As filed with the Securities and Exchange Commission on July 9, 2018.

Registration No. 333-225836

UNITED STATES
SECURITIES AND EXCHANGE COMMISSION
Washington, D.C. 20549

AMENDMENT NO. 1
TO
FORM S-1
REGISTRATION STATEMENT
Under
The Securities Act of 1933

ALLAKOS INC.

(Exact name of Registrant as specified in its charter)

Delaware	2834	45-4798831
(State or other jurisdiction of incorporation or organization)	(Primary Standard Industrial Classification Code Number)	(I.R.S. Employer Identification Number)

75 Shoreway Road, Suite A
San Carlos, California 94070
(650) 597-5002
(Address, including zip code, and telephone number, including area code, of Registrant's principal executive offices)

Robert Alexander, Ph.D.
President and Chief Executive Officer
Allakos Inc.
75 Shoreway Road, Suite A
San Carlos, California 94070
(650) 597-5002
(Name, address, including zip code, and telephone number, including area code, of agent for service)

Copies to:

Kenneth A. Clark Tony Jeffries Jennifer Knapp Wilson Sonsini Goodrich & Rosati, P.C. 650 Page Mill Road Palo Alto, California 94304 (650) 493-9300	Adam Tomasi, Ph.D. Chief Operating Officer and Chief Financial Officer Allakos Inc. 75 Shoreway Road, Suite A San Carlos, California 94070 (650) 597-5002	Alan F. Denenberg Stephen Salmon Davis Polk & Wardwell LLP 1600 El Camino Real Menlo Park, California 94025 (650) 752-2004

Approximate date of commencement of proposed sale to the public: As soon as practicable after the effective date of this registration statement.

If any of the securities being registered on this form are to be offered on a delayed or continuous basis pursuant to Rule 415 under the Securities Act of 1933, check the following box. ☐

If this form is filed to register additional securities for an offering pursuant to Rule 462(b) under the Securities Act, please check the following box and list the Securities Act registration statement number of the earlier effective registration statement for the same offering. ☐

If this form is a post-effective amendment filed pursuant to Rule 462(c) under the Securities Act, check the following box and list the Securities Act registration statement number of the earlier effective registration statement for the same offering. ☐

If this form is a post-effective amendment filed pursuant to Rule 462(d) under the Securities Act, check the following box and list the Securities Act registration statement number of the earlier effective registration statement for the same offering. ☐

Indicate by check mark whether the registrant is a large accelerated filer, an accelerated filer, a non-accelerated filer, smaller reporting company, or an emerging growth company. See the definitions of "large accelerated filer," "accelerated filer," "smaller reporting company." and "emerging growth company" in Rule 12b-2 of the Exchange Act.

Large accelerated filer	☐	Accelerated filer	☐
Non-accelerated filer	☒ (Do not check if a smaller reporting company)	Smaller reporting company	☐
		Emerging growth company	☒

If an emerging growth company, indicate by check mark if the registrant has elected not to use the extended transition period for complying with any new or revised financial accounting standards provided pursuant to Section 7(a)(2)(B) of the Securities Act. ☒

CALCULATION OF REGISTRATION FEE

Title of Each Class of Securities to be Registered	Amount to be Registered (1)	Proposed Maximum Offering Price Per Share (2)	Proposed Maximum Aggregate Offering Price (2)	Amount of Registration Fee (3)
Common Stock, $0.001 par value per share	6,900,000	$17.00	$117,300,000	$14,604

(1) Includes the additional shares that the underwriters have the right to purchase from the Registrant.
(2) Estimated solely for the purpose of computing the amount of the registration fee pursuant to Rule 457(a) under the Securities Act of 1933, as amended.
(3) The Registrant previously paid $9,338 in connection with the initial filing of the Registration Statement.

The Registrant hereby amends this Registration Statement on such date or dates as may be necessary to delay its effective date until the Registrant shall file a further amendment which specifically states that this Registration Statement shall thereafter become effective in accordance with Section 8(a) of the Securities Act of 1933, as amended, or until the Registration Statement shall become effective on such date as the Commission, acting pursuant to said Section 8(a), may determine.

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The information in this preliminary prospectus is not complete and may be changed. These securities may not be sold until the registration statement filed with the Securities and Exchange Commission is effective. This preliminary prospectus is not an offer to sell nor does it seek an offer to buy these securities in any jurisdiction where the offer or sale is not permitted.

SUBJECT TO COMPLETION. DATED JULY 9, 2018

6,000,000 Shares

COMMON STOCK

This is an initial public offering of shares of common stock by Allakos Inc.

Prior to this offering, there has been no public market for our common stock. It is currently estimated that the initial public offering price will be between $15.00 and $17.00 per share.

We have applied to list our common stock on the NASDAQ Global Select Market under the symbol “ALLK.”

We are an “emerging growth company” as defined under the federal securities laws and, as such, have elected to comply with certain reduced reporting requirements for this prospectus and may elect to do so in future filings.

Investing in our common stock involves risks. See the section titled “Risk Factors” beginning on page 19 to read about factors you should consider before buying shares of our common stock.

Neither the Securities and Exchange Commission nor any other regulatory body has approved or disapproved of these securities, or passed upon the accuracy or adequacy of this prospectus. Any representation to the contrary is a criminal offense.

	Per Share	Total
Initial public offering price	$	$
Underwriting discounts and commissions(1)	$	$
Proceeds, before expenses, to us	$	$

(1) See the section titled “Underwriting” for a description of the compensation payable to the underwriters.

We have granted the underwriters an option to purchase up to 900,000 additional shares of our common stock. The underwriters can exercise this option at any time within 30 days after the date of this prospectus.

Certain of our existing stockholders, including certain stockholders affiliated with our directors and that beneficially own more than 5% of our outstanding common stock, have indicated an interest in purchasing approximately $35.0 million in shares of our common stock in this offering at the initial public offering price. However, because indications of interest are not binding agreements or commitments to purchase, the underwriters may determine to sell more, less or no shares in this offering to any of these stockholders, or any of these stockholders may determine to purchase more, less or no shares in this offering. The underwriters will receive the same underwriting discounts and commissions on any shares purchased by these stockholders as they will on any other shares sold to the public in this offering.

In addition, New Enterprise Associates 16, L.P., an existing stockholder of ours, has indicated an interest in purchasing approximately $10.0 million in shares of our common stock at the initial public offering price in a proposed private placement that would close concurrently with this offering. This indication of interest is not a binding agreement or commitment to purchase, and we could determine to sell more, fewer or no shares to this potential purchaser and this potential purchaser could determine to purchase more, fewer or no shares in the proposed concurrent private placement. We will receive the full proceeds from and will not pay any underwriting discounts or commissions with respect to the shares that are sold in the proposed concurrent private placement. The closing of this offering is not conditioned upon the closing of such concurrent private placement.

The underwriters expect to deliver the shares of common stock to purchasers on or about , 2018.

Goldman Sachs & Co. LLC **Jefferies**

William Blair

Prospectus dated , 2018.

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Through and including , 2018 (the 25th day after the date of this prospectus), all dealers effecting transactions in these securities, whether or not participating in this offering, may be required to deliver a prospectus. This is in addition to a dealer's obligation to deliver a prospectus when acting as an underwriter and with respect to an unsold allotment or subscription.

We and the underwriters have not authorized anyone to provide you any information other than that contained in this prospectus or in any free writing prospectus prepared by or on behalf of us or to which we have referred you. We take no responsibility for, and can provide no assurance as to the reliability of, any other information that others may give you. We and the underwriters are not making an offer to sell these securities in any jurisdiction where the offer or sale is not permitted. You should assume that the information appearing in this prospectus is accurate only as of the date on the front cover of this prospectus. Our business, financial condition, results of operations and prospects may have changed since that date.

For investors outside of the United States: We have not and the underwriters have not done anything that would permit this offering or possession or distribution of this prospectus in any jurisdiction where action for that purpose is required, other than the United States. Persons outside of the United States who come into possession of this prospectus must inform themselves about, and observe any restrictions relating to, the offering of the shares of common stock and the distribution of this prospectus outside of the United States.

PROSPECTUS SUMMARY

This summary highlights selected information contained elsewhere in this prospectus and is qualified in its entirety by the more detailed information and financial statements included elsewhere in this prospectus. It does not contain all of the information that may be important to you and your investment decision. You should carefully read this entire prospectus, including the sections titled "Risk Factors," "Management's Discussion and Analysis of Financial Condition and Results of Operations," and our financial statements and related notes. In this prospectus, unless context requires otherwise, references to "we," "us," "our," "Allakos," or "the Company" refer to Allakos Inc.

Overview

We are a clinical stage biotechnology company developing AK002, our wholly owned monoclonal antibody, for the treatment of various eosinophil and mast cell related diseases. AK002 demonstrated pharmacodynamic activity in both of our completed Phase 1 trials, and in the single ascending dose Phase 1 trial involving patients with indolent systemic mastocytosis ("ISM"), patients reported improvements in their symptoms. AK002 selectively targets both eosinophils and mast cells, which are types of white blood cells that are widely distributed in the body and play a central role in the inflammatory response. Inappropriately activated eosinophils and mast cells have been identified as key drivers in a number of severe diseases affecting the gastrointestinal tract, eyes, skin, lungs and other organs. As such, AK002 has the potential to treat a large number of severe diseases. We are developing AK002 for the treatment of eosinophilic gastritis ("EG") and eosinophilic gastroenteritis ("EGE"). In addition, we are conducting studies in ISM, chronic urticaria ("CU") and severe allergic conjunctivitis ("SAC") and are evaluating additional indications for future development.

Figure A. Select Eosinophil and Mast Cell Related Diseases

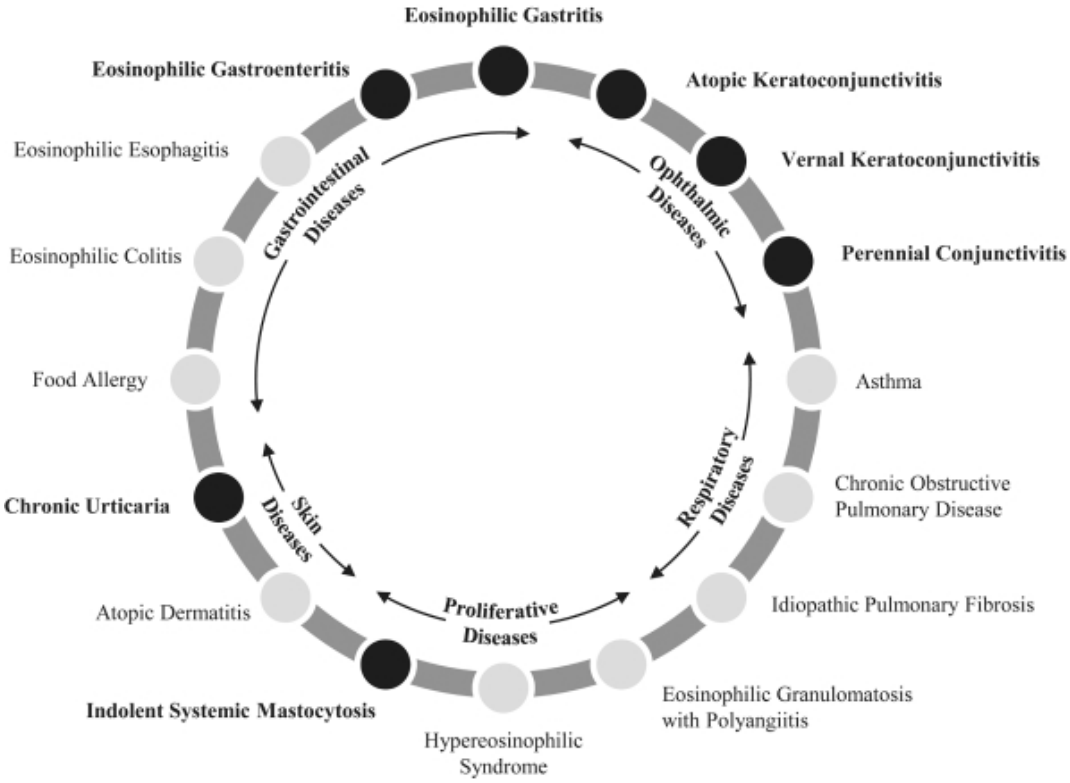


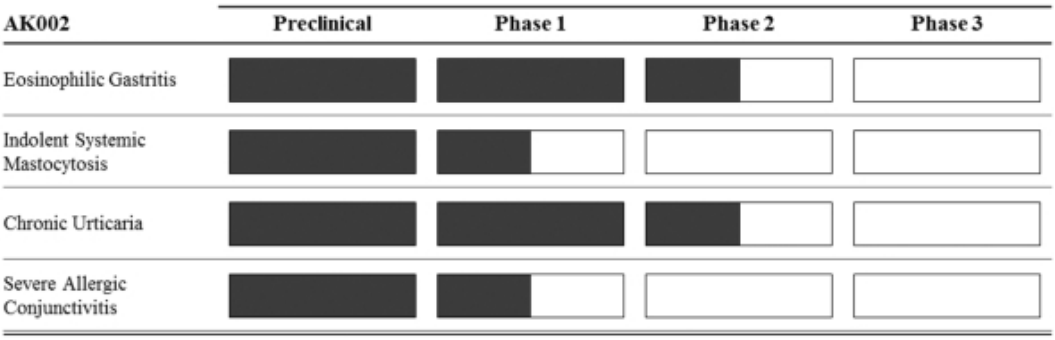
Figure A: We are focusing our development efforts on AK002 for the treatment of the diseases shown in bold and are evaluating additional indications for future development.

Despite the knowledge that eosinophils and mast cells drive many pathological conditions, there are no approved therapies that selectively target both eosinophils and mast cells. Current treatments for the diseases we are pursuing are non-selective and often come with serious side effects that make them unsuitable for long term use. AK002 binds to Siglec-8, an inhibitory receptor found on eosinophils and mast cells, which represents a novel way to selectively deplete or inhibit these important immune cells and thereby resolve inflammation. We believe AK002 is the only Siglec-8 targeting antibody currently in clinical development and has the potential to be an alternative to current treatments.

We have shown that AK002 depletes eosinophils and inhibits mast cell activation in Phase 1 clinical trials. In a randomized, double-blind, placebo-controlled Phase 1 trial in 51 healthy volunteers, all doses of AK002 resulted in complete depletion of blood eosinophils within one hour after administration. The duration of depletion was dose-dependent, with a single dose of 1.0 mg/kg of AK002 suppressing eosinophils for up to 84 days. In addition, in the single dose portion of a Phase 1 trial in 13 patients with ISM, a disorder characterized by an increased number of mast cells throughout the body and symptoms related to mast cell activation, patients reported marked improvement in ISM mast cell related symptoms and blood eosinophils were depleted.

We are currently testing AK002 in a double-blind, placebo-controlled Phase 2 trial in patients with EG with or without eosinophilic gastroenteritis (“EGE”). EG and EGE are severe eosinophilic inflammatory diseases of the stomach and small intestine, respectively. AK002 has received orphan drug designation for EG and EGE from the U.S. Food and Drug Administration (“FDA”) and we expect to report top-line data from the Phase 2 trial in mid-2019. As a follow up to the single dose portion of the Phase 1 trial in patients with ISM, we are also testing AK002 in an ongoing six month multi-dose Phase 1 trial in ISM patients. Further, AK002 is being tested in an open-label Phase 2 trial in patients with CU and in a Phase 1 trial in patients with SAC. CU is a group of inflammatory skin diseases that are caused by the inappropriate activation of mast cells in the skin. SAC is a group of allergic eye diseases that are caused by eosinophil and mast cell driven inflammation in the tissues lining the eyes and eyelids. We expect to report top-line data from these three trials in ISM, CU and SAC patients in the first quarter of 2019. The status of our clinical trials is shown below.

Figure B. AK002 Development Status



We have prioritized our AK002 development efforts based on our assessment of the probability of clinical and regulatory success, unmet medical need and potential market opportunity. We have assembled a team with a proven track record and deep experience in antibody discovery and in clinical development, commercialization, operations and finance from companies such as Genentech, Gilead,

Intermune, Novo Nordisk, Pfizer, ZS Pharma and others. Since our inception, we have raised private capital from investors including Alta Partners, RiverVest Partners, Roche Finance Ltd, 3x5 Special Opportunity Partners, New Enterprise Associates, RedMile, Partner Fund Management, Samsara and RockSprings.

Understanding the Foundation of Our Approach

Background on Eosinophils, Mast Cells and Siglec-8

Eosinophils and mast cells are involved in many inflammatory conditions and therefore represent attractive drug targets. Eosinophils and mast cells can respond to signals from allergens, tissues, bacteria, viruses and also cells of the innate and adaptive immune system. In response, they release a large variety of mediators which can result in tissue damage, fibrosis and the recruitment and activation of other innate and adaptive immune cells. Their ability to respond to signals from multiple cell types and the diverse array of mediators that they produce place eosinophils and mast cells at the center of multiple aspects of the inflammatory response.

Eosinophils are normally present in the blood and tissues, especially in the mucosal linings of the respiratory and gastrointestinal tract. However, they can be recruited to any site of the body in the setting of inflammation. Mast cells reside within the connective tissue of a variety of tissues and all vascularized organs, often located in close proximity to blood vessels, nerves and lymphatics. Sites include the dermis, gut mucosa and submucosa, conjunctiva and pulmonary alveoli and airways. As a result of their widespread location and potent inflammatory activity, eosinophils and mast cells have been identified as key drivers in a number of severe diseases of the gastrointestinal tract, eyes, skin, and lungs, as well as diseases which affect multiple organ systems.

Siglec-8 is an inhibitory receptor located selectively on eosinophils, mast cells and, to a lesser extent, on basophils. Because Siglec-8 is expressed in high abundance only on eosinophils and mast cells, it presents a novel way to selectively target these important immune cells. As an inhibitory receptor, the natural function of Siglec-8 is to counteract activating signals within eosinophils and mast cells that lead to an inflammatory response. By binding to Siglec-8, AK002 is able to selectively target eosinophils and mast cells to resolve inflammation.

Our Strategy

AK002 has shown pharmacodynamic activity in humans and a broad array of animal disease models of eosinophilic and mast cell driven diseases. We have prioritized our development efforts based on our assessment of the probability of clinical and regulatory success, unmet medical need and potential market opportunity. We have chosen to focus our wholly-owned AK002 program initially on four indications: EG, ISM, CU and SAC. The key elements of our strategy are to:

- ***Rapidly advance AK002 through clinical development in EG.*** AK002 has secured orphan drug designation for the treatment of EG and EGE with the FDA. We have completed a Phase 1 trial in healthy volunteers. In this trial, AK002 exhibited clear signs of pharmacodynamic activity by depleting blood eosinophils as soon as one hour after dosing. We are conducting a Phase 2 trial in patients with EG with or without EGE. We believe this trial, if positive, in conjunction with a future Phase 3 trial, will serve as the basis for demonstrating safety and efficacy in our biologics license application (“BLA”) and market authorization application (“MAA”) submissions.
- ***Develop AK002 for other EGIDs.*** EG is part of a group of related diseases called eosinophilic gastrointestinal diseases (“EGIDs”). These include EG, EGE and eosinophilic

colitis. EGIDs share the common pathology of tissue inflammation caused by the presence of elevated numbers of eosinophils. If AK002 shows activity in EG, we expect to conduct clinical trials of AK002 in these related conditions.

- ***Expand opportunity to additional eosinophilic and mast cell driven conditions.*** We are currently conducting clinical trials with AK002 in other eosinophil and mast cell driven diseases, including two Phase 1 trials in patients with ISM and SAC and a Phase 2 trial in patients with CU. Patients in the single ascending dose portion of the ISM trial reported improvements in mast cell related symptoms, and one patient with cholinergic urticaria showed disease resolution for approximately four weeks following a single 0.3 mg/kg dose. Should these clinical trials confirm the activity of AK002 in these indications, we plan to continue to develop AK002 in these indications.
- ***Build commercial capability and retain rights in key markets.*** If AK002 receives regulatory approval, we intend to retain the rights to it in key markets, and plan to commercialize AK002 in both the United States and Europe through a specialty sales force. EG and other EGIDs, ISM, CU and SAC are severe diseases which lack effective treatments. We believe a significant market opportunity for AK002 exists in each of these diseases.
- ***Coordinate clinical and manufacturing process development.*** AK002 has been produced under current good manufacturing practices at commercial scale utilizing the commercial process at Lonza Sales AG ("Lonza"), a contract development manufacturing organization. We have signed an agreement with Lonza for BLA activities.

AK002 Clinical Development Plan

AK002 was designed to take advantage of the selective expression pattern and inhibitory function of Siglec-8, an inhibitory receptor found on eosinophils, mast cells and, to a lesser extent, on basophils. AK002 is a humanized antibody that binds to Siglec-8 with high affinity (bivalent binding avidity (K_D) = 17 pM determined by surface plasmon resonance analysis). The high expression level of Siglec-8 on eosinophils and mast cells allows AK002 to selectively deplete eosinophils and inhibit mast cells. AK002 is a non-fucosylated IgG1 antibody engineered to have potent antibody-dependent cellular cytotoxicity ("ADCC"). ADCC is a mechanism whereby the binding of an antibody like AK002 triggers an effector cell of the immune system (usually a natural killer ("NK") cell) to destroy the antibody-bound cell. This provides AK002 with an additional mechanism to deplete eosinophils present in blood, where NK cells also reside. As a result of these dual modes of action, AK002 has been shown to deplete eosinophils in blood and tissue, and to inhibit the release of inflammatory mediators from mast cells.

AK002 has demonstrated activity in a broad array of animal disease models of eosinophilic and mast cell-driven diseases. Consistent with these experiments, human trials have shown that AK002 depletes blood eosinophils and inhibits mast cell function. Across the healthy volunteer and ISM Phase 1 trials, 61 patients have received AK002 to date. AK002 has generally been well tolerated.

Eosinophilic Gastritis and Eosinophilic Gastrointestinal Disorders

Disease Overview

EGIDs are chronic inflammatory disorders that share a similar eosinophilic driven inflammation that occurs along different segments of the gastrointestinal ("GI") tract. EG is a rare disease that is characterized by chronic inflammation due to patchy or diffuse infiltration of eosinophils into layers of the stomach. EG can occur with eosinophilia isolated to the stomach or often in combination with

eosinophilia of the small intestine. The estimated prevalence of EG in the United States is approximately 20,000 to 25,000 patients, and the estimated prevalence of EGE in the United States is approximately 25,000 patients, and we believe these diseases may be significantly underdiagnosed based on our conversations with gastroenterologists.

It is believed that EG and other EGIDs arise in some patients from food allergies or other allergens that cause a hypersensitivity reaction that leads to recruitment of eosinophils to the GI tract. The gastrointestinal symptoms are believed to be due to the release of inflammatory mediators from activated eosinophils. Mast cells are also elevated and believed to play a role. Elevated serum immunoglobulin E ("IgE") levels and food-specific IgE are correlated with EG in some patients and provide evidence for the allergy hypothesis and mast cell involvement. Symptoms commonly include abdominal pain, nausea, vomiting, diarrhea, malnutrition and weight loss.

Clinical Results

AK002 was tested in a randomized, double-blind, placebo-controlled, dose-escalating Phase 1 trial conducted in Melbourne, Australia. 51 healthy volunteers were randomized to receive doses of AK002 (0.001, 0.003, 0.01, 0.03, 0.1, 0.3, or 1.0 mg/kg) or placebo. The primary endpoints of the trial were safety and tolerability. The secondary endpoints included pharmacokinetic and pharmacodynamic ("PK/PD") measurements, including changes in the absolute peripheral blood counts of eosinophils.

With respect to the secondary endpoints, all doses of AK002 tested resulted in complete depletion of blood eosinophils one hour after administration, clearly demonstrating the pharmacodynamic activity of AK002. The duration of depletion was dose-dependent with a single dose of 1 mg/kg of AK002 suppressing eosinophils for up to 84 days. AK002's pharmacokinetic half-life was determined to be 18 days. In the multi-dose portion of the trial, patients received monthly doses of 0.3 mg/kg of AK002. Monthly administrations of this dose provided sustained eosinophil depletion for the duration of dosing.

Figure C. Single Dose Placebo and AK002 Eosinophil Response

	Blood Eosinophils 10^3/mL				
Dose Cohort (mg/kg)	**Placebo Pre-dose**	**Placebo 1 Hr Post-dose**	**AK002 Pre-dose**	**AK002 1 Hr Post-dose**	**Minimal Duration Eos Depletion**
0.001	NA	NA	70	0	1 Day
0.003	120	70	160	0	2 Days
0.01	210	150	160	0	4-7 Days
0.03	150	150	160	0	7-14 Days
0.1	100	80	250	0	14-28 Days
0.3	180	140	180	0	28 Days
1.0	60	40	120	0	56-84 Days

Across the healthy volunteer and ISM Phase 1 trials, 61 subjects have received AK002 at single doses ranging from 0.0003 to 1.0 mg/kg and multiple doses of 0.3 to 3.0 mg/kg. These subjects received up to six doses of AK002 given monthly for six months. AK002 has generally been well tolerated in our clinical trials. The most common adverse event has been the occurrence of mild to moderate infusion-related reactions ("IRRs") (flushing, feeling of warmth, headache, nausea and dizziness), which occurred mostly during the first infusion and diminished or did not occur on subsequent infusions. In the Phase 1 healthy volunteer trial, one subject treated with 1.0 mg/kg

administered over one hour experienced an infusion reaction three hours after dosing, including nausea, vomiting and hypotension, which was considered severe and led to the subject discontinuing from the trial. The subject was treated with standard therapies and no further symptoms occurred.

There were no clinically significant effects of AK002 identified in vital signs, ECGs, clinical laboratory parameters (including hematology, clinical chemistry and urinalysis) or physical examinations. In both trials, there was a transient decrease in lymphocyte count after the AK002 infusion (resolving within one day), as seen with other monoclonal antibodies, that was not associated with any adverse event. Sustained depletion of eosinophils was also observed, consistent with the mechanism of action of AK002.

Development Plan

AK002 has received orphan drug designation in the United States for the treatment of EG and EGE. We have initiated a randomized, double-blind, placebo-controlled Phase 2 trial with AK002 in patients with EG with or without EGE. The trial will enroll approximately 60 patients with active, moderate to severe, biopsy-confirmed EG (>30 eosinophils/hpf in 5 hpf), and will randomize patients 1:1:1 to receive: (a) 0.3 mg/kg for the first month followed by three doses of 1.0 mg/kg AK002 given monthly, (b) 0.3 mg/kg for the first month followed by 1.0 mg/kg, 3.0 mg/kg and 3.0 mg/kg given monthly, or (c) monthly placebo. The primary endpoint is the reduction in gastric eosinophils post-treatment with AK002. The secondary endpoints include changes in EG patient symptoms, such as abdominal pain, nausea, vomiting and diarrhea, as reported by patients using our proprietary daily Patient Reported Outcome (“PRO”) questionnaire. The PRO was developed based on published guidance from the FDA on the development of PRO instruments, and is expected to be used to help determine safety and efficacy in future clinical trials.

We anticipate that a number of EG patients enrolled in the trial will also have EGE or eosinophilic esophagitis (“EoE”). If sufficient patients with EoE and EGE are enrolled in the trial, it may be possible to evaluate response to treatment with AK002 in these diseases as well. Patients completing the randomized portion of the trial will be eligible to enroll in a nine month safety exposure trial. Top-line data from the Phase 2 trial are expected during mid-2019. Based on discussions with the FDA, we believe that this Phase 2 trial, if successful, and a single Phase 3 trial, if successful, may be sufficient for regulatory approval of AK002 in EG.

Indolent Systemic Mastocytosis

Disease Overview

Indolent systemic mastocytosis (“ISM”) is a rare disease characterized by the clonal proliferation and accumulation of mast cells in the bone marrow, respiratory and gastrointestinal tracts, and organs such as the skin, liver, spleen and brain. Common symptoms include pruritus, flushing, headache, cognitive impairment, fatigue, diarrhea, gastrointestinal cramps, hypotension and skin lesions, as well as an increased risk for osteoporosis and anaphylaxis, which in some cases can be life threatening. The symptoms of ISM are attributed to mast cell activation and the systemic release of mediators. Approximately 30,000 patients in the United States suffer from ISM.

Clinical Results

AK002 is being evaluated in an open-label, single and multiple ascending dose Phase 1 trial in patients with ISM. The single dose portion of this trial was completed during the second quarter of

2017, and the six month multi-dose portion is ongoing. In the single dose portion, 13 patients received single escalating doses of 0.0003 to 1.0 mg/kg, including three patients receiving 0.3 mg/kg and three patients receiving 1.0 mg/kg of AK002. Thus far in the multi-dose portion of the trial, six patients have received six doses of 1.0 mg/kg of AK002 given monthly and six patients have received 1.0 mg/kg for the first month and will be given monthly doses of 3.0 to 10 mg/kg of AK002 for five months. The primary endpoints of this trial are safety and tolerability. Key secondary endpoints are the PK/PD profile, peripheral counts of eosinophils and patient-reported mastocytosis disease symptoms including itching, hives, skin flushing, diarrhea, abdominal pain, fatigue, headache, difficulty concentrating and muscle and joint pain.

Secondary endpoint results from the completed single dose portion of the trial indicate that AK002 has pharmacodynamic activity; single doses of AK002 depleted blood eosinophils, with dose-dependent duration of depletion similar to the healthy volunteer trial. In addition, five out of six patients receiving 0.3 or 1.0 mg/kg reported to the study investigators that they had improvements in symptoms, including diarrhea, abdominal pain, fatigue, pruritus, difficulty concentrating and headaches, and, in one patient, resolution of comorbid cholinergic urticaria (a disease that is believed to be caused by the activation of mast cells) for approximately four weeks. These encouraging initial reports of symptom improvement will be more fully explored in the multi-dose portion of the ISM trial.

The multi-dose portion of the trial is fully enrolled with 12 patients in two AK002 dosing cohorts. We have developed a proprietary daily PRO questionnaire to assess the change in ISM patient symptoms in the multi-dose portion of the trial and in our future clinical trials. The PRO was based on published guidance from the FDA on the development of PRO instruments, and is expected to be used to help determine safety and efficacy in future clinical trials. The questionnaire consists of nine symptom assessments, with each symptom being scored on a 0-10 scale and higher values representing greater symptom burden (total score 0-90 points).

Development Plan

AK002 has received orphan drug designation from the European Medicines Agency for the treatment of ISM. AK002 has been evaluated in an open-label, single-arm, dose-escalating Phase 1 trial in patients with ISM. The single dose portion of this trial was completed in 2017, and the multi-dose portion is ongoing in 12 patients. Given that the trials are open-label observational studies, they are not designed to show statistical significance. We expect to report data from this trial in the first quarter of 2019. Encouraging reports of symptom improvements in the single dose phase have been reported. If similar responses are observed in the ongoing multi-dose trial, we anticipate conducting a placebo controlled double blind trial to confirm activity.

Chronic Urticarias – Cholinergic Urticaria, Chronic Spontaneous Urticaria, Symptomatic Dermatographism

Disease Overview

Chronic urticarias (“CU”) are a group of skin conditions which are characterized by recurrent transient pruritic wheal and flare type skin reactions and, in roughly 40% of patients, angioedema. Symptoms include itching, redness, raised welts, burning, warmth, tingling and irritation of the skin. Patients with CU are often severely impaired in their quality of life, with negative effects on sleep, daily activities, school/work life and social interactions. The most common forms of CU are chronic spontaneous urticaria (“CSU”), cholinergic urticaria and symptomatic dermatographism. We estimate that approximately 200,000 patients with severe CSU, cholinergic urticaria and symptomatic dermatographism could be candidates for therapy with AK002.

Development Plan

We are conducting an open-label Phase 2 trial with AK002 in patients with urticaria. The trial is enrolling patients with different forms of urticaria: CSU (Xolair naïve and Xolair failures), cholinergic urticaria and symptomatic dermatographism. Approximately 40 patients are expected to be enrolled, and will receive six monthly doses of AK002. The primary endpoint of the trial is patient-reported symptoms measured by the urticaria control test ("UCT"). Secondary endpoints include safety and tolerability, as well as patient-reported symptoms as measured by urticaria activity score 7 ("UAS7") and cholinergic UAS7. Given that the trial is an open-label observational study, it is not designed to show statistical significance. We expect to report data from this trial in the first quarter of 2019.

Severe Allergic Conjunctivitis

Disease Overview

Atopic keratoconjunctivitis ("AKC"), vernal keratoconjunctivitis ("VKC") and perennial allergic conjunctivitis ("PAC") are a set of allergic ocular conjunctival diseases primarily associated with an IgE-mediated hypersensitivity reaction. We are focused on the severe forms of these diseases, which are collectively referred to as severe allergic conjunctivitis ("SAC"). These conditions are often caused by airborne allergens, such as grass and tree pollens, coming into contact with the eyes, which induces IgE mediated mast cell degranulation and allergic inflammation. The inflammatory mediators released by the mast cell result in inflammation and the infiltration of eosinophils, neutrophils and other immune cells. Symptoms include itching, hyperemia, light sensitivity (photophobia), pain, eye discharge and the sensation of having a foreign body in the eye. These symptoms can affect quality of life and daily activities, such as reading, driving and being in bright outdoor environments. In addition, patients with untreated disease, in particular those with VKC and AKC, can experience remodeling of the ocular surface tissues that can lead to vision loss. In addition to the primary symptoms of allergic conjunctivitis, a high correlation of allergic rhinitis, allergic asthma and atopic dermatitis comorbidities occur in this patient population. We believe that approximately 50,000 to 150,000 patients in the United States suffer from severe AKC, VKC or PAC and could be candidates for treatment with AK002.

Development Plan

We are conducting an open-label Phase 1 trial with AK002 in patients with SAC. The trial is enrolling patients with three different forms of allergic conjunctivitis: AKC, VKC and PAC. Approximately 30 patients are planned to be enrolled and will receive six monthly doses of AK002. The primary endpoint of the trial is safety and tolerability. Key secondary endpoints include patient-reported symptom measures of ocular itch, pain, lacrimation, photophobia and foreign body sensation. Given that the trial is an open-label observational study, it is not designed to show statistical significance. We expect to report data from this trial in the first quarter of 2019.

Preclinical Results

AK002 Results in Disease Models Suggest Broad Activity

Because Siglec-8 is found only in cells of humans and certain other primates, we have developed a proprietary Siglec-8 transgenic mouse, in which Siglec-8 is expressed with a similar tissue distribution to humans and is functionally active. The transgenic mouse provides us with a proprietary tool to assess the safety, tolerability and activity of anti-Siglec-8 antibodies.

AK002 has completed short- and long-term toxicity studies in Siglec-8 transgenic mice. Chronic weekly dosing for six months with AK002 in transgenic mice at dose levels of 50 or 100 mg/kg resulted

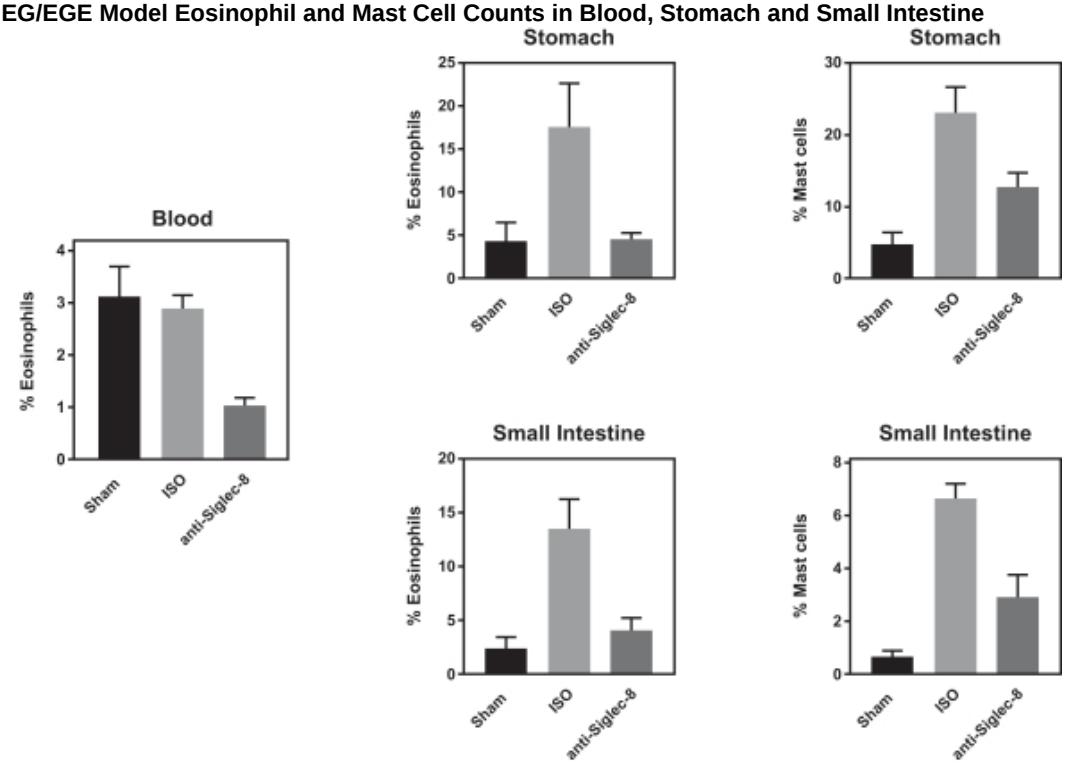
in no adverse AK002-related findings in mortality, clinical observations, body weight, food consumption and anatomic pathology after the end of dosing. Non-adverse findings included decreases in eosinophil counts in both sexes at ³50 mg/kg/week, which persisted through the recovery period. These findings reflect the expected pharmacology of AK002. The no-observed-adverse-effect-level of AK002 after chronic dosing for six months was 100 mg/kg/week.

We have shown that AK002 or antibodies to Siglec-8 have broad activity in animal disease models (eosinophilic gastroenteritis, anaphylaxis, fibrosis and chronic obstructive pulmonary disease) and in human *ex vivo* diseased tissue (eosinophilic gastrointestinal disease, mastocytosis, atomic dermatitis and lung). In these models, anti-Siglec-8 antibodies have significantly reduced eosinophil and inhibited mast cells. The activity in these models suggests AK002 has the potential to treat eosinophil and mast cell inflammation in a number of disease settings and highlights AK002's ability to inhibit the inflammatory cascade triggered by different activating signals.

Anti-Siglec-8 Antibody Reduces Eosinophil and Mast Cell Levels in EG/EGE Model

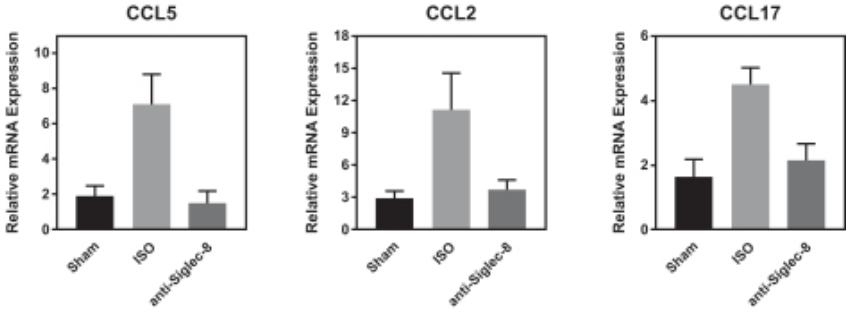
In this model, two groups of Siglec-8 transgenic mice were sensitized with ovalbumin to induce eosinophil and mast cell driven gastrointestinal inflammation similar to that observed in EG and other EGIDs. A third group of animals was administered phosphate buffered saline to serve as normal unsensitized sham controls ("sham"). Treatment with a single dose of anti-Siglec-8 antibody led to lower levels of eosinophils in the blood, stomach and small intestine and reduced numbers of mast cells in the stomach and small intestine compared to mice that received an isotype control antibody ("ISO").

Figure D. EG/EGE Model Eosinophil and Mast Cell Counts in Blood, Stomach and Small Intestine



Anti-Siglec-8 treatment also reduced the levels of multiple important chemokines (CCL5/Rantes, CCL2/MCP-1, CCL17) to the levels of sham control animals. Chemokines are known to recruit and activate cells of the innate and adaptive immune system. By normalizing chemokine secretions, AK002 may be able to reduce further recruitment of immune cells and thereby interrupt the inflammatory cascade.

Figure E. Chemokine Levels in the EG/EGE Mouse Model



Anti-Siglec-8 Antibody Inhibits IgE Mediated Systemic Anaphylaxis in Mouse Model

The ability of an anti-Siglec-8 antibody to inhibit IgE-mediated mast cell activation was demonstrated in a mouse model of systemic anaphylaxis. Anaphylaxis occurs due to IgE-mediated release of inflammatory mediators and cytokines from mast cells, which results in vasodilation, a reduction in core body temperature, itchiness and bronchoconstriction, among other symptoms. In this model, “humanized” mice engrafted with human immune cells were pretreated with an anti-Siglec-8 antibody or an isotype control antibody, administered an allergen-specific IgE, and 24 hours later, anaphylaxis was triggered using an allergen. Mice treated with the isotype control antibody plus IgE and allergen displayed symptoms of anaphylaxis and body temperature decreases that peaked 10 to 40 minutes after inducing anaphylaxis. In contrast, mice treated with the anti-Siglec-8 antibody plus IgE and allergen displayed no observable symptoms and had no significant changes in core body temperature.

Anti-Siglec-8 Antibody Decreases Bleomycin Induced Lung Fibrosis in Mouse Model

Lung fibrosis induced by bleomycin is believed to be due to the increased expression of IL-33. IL-33 induces mast cells to release mediators that activate fibroblasts leading to fibrosis and collagen deposition. In this model, lung fibrosis was induced by administering bleomycin to Siglec-8 transgenic mice every other day for 30 days. On days 14, 21 and 28, an anti-Siglec-8 or isotype control antibody was administered. Fibrosis was assessed on day 30 for anti-Siglec-8 or isotype control antibody treated mice and compared to sham treated mice (mice that did not receive bleomycin). Relative to control antibody mice, mice treated with an anti-Siglec-8 antibody displayed minimal fibrotic changes. In addition, the bronchoalveolar lavage of anti-Siglec-8 treated mice displayed reduced levels of infiltrating leukocytes that were similar to sham treated animals.

Anti-Siglec-8 Antibody Inhibits IL-33/TSLP Activation of Mast Cells from Human Skin

IL-33 combined with TSLP is a potent activator of mast cells and results in increased expression of the mast cell activation marker CD63. Mast cells isolated from skin showed a 20% increase in the expression of CD63 after overnight exposure to IL-33 and TSLP. In contrast, skin mast cells treated with AK002 along with IL-33 and TSLP did not show increased activation, with CD63 levels remaining similar to control levels (no IL-33 and TSLP exposure). In addition, levels of the chemokines CCL2 and ENA78 did not increase after stimulation with IL-33 and TSLP in the presence of AK002. Chemokines are known to recruit and activate cells of the innate and adaptive immune system. By normalizing chemokine secretions, AK002 may be able to reduce further recruitment of immune cells and thereby interrupt the inflammatory cascade.

AK001

We initially began developing two product candidates, AK001 and AK002, both of which are monoclonal antibodies targeting Siglec-8. These compounds entered clinical development in 2015 and 2016, respectively. Due to the greater activity of AK002, we decided to focus our development efforts on AK002 and discontinued the development of AK001 in 2017. We have no current plans to continue development of AK001, but may choose to do so in the future.

Preclinical Programs

We are developing two additional antibodies targeting novel immune system receptors for the treatment of cancer. These antibodies are being assessed in a variety of animal models.

Risks Associated with Our Business

Our business is subject to numerous risks and uncertainties that you should consider before investing in us. These risks are described more fully in the section titled “Risk Factors” in this prospectus. These risks include, but are not limited to, the following:

- We are in the early stages of clinical drug development and have a very limited operating history and no products approved for commercial sale.
- We have incurred significant net losses since inception and we expect to continue to incur significant net losses for the foreseeable future.
- Our ability to generate revenue and achieve profitability depends significantly on our ability to achieve a number of objectives.
- Even if this offering is successful, we will require substantial additional capital to finance our operation.
- We are dependent on the success of our lead compound, AK002, which is currently in multiple clinical trials.
- The regulatory approval processes of the FDA, European Medicines Agency and comparable foreign regulatory authorities are lengthy, time-consuming and inherently unpredictable.
- If we experience delays or difficulties in the enrollment of patients in clinical trials, our receipt of necessary marketing approvals could be delayed or prevented.
- The clinical trials of our product candidates may not demonstrate safety and efficacy to the satisfaction of regulatory authorities or otherwise produce positive results.
- We may be unable to obtain U.S. or foreign regulatory approval and, as a result, unable to commercialize our product candidates.
- The sizes of the patient populations suffering from some of the diseases we are targeting are small and based on estimates that may not be accurate.
- If we are unable to obtain or protect intellectual property rights, we may not be able to compete effectively in our market.

Concurrent Private Placement

New Enterprise Associates 16, L.P. (“NEA”), an existing stockholder of ours, has indicated an interest in purchasing approximately $10.0 million in shares of our common stock at the initial public offering price (or 625,000 shares based on the assumed initial public offering price of $16.00 per share) in a proposed private placement that would close concurrently with this offering. This indication of interest is not a binding agreement or commitment to purchase, and we could determine to sell more, fewer or no shares to this potential purchaser and this potential purchaser could determine to purchase more, fewer or no shares in the proposed concurrent private placement. The shares that may be sold in the proposed concurrent private placement will not be registered in the offering, will constitute restricted securities under the Securities Act of 1933, as amended, and will be subject to a market standoff agreement with us and lock-up agreement with the underwriters for a period of 180 days after the date of this prospectus. We will receive the full proceeds from and will not pay any underwriting discounts or commissions with respect to the shares that are sold in the proposed concurrent private placement. The closing of this offering is not conditioned upon the closing of such concurrent private placement.

Corporate Information

We were incorporated in Delaware in March 2012. Our principal executive offices are located at 75 Shoreway Road, Suite A, San Carlos, California 94070. Our telephone number is (650) 597-5002. Our website address is www.allakos.com. Information contained on the website is not incorporated by reference into this prospectus and should not be considered to be part of this prospectus.

We use Allakos®, the Allakos logo and other marks as trademarks in the United States and other countries. This prospectus contains references to our trademarks and service marks and to those belonging to other entities. Solely for convenience, trademarks and trade names referred to in this prospectus, including logos, artwork and other visual displays, may appear without the ® or ™ symbols, but such references are not intended to indicate in any way that we will not assert, to the fullest extent under applicable law, our rights or the rights of the applicable licensor to these trademarks and trade names. We do not intend our use or display of other entities' trade names, trademarks or service marks to imply a relationship with, or endorsement or sponsorship of us by, any other entity.

Implications of Being an Emerging Growth Company

We are an "emerging growth company" as defined in the Jumpstart Our Business Startups Act of 2012, as amended ("JOBS Act"). We will remain an emerging growth company until the earliest to occur of: the last day of the fiscal year in which we have more than $1.07 billion in annual revenue; the date we qualify as a "large accelerated filer," with at least $700 million of equity securities held by non-affiliates; the issuance, in any three-year period, by us of more than $1.0 billion in non-convertible debt securities; and the last day of the fiscal year ending after the fifth anniversary of our initial public offering. As a result of this status, we have taken advantage of reduced reporting requirements in this prospectus and may elect to take advantage of other reduced reporting requirements in our future filings with the SEC. In particular, in this prospectus, we have provided only two years of audited financial statements and have not included all of the executive compensation related information that would be required if we were not an emerging growth company. In addition, the JOBS Act provides that an emerging growth company can take advantage of an extended transition period for complying with new or revised accounting standards, delaying the adoption of these accounting standards until they would apply to private companies. We have irrevocably elected not to avail ourselves of this exemption and, as a result, upon completion of this offering we will adopt new or revised accounting standards on the relevant dates on which adoption of such standards is required for other public companies that are not emerging growth companies.

THE OFFERING

Common stock offered by us in this offering	6,000,000 shares
Common stock offered in the concurrent private placement	New Enterprise Associates 16, L.P. (“NEA”), an existing stockholder of ours, has indicated an interest in purchasing approximately $10.0 million in shares of our common stock at the initial public offering price (or 625,000 shares based on the assumed initial public offering price of $16.00 per share) in a proposed private placement that would close concurrently with this offering. This indication of interest is not a binding agreement or commitment to purchase, and we could determine to sell more, fewer or no shares to this potential purchaser and this potential purchaser could determine to purchase more, fewer or no shares in the proposed concurrent private placement. The shares that may be sold in the proposed concurrent private placement will not be registered in the offering, will constitute restricted securities under the Securities Act of 1933, as amended, and will be subject to a market standoff agreement with us and lock-up agreement with the underwriters for a period of 180 days after the date of this prospectus. We will receive the full proceeds from and will not pay any underwriting discounts or commissions with respect to the shares that are sold in the proposed concurrent private placement. The closing of this offering is not conditioned upon the closing of such concurrent private placement.
Common stock to be outstanding after this offering assuming completion of the proposed concurrent private placement	39,710,859 shares (or 40,610,859 shares if the underwriters exercise their option to purchase additional shares in full)
Underwriters’ option to purchase additional shares	We have granted the underwriters an option for a period of 30 days to purchase up to 900,000 additional shares of our common stock.
Use of proceeds	We intend to use the net proceeds from this offering for (1) the development of our lead compound, AK002, and (2) other research and development activities, working capital and general corporate purposes. See the section titled “Use of Proceeds” for more information.
Proposed NASDAQ trading symbol	“ALLK”

The number of shares of our common stock to be outstanding after this offering, assuming completion of the proposed concurrent private placement, is based on the 33,085,859 shares of our

common stock outstanding as of March 31, 2018 (including convertible preferred stock on an as-converted basis), and excludes the following:

- 6,224,533 shares of common stock issuable upon exercise of options to purchase shares of our common stock outstanding as of March 31, 2018, at a weighted-average exercise price of $1.39 per share;
- 1,122,160 shares of common stock issuable upon exercise of options to purchase shares of our common stock that we granted after March 31, 2018, at a weighted-average exercise price of $6.27 per share;
- 47,616 shares of common stock issuable upon exercise of a warrant to purchase shares of common stock outstanding as of March 31, 2018, at a weighted-average exercise price of $0.61 per share; and
- 4,596,872 shares of common stock reserved for future issuance under our stock-based compensation plans, consisting of:
  - 96,872 shares of common stock reserved for future issuance under our 2012 Equity Incentive Plan, as amended ("2012 Plan");
  - 4,000,000 shares of common stock reserved for future issuance under our 2018 Equity Incentive Plan ("2018 Plan"), which will become effective in connection with this offering, and any additional shares that become available under our 2018 Plan pursuant to provisions thereof that automatically increase the share reserve under the plan each year, as more fully described in the section titled "Executive Compensation—Employee Benefit and Stock Plans"; and
  - 500,000 shares of common stock reserved for future issuance under our 2018 Employee Stock Purchase Plan, or ESPP, which will become effective in connection with this offering, and any additional shares that become available under our ESPP pursuant to provisions thereof that automatically increase the share reserve under the plan each year, as more fully described in the section titled "Executive Compensation—Employee Benefit and Stock Plans."

Unless otherwise indicated, this prospectus reflects and assumes the following:

- no exercise of outstanding options or warrants;
- no exercise by the underwriters of their option to purchase additional shares of common stock from us in this offering;
- the conversion of all outstanding shares of our convertible preferred stock into an aggregate of 30,971,627 shares of our common stock, which will occur immediately prior to the closing of this offering; and
- the filing and effectiveness of our amended and restated certificate of incorporation and the effectiveness of our amended and restated bylaws, which will occur immediately prior to the closing of this offering.

On July 6, 2018, we effected a 1-for-1.25 reverse stock split of our common stock and convertible preferred stock. This prospectus gives retroactive effect to the split for all periods presented.

Certain of our existing stockholders, including certain stockholders affiliated with our directors and that beneficially own more than 5% of our outstanding common stock, have indicated an interest in purchasing approximately $35.0 million in shares of our common stock in this offering at the initial

public offering price. However, because indications of interest are not binding agreements or commitments to purchase, the underwriters may determine to sell more, less or no shares in this offering to any of these stockholders, or any of these stockholders may determine to purchase more, less or no shares in this offering. The underwriters will receive the same underwriting discounts and commissions on any shares purchased by these stockholders as they will on any other shares sold to the public in this offering.

SUMMARY FINANCIAL DATA

The following tables summarize our financial data for the periods and as of the dates indicated. We have derived the statements of operations and comprehensive loss data for the years ended December 31, 2016 and 2017 from our audited financial statements included elsewhere in this prospectus. The statements of operations and comprehensive loss data for the three months ended March 31, 2017 and 2018 and the balance sheet data as of March 31, 2018 have been derived from our unaudited interim financial statements included elsewhere in this prospectus and have been prepared in accordance with generally accepted accounting principles in the United States on the same basis as the annual audited financial statements and, in the opinion of management, the unaudited data reflects all adjustments, consisting only of normal recurring adjustments, necessary for the fair presentation of the financial information in those statements. Our historical results are not necessarily indicative of results that may be expected in the future, and our results for the three months ended March 31, 2018 are not necessarily indicative of results to be expected for the full year. You should read the following summary financial data together with our financial statements and the related notes appearing elsewhere in this prospectus and the information in the sections titled “Selected Financial Data” and “Management’s Discussion and Analysis of Financial Condition and Results of Operations.”

	Year Ended December 31,		Three Months Ended March 31,	
	2016	2017	2017	2018
	(in thousands, except per share data)			
Statements of Operations Data:				
Operating expenses:				
Research and development	$ 14,672	$ 18,506	$ 4,364	$ 6,401
General and administrative	2,388	3,748	613	2,308
Total operating expenses	17,060	22,254	4,977	8,709
Loss from operations	(17,060)	(22,254)	(4,977)	(8,709)
Interest income (expense), net	(51)	(1,302)	(64)	224
Other income (expense), net	11	(287)	(15)	—
Loss before benefit from income taxes	(17,100)	(23,843)	(5,056)	(8,485)
Provision for (benefit from) income taxes	—	(291)	—	—
Net loss and comprehensive loss	$(17,100)	$(23,552)	$(5,056)	$ (8,485)
Net loss per share: (1)				
Basic and diluted	$ (13.03)	$ (14.54)	$ (3.56)	$ (4.19)
Weighted-average shares of common stock outstanding: (1)				
Basic and diluted	1,312	1,620	1,420	2,024
Pro forma net loss per share: (1)				
Basic and diluted (unaudited)		$ (1.01)		$ (0.26)
Pro forma weighted-average shares of common stock outstanding: (1)				
Basic and diluted (unaudited)		23,372		32,995

(1) See our statements of operations and comprehensive loss and Note 2 to our financial statements for further details on the calculation of net loss per share, basic and diluted, attributable to

common stockholders and the weighted-average number of shares of common stock used in the computation of the per share amounts and unaudited pro forma information.

	As of March 31, 2018 (unaudited)		
	Actual	Pro Forma (1)	Pro Forma As Adjusted (2) (3)
		(in thousands)	
Balance Sheet Data:			
Cash and cash equivalents	$ 74,600	$ 74,600	$ 170,927
Working capital (4)	73,904	73,904	170,616
Total assets	79,777	79,777	175,272
Total liabilities	3,441	3,441	3,056
Convertible preferred stock	142,969	—	—
Accumulated deficit	(69,059)	(69,059)	(69,059)
Total stockholders' equity (deficit)	(66,633)	76,336	172,216

(1) The pro forma column in the balance sheet table reflects the automatic conversion of our outstanding shares of convertible preferred stock into 30,971,627 shares of common stock, which will occur immediately prior to the closing of this offering.

(2) The pro forma as adjusted column gives effect to the adjustments described in footnote (1) above, the sale by us of 6,000,000 shares of common stock in this offering at an assumed initial public offering price of $16.00 per share, the midpoint of the estimated price range set forth on the cover page of this prospectus, after deducting estimated underwriting discounts and commissions and estimated offering expenses payable by us, and our issuance and sale of $10.0 million in shares of our common stock at a price per share equal to the initial public offering price (or 625,000 shares based on the assumed initial public offering price of $16.00 per share) in the proposed concurrent private placement to NEA. Because we have not entered into any definitive agreement with NEA related to the concurrent private placement, there can be no assurance that the concurrent private placement will take place or that more or fewer shares will not be issued in the concurrent private placement.

(3) A $1.00 increase (decrease) in the assumed initial public offering price of $16.00 per share, which is the midpoint of the estimated offering price range set forth on the cover of this prospectus, would increase (decrease) the pro forma as adjusted amount of each of cash and cash equivalents, working capital, total assets and total stockholders' equity (deficit) by approximately $5.6 million, assuming that the number of shares offered by us in this offering, as set forth on the cover page of this prospectus, remains the same and after deducting estimated underwriting discounts and commissions and estimated offering expenses payable by us. An increase (decrease) of one million shares in the number of shares offered by us in this offering would increase (decrease) each of cash and cash equivalents, working capital, total assets and stockholders' equity (deficit) equity by approximately $14.9 million, assuming the assumed initial public offering price of $16.00 per share, which is the midpoint of the estimated offering price range set forth on the cover page of this prospectus, and the number of shares of common stock offered by us in the proposed concurrent private placement, in each case, remains the same, and after deducting estimated underwriting discounts and commissions and estimated offering expenses payable by us. The pro forma as adjusted information discussed above is illustrative only and will be adjusted based on the actual public offering price and other terms of this offering and the proposed concurrent private placement as determined at pricing.

(4) We define working capital as current assets less current liabilities. See our financial statements included elsewhere in this prospectus for further details regarding our current assets and current liabilities.

RISK FACTORS

Investing in our common stock involves a high degree of risk. You should carefully consider the risks described below, as well as the other information in this prospectus, including our financial statements and the related notes and the section titled "Management's Discussion and Analysis of Financial Condition and Results of Operations" in this prospectus, before deciding whether to invest in our common stock. The occurrence of any of the events or developments described below could harm our business, financial condition, results of operations and growth prospects. In such an event, the market price of our common stock could decline and you may lose all or part of your investment. Additional risks and uncertainties not presently known to us or that we currently deem immaterial also may impair our business operations.

Risks Related to Our Financial Position and Need for Additional Capital

We are in the early stages of clinical drug development and have a very limited operating history and no products approved for commercial sale, which may make it difficult for you to evaluate our current business and predict our future success and viability.

We are an early clinical stage biopharmaceutical company with a limited operating history. We were incorporated and commenced operations in 2012, have no products approved for commercial sale and have not generated any revenue. Our operations to date have been limited to organizing and staffing our company, business planning, raising capital, identifying and developing potential product candidates, conducting preclinical and clinical studies of our product candidates, including Phase 1 and Phase 2 clinical trials of AK002, our lead compound. All of our product candidates currently under development, other than AK002, are in preclinical development. We have not yet demonstrated our ability to successfully complete any large-scale, pivotal clinical trials, obtain marketing approvals, manufacture a commercial-scale drug or arrange for a third party to do so on our behalf or conduct sales and marketing activities. As a result, it may be more difficult for you to accurately predict our future success or viability than it could be if we had a longer operating history.

In addition, as a business with a limited operating history, we may encounter unforeseen expenses, difficulties, complications, delays and other known and unknown factors and risks frequently experienced by early-stage biopharmaceutical companies in rapidly evolving fields. We also may need to transition from a company with a research focus to a company capable of supporting commercial activities. We have not yet demonstrated an ability to successfully overcome such risks and difficulties, or to make such a transition. If we do not adequately address these risks and difficulties or successfully make such a transition, our business will suffer.

We have incurred significant net losses since inception and we expect to continue to incur significant net losses for the foreseeable future.

We have incurred net losses in each reporting period since our inception, have not generated any revenue to date and have financed our operations principally through private placements of our preferred stock. Our net loss was $23.6 million for the year ended December 31, 2017 and $8.5 million for the three months ended March 31, 2018. As of March 31, 2018, we had an accumulated deficit of $69.1 million. We have devoted substantially all of our resources and efforts to research and development. Our lead compound, AK002, is in clinical development, and our other product candidates are in preclinical development. As a result, we expect that it will be several years, if ever, before we generate revenue from product sales. Even if we succeed in receiving marketing approval for and commercializing one or more of our product candidates, we expect that we will continue to incur substantial research and development and other expenses in order to develop and market additional potential products.

We expect to continue to incur significant expenses and increasing operating losses for the foreseeable future. The net losses we incur may fluctuate significantly from quarter-to-quarter such that a period-to-period comparison of our results of operations may not be a good indication of our future performance. The size of our future net losses will depend, in part, on the rate of future growth of our expenses and our ability to generate revenue. Our prior losses and expected future losses have had and will continue to have an adverse effect on our working capital and our ability to achieve and maintain profitability.

Our ability to generate revenue and achieve profitability depends significantly on our ability to achieve a number of objectives.

Our business depends entirely on the successful development and commercialization of our product candidates. We currently generate no revenues from sales of any products. We have no products approved for commercial sale and do not anticipate generating any revenue from product sales until some time after we have successfully completed clinical development and received marketing approval for the commercial sale of a product candidate, if ever. Our ability to generate revenue and achieve profitability depends significantly on our ability to achieve a number of objectives, including:

- successful and timely completion of preclinical and clinical development of our lead compound, AK002, and any other future product candidates;
- timely receipt of marketing approvals for AK002 and any future product candidates for which we successfully complete clinical development and clinical trials from applicable regulatory authorities;
- the extent of any required post-marketing approval commitments to applicable regulatory authorities;
- developing an efficient and scalable manufacturing process for AK002 and any future product candidates, including establishing and maintaining commercially viable supply and manufacturing relationships with third parties to obtain finished products that are appropriately packaged for sale;
- successful launch of commercial sales following any marketing approval, including the development of a commercial infrastructure, whether in-house or with one or more collaborators;
- a continued acceptable safety profile following any marketing approval;
- commercial acceptance of AK002 and any future product candidates as viable treatment options by patients, the medical community and third-party payors;
- addressing any competing technological and market developments;
- identifying, assessing, acquiring and developing new product candidates;
- obtaining and maintaining patent protection, trade secret protection and regulatory exclusivity, both in the United States and internationally;
- protection of our rights in our intellectual property portfolio, including our licensed intellectual property;
- negotiating favorable terms in any collaboration, licensing or other arrangements that may be necessary to develop, manufacture or commercialize our product candidates; and
- attracting, hiring and retaining qualified personnel.

We may never be successful in achieving our objectives and, even if we do, may never generate revenue that is significant or large enough to achieve profitability. If we do achieve profitability, we may

not be able to sustain or increase profitability on a quarterly or annual basis. Our failure to become and remain profitable would decrease the value of our company and could impair our ability to maintain or further our research and development efforts, raise additional necessary capital, grow our business and/or continue our operations.

Even if this offering is successful, we will require substantial additional capital to finance our operations. If we are unable to raise such capital when needed, or on acceptable terms, we may be forced to delay, reduce and/or eliminate one or more of our research and drug development programs or future commercialization efforts.

Developing pharmaceutical products, including conducting preclinical studies and clinical trials, is a very time-consuming, expensive and uncertain process that takes years to complete. We expect our expenses to increase in connection with our ongoing activities, particularly as we conduct clinical trials of, and seek marketing approval for, AK002 and our other product candidates. In addition, if we obtain marketing approval for any of our product candidates, we expect to incur significant commercialization expenses related to drug sales, marketing, manufacturing and distribution. Commencing upon the closing of this offering, we also expect to incur additional costs associated with operating as a public company. Accordingly, we will need to obtain substantial additional funding in order to maintain our continuing operations. If we are unable to raise capital when needed or on acceptable terms, we may be forced to delay, reduce and/or eliminate one or more of our research and drug development programs or future commercialization efforts.

As of March 31, 2018, we had $74.6 million in cash and cash equivalents. We estimate that our net proceeds from this offering and the proposed concurrent private placement will be approximately $96.3 million, assuming an initial public offering price of $16.00 per share, which is the midpoint of the estimated offering price range set forth on the cover page of this prospectus, after deducting the estimated underwriting discounts and commissions and estimated offering expenses payable by us. We believe that our existing cash and cash equivalents will enable us to fund our operating expenses and capital expenditure requirements through at least the next twelve months. Our estimate as to how long we expect the net proceeds from this offering and the proposed concurrent private placement, together with our existing cash and cash equivalents, to be able to continue to fund our operations is based on assumptions that may prove to be wrong, and we could use our available capital resources sooner than we currently expect. Changing circumstances, some of which may be beyond our control, could cause us to consume capital significantly faster than we currently anticipate, and we may need to seek additional funds sooner than planned.

We plan to use the net proceeds from this offering and the proposed concurrent private placement to fund our development of AK002 and for other research and development activities, working capital and other general corporate purposes. This may include additional research, hiring additional personnel, capital expenditures and the costs of operating as a public company. Advancing the development of AK002 and any other product candidates will require a significant amount of capital. The net proceeds from this offering and the proposed concurrent private placement and our existing cash and cash equivalents will not be sufficient to fund all of the actions that are necessary to complete the development of AK002 or any of our other product candidates. We will be required to obtain further funding through public or private equity offerings, debt financings, collaborations and licensing arrangements or other sources, which may dilute our stockholders or restrict our operating activities. We do not have any committed external source of funds. Adequate additional financing may not be available to us on acceptable terms, or at all. Our failure to raise capital as and when needed would have a negative impact on our financial condition and our ability to pursue our business strategy.

Risks Related to the Discovery, Development and Commercialization of Our Product Candidates

We are dependent on the success of our lead compound, AK002, which is currently in multiple clinical trials. If we are unable to obtain approval for and commercialize AK002 for one or more indications in a timely manner, our business could be materially harmed.

Our future success is dependent on our ability to timely complete clinical trials and obtain marketing approval for, and then successfully commercialize AK002, our lead compound, for one or more indications. AK002 is in the early stages of development and we are investing the majority of our efforts and financial resources in the research and development of AK002 for multiple indications. AK002 will require additional clinical development, evaluation of clinical, preclinical and manufacturing activities, marketing approval from government regulators, substantial investment and significant marketing efforts before we generate any revenues from product sales. We are not permitted to market or promote AK002, or any other product candidates, before we receive marketing approval from the U.S. Food and Drug Administration ("FDA") and comparable foreign regulatory authorities, and we may never receive such marketing approvals.

The success of AK002 will depend on several factors, including the following:

- successful and timely completion of our ongoing clinical trials of AK002;
- initiation and successful patient enrollment and completion of additional clinical trials on a timely basis;
- efficacy, safety and tolerability profiles that are satisfactory to the FDA or any comparable foreign regulatory authority for marketing approval;
- timely receipt of marketing approvals for AK002 from applicable regulatory authorities;
- the extent of any required post-marketing approval commitments to applicable regulatory authorities;
- the maintenance of existing or the establishment of new supply arrangements with third-party drug product suppliers and manufacturers;
- the maintenance of existing or the establishment of new scaled production arrangements with third-party manufacturers to obtain finished products that are appropriately packaged for sale;
- obtaining and maintaining patent protection, trade secret protection and regulatory exclusivity, both in the United States and internationally;
- protection of our rights in our intellectual property portfolio, including our licensed intellectual property;
- successful launch of commercial sales following any marketing approval;
- a continued acceptable safety profile following any marketing approval;
- commercial acceptance by patients, the medical community and third-party payors; and
- our ability to compete with other therapies.

We do not have complete control over many of these factors, including certain aspects of clinical development and the regulatory submission process, potential threats to our intellectual property rights and the manufacturing, marketing, distribution and sales efforts of any future collaborator.

The regulatory approval processes of the FDA, European Medicines Agency ("EMA") and comparable foreign regulatory authorities are lengthy, time-consuming and inherently unpredictable. If we are ultimately unable to obtain regulatory approval for our product candidates, we will be unable to generate product revenue and our business will be substantially harmed.

The time required to obtain approval by the FDA, EMA and comparable foreign regulatory authorities is unpredictable, typically takes many years following the commencement of clinical trials, and depends upon numerous factors, including the type, complexity and novelty of the product candidates involved. In addition, approval policies, regulations or the type and amount of clinical data necessary to gain approval may change during the course of a product candidate's clinical development and may vary among jurisdictions, which may cause delays in the approval or the decision not to approve an application. Regulatory authorities have substantial discretion in the approval process and may refuse to accept any application or may decide that our data are insufficient for approval and require additional preclinical, clinical or other data. Even if we eventually complete clinical testing and receive approval of any regulatory filing for our product candidates, the FDA, EMA and comparable foreign regulatory authorities may approve our product candidates for a more limited indication or a narrower patient population than we originally requested. We have not submitted for, or obtained regulatory approval for any product candidate, and it is possible that none of our existing product candidates or any product candidates we may seek to develop in the future will ever obtain regulatory approval.

Applications for our product candidates could fail to receive regulatory approval for many reasons, including but not limited to the following:

- the FDA, EMA or comparable foreign regulatory authorities may disagree with the design, implementation or results of our clinical trials;
- the FDA, EMA or comparable foreign regulatory authorities may determine that our product candidates are not safe and effective, only moderately effective or have undesirable or unintended side effects, toxicities or other characteristics that preclude our obtaining marketing approval or prevent or limit commercial use;
- the population studied in the clinical program may not be sufficiently broad or representative to assure efficacy and safety in the full population for which we seek approval;
- the FDA, EMA or comparable foreign regulatory authorities may disagree with our interpretation of data from preclinical studies or clinical trials;
- the data collected from clinical trials of our product candidates may not be sufficient to support the submission of a Biologics License Application ("BLA") or New Drug Application ("NDA"), or other submission or to obtain regulatory approval in the United States or elsewhere;
- we may be unable to demonstrate to the FDA, EMA or comparable foreign regulatory authorities that a product candidate's risk-benefit ratio for its proposed indication is acceptable;
- the FDA, EMA or comparable foreign regulatory authorities may fail to approve the manufacturing processes, test procedures and specifications or facilities of third-party manufacturers with which we contract for clinical and commercial supplies; and
- the approval policies or regulations of the FDA, EMA or comparable foreign regulatory authorities may significantly change in a manner rendering our clinical data insufficient for approval.

This lengthy approval process, as well as the unpredictability of the results of clinical trials, may result in our failing to obtain regulatory approval to market any of our product candidates, which would significantly harm our business, results of operations and prospects.

If we experience delays or difficulties in the enrollment of patients in clinical trials, our receipt of necessary marketing approvals could be delayed or prevented.

We may not be able to initiate or continue clinical trials for our product candidates if we are unable to locate and enroll a sufficient number of eligible patients to participate in these trials as required by the FDA or comparable foreign regulatory authorities. Patient enrollment is a significant factor in the timing of clinical trials. In particular, because certain of our clinical trials of AK002 are focused on indications with small patient populations, our ability to enroll eligible patients may be limited or may result in slower enrollment than we anticipate.

Patient enrollment may be affected if our competitors have ongoing clinical trials for product candidates that are under development for the same indications as our product candidates, and patients who would otherwise be eligible for our clinical trials instead enroll in clinical trials of our competitors' product candidates. Patient enrollment may also be affected by other factors, including:

- size and nature of the patient population;
- severity of the disease under investigation;
- availability and efficacy of approved drugs for the disease under investigation;
- patient eligibility criteria for the trial in question;
- perceived risks and benefits of the product candidate under study;
- efforts to facilitate timely enrollment in clinical trials;
- patient referral practices of physicians;
- the ability to monitor patients adequately during and after treatment;
- proximity and availability of clinical trial sites for prospective patients; and
- continued enrollment of prospective patients by clinical trial sites.

Our inability to enroll a sufficient number of patients for our clinical trials would result in significant delays or may require us to abandon one or more clinical trials altogether. Enrollment delays in our clinical trials may result in increased development costs for our product candidates and jeopardize our ability to obtain marketing approval for the sale of our product candidates.

The clinical trials of our product candidates may not demonstrate safety and efficacy to the satisfaction of regulatory authorities or otherwise produce positive results.

Before obtaining marketing approval from regulatory authorities for the sale of our product candidates, we must complete preclinical development and then conduct extensive clinical trials to demonstrate the safety and efficacy of our product candidates. Clinical testing is expensive, difficult to design and implement, can take many years to complete and its ultimate outcome is uncertain. A failure of one or more clinical trials can occur at any stage of the process. The outcome of preclinical studies and early-stage clinical trials may not be predictive of the success of later clinical trials. Moreover, preclinical and clinical data are often susceptible to varying interpretations and analyses, and many companies that have believed their product candidates performed satisfactorily in preclinical studies and clinical trials have nonetheless failed to obtain marketing approval of their drugs.

We do not know whether our future clinical trials will begin on time or enroll patients on time, or whether our ongoing and/or future clinical trials will be completed on schedule or at all. Clinical trials can be delayed for a variety of reasons, including delays related to:

- obtaining marketing approval to commence a trial;

- reaching agreement on acceptable terms with prospective contract research organizations (“CROs”), and clinical trial sites;
- obtaining institutional review board approval at each clinical trial site;
- recruiting suitable patients to participate in a trial;
- patients failing to comply with trial protocol or dropping out of a trial;
- clinical trial sites deviating from trial protocol or dropping out of a trial;
- the need to add new clinical trial sites; or
- manufacturing sufficient quantities of product candidate for use in clinical trials.

We may experience numerous unforeseen events during, or as a result of, clinical trials that could delay or prevent receipt of marketing approval or our ability to commercialize our product candidates, including:

- receipt of feedback from regulatory authorities that requires us to modify the design of our clinical trials;
- negative or inconclusive clinical trial results that may require us to conduct additional clinical trials or abandon certain drug development programs;
- the number of patients required for clinical trials being larger than anticipated, enrollment in these clinical trials being slower than anticipated or participants dropping out of these clinical trials at a higher rate than anticipated;
- third-party contractors failing to comply with regulatory requirements or meet their contractual obligations to us in a timely manner, or at all;
- the suspension or termination of our clinical trials for various reasons, including non-compliance with regulatory requirements, a finding that our product candidates have undesirable side effects or other unexpected characteristics or risks;
- the cost of clinical trials of our product candidates being greater than anticipated;
- the supply or quality of our product candidates or other materials necessary to conduct clinical trials of our product candidates being insufficient or inadequate; and
- regulators revising the requirements for approving our product candidates.

If we are required to conduct additional clinical trials or other testing of our product candidates beyond those that we currently contemplate, if we are unable to successfully complete clinical trials of our product candidates or other testing, if the results of these trials or tests are not positive or are only modestly positive or if there are safety concerns, we may incur unplanned costs, be delayed in obtaining marketing approval, if at all, receive more limited or restrictive marketing approval, be subject to additional post-marketing testing requirements or have the drug removed from the market after obtaining marketing approval.

The outcome of preclinical testing and early clinical trials may not be predictive of the success of later clinical trials, and the results of our clinical trials may not satisfy the requirements of the FDA or comparable foreign regulatory authorities.

We currently have no drugs approved for sale and we cannot guarantee that we will ever have marketable drugs. Clinical failure can occur at any stage of clinical development. Clinical trials may produce negative or inconclusive results, and we or any future collaborators may decide, or regulators may require us, to conduct additional clinical trials or preclinical studies. We will be required to

demonstrate with substantial evidence through well-controlled clinical trials that our product candidates are safe and effective for use in a diverse population before we can seek marketing approvals for their commercial sale. Success in preclinical studies and early-stage clinical trials does not mean that future larger registration clinical trials will be successful. This is because product candidates in later-stage clinical trials may fail to demonstrate sufficient safety and efficacy to the satisfaction of the FDA and non-U.S. regulatory authorities despite having progressed through preclinical studies and early-stage clinical trials. In particular, no compound with the mechanism of action of AK002 has been commercialized, and the outcome of preclinical studies and early-stage clinical trials may not be predictive of the success of later-stage clinical trials.

From time to time, we may publish or report interim or preliminary data from our clinical trials. Interim or preliminary data from clinical trials that we may conduct may not be indicative of the final results of the trial and are subject to the risk that one or more of the clinical outcomes may materially change as patient enrollment continues and more patient data become available. Interim or preliminary data also remain subject to audit and verification procedures that may result in the final data being materially different from the interim or preliminary data. As a result, interim or preliminary data should be viewed with caution until the final data are available.

In some instances, there can be significant variability in safety and efficacy results between different clinical trials of the same product candidate due to numerous factors, including changes in trial protocols, differences in size and type of the patient populations, differences in and adherence to the dosing regimen and other trial protocols and the rate of dropout among clinical trial participants. In addition, we use patient-reported outcome assessments (“PROs”) in our clinical trials, which involve patients’ subjective assessments of efficacy of the treatments they receive in the trial. Such assessments can vary widely from day to day for a particular patient, and from patient to patient and site to site within a clinical trial. This subjectivity can increase the uncertainty of, and adversely impact, our clinical trial outcomes.

We do not know whether any clinical trials we may conduct will demonstrate consistent or adequate efficacy and safety sufficient to obtain marketing approval to market our product candidates.

Our product candidates may not achieve adequate market acceptance among physicians, patients, healthcare payors and others in the medical community necessary for commercial success.

Even if our product candidates receive regulatory approval, they may not gain adequate market acceptance among physicians, patients, healthcare payors and others in the medical community. The degree of market acceptance of any of our approved product candidates will depend on a number of factors, including:

- the efficacy and safety profile as demonstrated in planned clinical trials;
- the timing of market introduction of the product candidate as well as competitive products;
- the clinical indications for which the product candidate is approved;
- restrictions on the use of our products, if approved, such as boxed warnings or contraindications in labeling, or a risk evaluation and mitigation strategy, if any, which may not be required of alternative treatments and competitor products;
- the potential and perceived advantages of product candidates over alternative treatments;
- the cost of treatment in relation to alternative treatments;
- the availability of coverage and adequate reimbursement and pricing by third parties and government authorities;

- relative convenience and ease of administration;
- the effectiveness of sales and marketing efforts;
- unfavorable publicity relating to the product candidate; and
- the approval of other new therapies for the same indications.

If any product candidate is approved but does not achieve an adequate level of acceptance by physicians, hospitals, healthcare payors and patients, we may not generate or derive sufficient revenue from that product candidate and our financial results could be harmed. AK002 is currently administered as an intravenous treatment, which is less convenient for patients than some other methods of administration, such as an orally delivered drug.

The sizes of the patient populations suffering from some of the diseases we are targeting are small and based on estimates that may not be accurate.

Our projections of both the number of people who have some of the diseases we are targeting, as well as the subset of people with these diseases who have the potential to benefit from treatment with AK002 and any other future product candidates, are estimates. These estimates have been derived from a variety of sources, including scientific literature, surveys of clinics, physician interviews, patient foundations and market research, and may prove to be incorrect. Further, new studies may change the estimated incidence or prevalence of these diseases. The number of patients may turn out to be lower than expected. Additionally, the potentially addressable patient population for AK002 and any other future product candidates may be limited or may not be amenable to treatment with AK002 and any other products, if and when approved. Even if we obtain significant market share for AK002 and any other products (if and when they are approved), small potential target populations for certain indications means we may never achieve profitability without obtaining market approval for additional indications.

Our business will be impacted by our ability to advance additional product candidates beyond AK002 into clinical development and through to regulatory approval and commercialization. Our other product candidates are at even earlier stages of development than AK002 and may fail in development or suffer delays that adversely affect their commercial viability.

All of our product candidates are in the early stages of development, and may fail in development or suffer delays that adversely affect their commercial viability. A product candidate can unexpectedly fail at any stage of preclinical and clinical development. The historical failure rate for product candidates is high due to risks relating to safety, efficacy, clinical execution, changing standards of medical care and other unpredictable variables. The results from preclinical testing or early clinical trials of a product candidate may not be predictive of the results that will be obtained in later-stage clinical trials of the product candidate.

Our future operating results are dependent on our ability to successfully develop, obtain regulatory approval for, and then successfully commercialize other product candidates in addition to AK002. The success of any product candidates we may develop will depend on many factors, including the following:

- generating sufficient data to support the initiation or continuation of clinical trials;
- obtaining regulatory permission to initiate clinical trials;
- contracting with the necessary parties to conduct clinical trials;
- successful enrollment of patients in, and the completion of, clinical trials;

- the timely manufacture of sufficient quantities of the product candidate for use in clinical trials; and
- adverse events in the clinical trials.

Even if we successfully advance any other product candidates into clinical development, their success will be subject to all of the clinical, regulatory and commercial risks described elsewhere in this “Risk Factors” section. Accordingly, we cannot assure you that we will ever be able to develop, obtain regulatory approval of, commercialize or generate significant revenue from any other product candidates.

Any drugs we develop may become subject to unfavorable third-party reimbursement practices and pricing regulations.

The availability and extent of coverage and adequate reimbursement by governmental and private payors is essential for most patients to be able to afford expensive treatments. Sales of any of our product candidates that receive marketing approval will depend substantially, both in the United States and internationally, on the extent to which the costs of our product candidates will be paid by health maintenance, managed care, pharmacy benefit, and similar healthcare management organizations or reimbursed by government health administration authorities, private health coverage insurers and other third-party payors. If reimbursement is not available, or is available only to limited levels, we may not be able to successfully commercialize our product candidates. Even if coverage is provided, the approved reimbursement amount may not be high enough to allow us to establish or maintain pricing sufficient to realize an adequate return on our investment. Coverage and reimbursement may impact the demand for, or the price of, any product candidate for which we obtain marketing approval. If coverage and reimbursement are not available or reimbursement is available only to limited levels, we may not successfully commercialize any product candidate for which we obtain marketing approval.

There is significant uncertainty related to insurance coverage and reimbursement of newly approved products. In the United States, principal decisions about reimbursement for new products are typically made by the Centers for Medicare & Medicaid Services (“CMS”), an agency within the U.S. Department of Health and Human Services. CMS decides whether and to what extent a new product will be covered and reimbursed under Medicare, and private payors often follow CMS’s decisions regarding coverage and reimbursement to a substantial degree. However, one payor’s determination to provide coverage for a drug product does not assure that other payors will also provide coverage for the drug product. As a result, the coverage determination process is often time-consuming and costly. This process will require us to provide scientific and clinical support for the use of our products to each payor separately, with no assurance that coverage and adequate reimbursement will be applied consistently or obtained in the first instance.

Increasingly, third-party payors are requiring that drug companies provide them with predetermined discounts from list prices and are challenging the prices charged for medical products. Further, such payors are increasingly challenging the price, examining the medical necessity and reviewing the cost effectiveness of medical drug products. There may be especially significant delays in obtaining coverage and reimbursement for newly approved drugs. Third-party payors may limit coverage to specific drug products on an approved list, known as a formulary, which might not include all FDA-approved drugs for a particular indication. We may need to conduct expensive pharmaco-economic studies to demonstrate the medical necessity and cost effectiveness of our products. Nonetheless, our product candidates may not be considered medically necessary or cost effective. We cannot be sure that coverage and reimbursement will be available for any product that we commercialize and, if reimbursement is available, what the level of reimbursement will be.

Outside the United States, international operations are generally subject to extensive governmental price controls and other market regulations, and we believe the increasing emphasis on

cost containment initiatives in Europe, Canada and other countries has and will continue to put pressure on the pricing and usage of therapeutics such as our product candidates. In many countries, particularly the countries of the European Union, medical product prices are subject to varying price control mechanisms as part of national health systems. In these countries, pricing negotiations with governmental authorities can take considerable time after a product receives marketing approval. To obtain reimbursement or pricing approval in some countries, we may be required to conduct a clinical trial that compares the cost-effectiveness of our product candidate to other available therapies. In general, product prices under such systems are substantially lower than in the United States. Other countries allow companies to fix their own prices for products, but monitor and control company profits. Additional foreign price controls or other changes in pricing regulation could restrict the amount that we are able to charge for our product candidates. Accordingly, in markets outside the United States, the reimbursement for our products may be reduced compared with the United States and may be insufficient to generate commercially reasonable revenue and profits.

If we are unable to establish or sustain coverage and adequate reimbursement for any future product candidates from third-party payors, the adoption of those products and sales revenue will be adversely affected, which, in turn, could adversely affect the ability to market or sell those product candidates, if approved. Coverage policies and third-party reimbursement rates may change at any time. Even if favorable coverage and reimbursement status is attained for one or more products for which we receive regulatory approval, less favorable coverage policies and reimbursement rates may be implemented in the future.

If our competitors develop and market products that are more effective, safer or less expensive than our product candidates, our commercial opportunities will be negatively impacted.

The biotechnology industry is highly competitive and subject to rapid and significant technological change. Products we may develop in the future are likely to face competition from other drugs and therapies, some of which we may not currently be aware. In addition, our products may need to compete with off-label drugs used by physicians to treat the indications for which we seek approval. This may make it difficult for us to replace existing therapies with our products.

We are not aware of any other company or organization that is conducting clinical trials of a product candidate that targets both eosinophils and mast cells, including any product candidate that specifically targets Siglec-8. The competition we may face with respect to the indications we are targeting with AK002 includes announced plans by Blueprint Medicines to begin a trial evaluating avapritinib in ISM in the second half of 2018, and current testing by Novartis Pharmaceuticals of ligelizumab in a Phase 2 trial for chronic spontaneous urticaria.

These companies, or other major multinational pharmaceutical and biotechnology companies, emerging and start-up companies, universities and other research institutions, could focus their future efforts on developing competing therapies and treatments for any of the indications we are currently targeting or may target in the future. Many of these current and potential competitors have significantly greater financial, manufacturing, marketing, drug development, technical and human resources and commercial expertise than we do. Large pharmaceutical and biotechnology companies, in particular, have extensive experience in clinical testing, obtaining regulatory approvals, recruiting patients and manufacturing biotechnology products. These companies also have significantly greater research and marketing capabilities than we do and may also have products that have been approved or are in late stages of development, and collaborative arrangements in our target markets with leading companies and research institutions. Established pharmaceutical and biotechnology companies may also invest heavily to accelerate discovery and development of novel compounds or to in-license novel compounds that could make the product candidates that we develop obsolete. As a result of all of these factors, our competitors may succeed in obtaining approval from the FDA or foreign regulatory authorities or discovering, developing and commercializing products in our field before we do.

Smaller and other early-stage companies may also prove to be significant competitors, particularly through collaborative arrangements with large and established companies. These companies compete with us in recruiting and retaining qualified scientific and management personnel, establishing clinical trial sites and patient registration for planned clinical trials, as well as in acquiring technologies complementary to, or necessary for, our programs. In addition, the biotechnology industry is characterized by rapid technological change. If we fail to stay at the forefront of technological change, we may be unable to compete effectively. Technological advances or products developed by our competitors may render our technologies or product candidates obsolete, less competitive or not economical.

We have limited resources and are currently focusing our efforts on developing AK002 for particular indications. As a result, we may fail to capitalize on other product candidates or indications that may ultimately have proven to be more profitable.

We are currently focusing our efforts on developing AK002 for eosinophilic gastritis ("EG"), indolent systemic mastocytosis ("ISM"), chronic urticaria ("CU") and severe allergic conjunctivitis ("SAC"). As a result, we may forego or delay pursuit of opportunities for other indications or with other product candidates that may have greater commercial potential. Our resource allocation decisions may cause us to fail to capitalize on viable commercial drugs or profitable market opportunities. Our spending on current and future research and development activities for specific indications may not yield any commercially viable drugs. If we do not accurately evaluate the commercial potential or target markets for a particular product candidate, we may relinquish valuable rights to that product candidate through collaboration, licensing or other strategic arrangements in cases in which it would have been more advantageous for us to retain sole development and commercialization rights to such product candidate.

Our business entails a significant risk of product liability and if we are unable to obtain sufficient insurance coverage such inability could have an adverse effect on our business and financial condition.

Our business exposes us to significant product liability risks inherent in the development, testing, manufacturing and marketing of therapeutic treatments. Product liability claims could delay or prevent completion of our development programs. If we succeed in marketing products, such claims could result in an FDA investigation of the safety and effectiveness of our products, our manufacturing processes and facilities or our marketing programs. FDA investigation could potentially lead to a recall of our products or more serious enforcement action, limitations on the approved indications for which they may be used or suspension or withdrawal of approvals. Regardless of the merits or eventual outcome, liability claims may also result in decreased demand for our products, injury to our reputation, costs to defend the related litigation, a diversion of management's time and our resources and substantial monetary awards to trial participants or patients. We currently have product liability insurance that we believe is appropriate for our stage of development and may need to obtain higher levels prior to marketing any of our product candidates, if approved. Any insurance we have or may obtain may not provide sufficient coverage against potential liabilities. Furthermore, clinical trial and product liability insurance is becoming increasingly expensive. As a result, we may be unable to obtain sufficient insurance at a reasonable cost to protect us against losses caused by product liability claims that could have an adverse effect on our business and financial condition.

Risks Related to Regulatory Approval and Other Legal Compliance Matters

We may be unable to obtain U.S. or foreign regulatory approval and, as a result, unable to commercialize our product candidates.

Our product candidates are subject to extensive governmental regulations relating to, among other things, research, testing, development, manufacturing, safety, efficacy, approval, recordkeeping,

reporting, labeling, storage, packaging, advertising and promotion, pricing, marketing and distribution of drugs and therapeutic biologics. Rigorous preclinical testing and clinical trials and an extensive regulatory approval process must be successfully completed in the United States and in many foreign jurisdictions before a new drug or therapeutic biologic can be marketed. Satisfaction of these and other regulatory requirements is costly, time-consuming, uncertain and subject to unanticipated delays. It is possible that none of the product candidates we may develop will obtain the regulatory approvals necessary for us to begin selling them.

Our company has not conducted or managed clinical trials through regulatory approval, including FDA approval. The time required to obtain FDA and other approvals is unpredictable but typically takes many years following the commencement of clinical trials, depending upon the type, complexity and novelty of the product candidate. The standards that the FDA and its foreign counterparts use when regulating us require judgment and can change, which makes it difficult to predict with certainty how they will be applied. Any analysis we perform of data from preclinical and clinical activities is subject to confirmation and interpretation by regulatory authorities, which could delay, limit or prevent regulatory approval. We may also encounter unexpected delays or increased costs due to new government regulations. Examples of such regulations include future legislation or administrative action, or changes in FDA policy during the period of product development, clinical trials and FDA regulatory review. It is impossible to predict whether legislative changes will be enacted, or whether FDA or foreign regulations, guidance or interpretations will be changed, or what the impact of such changes, if any, may be.

Any delay or failure in obtaining required approvals could have a material and adverse effect on our ability to generate revenue from the particular product candidate for which we are seeking approval. Furthermore, any regulatory approval to market a product may be subject to limitations on the approved uses for which we may market the product or the labeling or other restrictions. In addition, the FDA has the authority to require a Risk Evaluation and Mitigation Strategy (“REMS”), plan as part of a BLA or NDA, or after approval, which may impose further requirements or restrictions on the distribution or use of an approved drug or biologic. These requirements or restrictions might include limiting prescribing to certain physicians or medical centers that have undergone specialized training, limiting treatment to patients who meet certain safe-use criteria and requiring treated patients to enroll in a registry. These limitations and restrictions may limit the size of the market for the product and affect reimbursement by third-party payors.

We are also subject to numerous foreign regulatory requirements governing, among other things, the conduct of clinical trials, manufacturing and marketing authorization, pricing and third-party reimbursement. The foreign regulatory approval process varies among countries and may include all of the risks associated with FDA approval described above as well as risks attributable to the satisfaction of local regulations in foreign jurisdictions. Moreover, the time required to obtain approval may differ from that required to obtain FDA approval. Approval by the FDA does not ensure approval by regulatory authorities outside the United States and vice versa.

Our clinical trials may reveal significant adverse events, toxicities or other side effects and may result in a safety profile that could inhibit regulatory approval or market acceptance of any of our product candidates.

In order to obtain marketing approval for any of our product candidates, we must demonstrate the safety and efficacy of the product candidate for the relevant clinical indication or indications through preclinical studies and clinical trials as well as additional supporting data. If our product candidates are associated with undesirable side effects in preclinical studies or clinical trials, or have unexpected characteristics, we may need to interrupt, delay or abandon their development or limit development to more narrow uses or subpopulations in which the undesirable side effects or other characteristics are less prevalent, less severe or more acceptable from a risk-benefit perspective.

We have completed a randomized, double-blind placebo-controlled Phase 1 trial for AK002 in 51 healthy volunteers and have an ongoing Phase 1 trial in 25 patients with ISM. We are also currently testing AK002 in a double-blind, placebo-controlled Phase 2 trial in patients with EG, in an open-label Phase 2 trial in patients with CU and in a Phase 1 trial in patients with SAC. Although we have conducted various preclinical studies and completed one Phase 1 clinical trial, we do not know the predictive value of these studies and trials for our future clinical trials, and we cannot guarantee that any positive results in preclinical studies or previous clinical trials will successfully translate to patients in our future clinical trials. It is not uncommon to observe results in clinical trials that are unexpected based on preclinical testing, and many product candidates fail in clinical trials despite promising preclinical results. Moreover, preclinical and clinical data are often susceptible to varying interpretations and analyses, and many companies that believed their product candidates performed satisfactorily in preclinical studies and clinical trials have nonetheless failed to obtain marketing approval for their products. Because Siglec-8 is only naturally expressed in humans and certain other primates, there is no standard animal toxicology model for anti-Siglec-8 therapies, and the acceptability of our preclinical safety data for AK002 depends on the continued acceptance by the FDA and EMA, and the acceptance by other regulatory authorities, of the use of our proprietary transgenic mice models for toxicology studies.

AK002 has generally been well tolerated in our clinical trials. The most common adverse event has been the occurrence of mild to moderate infusion-related reactions (“IRRs”) (flushing, feeling of warmth, headache, nausea and dizziness) which occurred mostly during the first infusion and diminished or did not occur on subsequent infusions. Temporal interruption of the AK002 infusion and minimal intervention generally resulted in prompt resolution of symptoms and ability to resume the infusion without further complications. In the Phase 1 healthy volunteer trial, one subject treated with 1.0 mg/kg of AK002 administered over one hour experienced an infusion reaction three hours after dosing, including nausea, vomiting and hypotension, which was considered severe and led to the subject discontinuing from the trial. The subject was treated with standard therapies and no further symptoms occurred. Subjects in our ongoing and planned clinical trials may in the future suffer other significant adverse events or other side effects not observed in our preclinical studies or previous clinical trials. If clinical trials of our product candidates fail to demonstrate efficacy to the satisfaction of regulatory authorities or do not otherwise produce positive results, we may incur additional costs or experience delays in completing, or ultimately be unable to complete, development and commercialization of our product candidates.

If further significant adverse events or other side effects are observed in any of our current or future clinical trials, we may have difficulty recruiting patients to the clinical trials, patients may drop out of our trials, or we may be required to abandon the trials or our development efforts of that product candidate altogether. We, the FDA, the EMA, other applicable regulatory authorities or an institutional review board may suspend clinical trials of a product candidate at any time for various reasons, including a belief that subjects in such trials are being exposed to unacceptable health risks or adverse side effects. Some potential therapeutics developed in the biotechnology industry that initially showed therapeutic promise in early-stage studies have later been found to cause side effects that prevented their further development. Even if the side effects do not preclude the drug from obtaining or maintaining marketing approval, undesirable side effects may inhibit market acceptance of the approved product due to its tolerability versus other therapies. Any of these developments could materially harm our business, financial condition and prospects.

Further, if any of our product candidates obtains marketing approval, toxicities associated with our product candidates may also develop after such approval and lead to a requirement to conduct additional clinical safety trials, additional warnings being added to the labeling, significant restrictions on the use of the product or the withdrawal of the product from the market. We cannot predict whether

our product candidates will cause toxicities in humans that would preclude or lead to the revocation of regulatory approval based on preclinical studies or early-stage clinical testing.

The FDA, EMA and applicable foreign regulatory authorities may not accept data from trials conducted in locations outside of their jurisdiction.

We have completed a clinical trial in Australia and currently have an ongoing clinical trial in Germany. We may also in the future choose to conduct additional clinical trials in these countries or other countries, including in Europe. The acceptance of study data by the FDA, EMA or applicable foreign regulatory authority from clinical trials conducted outside of their respective jurisdictions may be subject to certain conditions. In cases where data from foreign clinical trials are intended to serve as the basis for marketing approval in the United States, the FDA will generally not approve the application on the basis of foreign data alone unless (i) the data are applicable to the United States population and United States medical practice and (ii) the trials are performed by clinical investigators of recognized competence and pursuant to current good clinical practices regulations. Additionally, the FDA's clinical trial requirements, including sufficient size of patient populations and statistical powering, must be met. Many foreign regulatory bodies have similar approval requirements. In addition, such foreign trials would be subject to the applicable local laws of the foreign jurisdictions where the trials are conducted. There can be no assurance that the FDA, EMA or any applicable foreign regulatory authority will accept data from trials conducted outside of its applicable jurisdiction. If the FDA, EMA or any applicable foreign regulatory authority does not accept such data, it would result in the need for additional trials, which would be costly and time-consuming and delay aspects of our business plan, and which may result in our product candidates not receiving approval or clearance for commercialization in the applicable jurisdiction.

Obtaining and maintaining regulatory approval of our product candidates in one jurisdiction does not mean that we will be successful in obtaining regulatory approval of our product candidates in other jurisdictions.

Obtaining and maintaining regulatory approval of our product candidates in one jurisdiction does not guarantee that we will be able to obtain or maintain regulatory approval in any other jurisdiction. For example, even if the FDA or EMA grants marketing approval of a product candidate, comparable regulatory authorities in foreign jurisdictions must also approve the manufacturing, marketing and promotion of the product candidate in those countries. However, a failure or delay in obtaining regulatory approval in one jurisdiction may have a negative effect on the regulatory approval process in others. Approval procedures vary among jurisdictions and can involve requirements and administrative review periods different from those in the United States, including additional preclinical studies or clinical trials as clinical trials conducted in one jurisdiction may not be accepted by regulatory authorities in other jurisdictions. In many jurisdictions outside the United States, a product candidate must be approved for reimbursement before it can be approved for sale in that jurisdiction. In some cases, the price that we intend to charge for our products is also subject to approval.

Obtaining foreign regulatory approvals and compliance with foreign regulatory requirements could result in significant delays, difficulties and costs for us and could delay or prevent the introduction of our products in certain countries. If we or any partner we work with fail to comply with the regulatory requirements in international markets or fail to receive applicable marketing approvals, our target market will be reduced and our ability to realize the full market potential of our product candidates will be harmed.

Even if our product candidates receive regulatory approval, they will be subject to significant post-marketing regulatory requirements.

Any regulatory approvals that we may receive for our product candidates will require surveillance to monitor the safety and efficacy of the product candidate, may contain significant limitations related to use restrictions for specified age groups, warnings, precautions or contraindications, and may include burdensome post-approval study or risk management requirements. For example, the FDA may require a REMS in order to approve our product candidates, which could entail requirements for a medication guide, physician communication plans or additional elements to ensure safe use, such as restricted distribution methods, patient registries and other risk minimization tools. In addition, if the FDA or foreign regulatory authorities approve our product candidates, the manufacturing processes, labeling, packaging, distribution, adverse event reporting, storage, advertising, promotion, import, export and recordkeeping for our product candidates will be subject to extensive and ongoing regulatory requirements. These requirements include submissions of safety and other post-marketing information and reports, registration, as well as continued compliance with current good manufacturing practices ("cGMPs") and good clinical practices ("GCPs"), for any clinical trials that we conduct post-approval. In addition, manufacturers of drug products and their facilities are subject to continual review and periodic inspections by the FDA and other regulatory authorities for compliance with cGMP regulations and standards. If we or a regulatory agency discover previously unknown problems with a product, such as adverse events of unanticipated severity or frequency, or problems with the facilities where the product is manufactured, a regulatory agency may impose restrictions on that product, the manufacturing facility or us, including requiring recall or withdrawal of the product from the market or suspension of manufacturing. In addition, failure to comply with FDA and foreign regulatory requirements may, either before or after product approval, if any, subject our company to administrative or judicially imposed sanctions, including:

- restrictions on our ability to conduct clinical trials, including full or partial clinical holds on ongoing or planned trials;
- restrictions on the products, manufacturers or manufacturing process;
- warning or untitled letters;
- civil and criminal penalties;
- injunctions;
- suspension or withdrawal of regulatory approvals;
- product seizures, detentions or import bans;
- voluntary or mandatory product recalls and publicity requirements;
- total or partial suspension of production;
- imposition of restrictions on operations, including costly new manufacturing requirements; and
- refusal to approve pending BLAs or supplements to approved BLAs.

The occurrence of any event or penalty described above may inhibit our ability to commercialize our product candidates and generate revenue.

We may not be able to obtain orphan drug designation or obtain or maintain orphan drug exclusivity for our product candidates and, even if we do, that exclusivity may not prevent the FDA or the EMA, from approving competing products.

Regulatory authorities in some jurisdictions, including the United States and the European Union, may designate drugs for relatively small patient populations as orphan drugs. Under the Orphan Drug

Act, the FDA may designate a product as an orphan drug if it is a drug intended to treat a rare disease or condition, which is generally defined as a patient population of fewer than 200,000 individuals annually in the United States, or a patient population greater than 200,000 in the United States where there is no reasonable expectation that the cost of developing the drug will be recovered from sales in the United States. We have obtained orphan drug designation for EG and EGE in the United States and for ISM in the European Union. We expect to seek orphan drug designation for AK002 for other gastrointestinal diseases and may seek orphan drug designations for other indications or for other of our product candidates. There can be no assurances that we will be able to obtain such designations.

In the United States, orphan drug designation entitles a party to financial incentives such as opportunities for grant funding towards clinical trial costs, tax advantages and user-fee waivers. In addition, if a product that has orphan drug designation subsequently receives the first FDA approval for the disease for which it has such designation, the product is entitled to orphan drug exclusivity. Orphan drug exclusivity in the United States provides that the FDA may not approve any other applications, including a full BLA or NDA, to market the same drug for the same indication for seven years, except in limited circumstances. The applicable exclusivity period is ten years in Europe. The European exclusivity period can be reduced to six years if a drug no longer meets the criteria for orphan drug designation or if the drug is sufficiently profitable so that market exclusivity is no longer justified.

Even if we obtain orphan drug designation for a product candidate, we may not be able to obtain or maintain orphan drug exclusivity for that product candidate. We may not be the first to obtain marketing approval of any product candidate for which we have obtained orphan drug designation for the orphan-designated indication due to the uncertainties associated with developing pharmaceutical products. In addition, exclusive marketing rights in the United States may be limited if we seek approval for an indication broader than the orphan-designated indication or may be lost if the FDA later determines that the request for designation was materially defective or if we are unable to assure sufficient quantities of the product to meet the needs of patients with the rare disease or condition. Further, even if we obtain orphan drug exclusivity for a product, that exclusivity may not effectively protect the product from competition because different drugs with different active moieties may be approved for the same condition. Even after an orphan drug is approved, the FDA can subsequently approve the same drug with the same active moiety for the same condition if the FDA concludes that the later drug is clinically superior in that it is shown to be safer, more effective or makes a major contribution to patient care or the manufacturer of the product with orphan exclusivity is unable to maintain sufficient product quantity. Orphan drug designation neither shortens the development time or regulatory review time of a drug nor gives the drug any advantage in the regulatory review or approval process.

Although we may seek a breakthrough therapy designation for AK002 or one or more of our other product candidates, we might not receive such designation, and even if we do, such designation may not lead to a faster development or regulatory review or approval process.

We may seek a breakthrough therapy designation for AK002 in one or more indications or for other product candidates. A breakthrough therapy is defined as a drug that is intended, alone or in combination with one or more other drugs, to treat a serious condition, and preliminary clinical evidence indicates that the drug may demonstrate substantial improvement over existing therapies on one or more clinically significant endpoints, such as substantial treatment effects observed early in clinical development. For drugs and biologics that have been designated as breakthrough therapies, interaction and communication between the FDA and the sponsor of the trial can help to identify the most efficient path for clinical development while minimizing the number of patients placed in ineffective control regimens. Drugs designated as breakthrough therapies by the FDA may also be eligible for priority review if supported by clinical data at the time the NDA is submitted to the FDA.

Designation as a breakthrough therapy is within the discretion of the FDA. Accordingly, even if we believe that one of our product candidates meets the criteria for designation as a breakthrough therapy, the FDA may disagree and instead determine not to make such designation. Even if we receive breakthrough therapy designation, the receipt of such designation for a product candidate may not result in a faster development or regulatory review or approval process compared to drugs considered for approval under conventional FDA procedures and does not assure ultimate approval by the FDA. In addition, even if one or more of our product candidates qualify as breakthrough therapies, the FDA may later decide that the product candidates no longer meet the conditions for qualification or decide that the time period for FDA review or approval will not be shortened.

We may face difficulties from changes to current regulations and future legislation.

Existing regulatory policies may change and additional government regulations may be enacted that could prevent, limit or delay regulatory approval of our product candidates. We cannot predict the likelihood, nature or extent of government regulation that may arise from future legislation or administrative action, either in the United States or abroad. If we are slow or unable to adapt to changes in existing requirements or the adoption of new requirements or policies, or if we are not able to maintain regulatory compliance, we may lose any marketing approval that we may have obtained and we may not achieve or sustain profitability.

More recently, President Donald Trump has made statements that suggest he plans to seek repeal of all or portions of the Affordable Care Act (“ACA”), and has stated that he will ask Congress to replace the current legislation with new legislation. There is uncertainty with respect to the impact President Trump’s Administration may have, if any, and any changes likely will take time to unfold, and could have an impact on coverage and reimbursement for healthcare items and services covered by plans that were authorized by the ACA. However, we cannot predict the ultimate content, timing or effect of any healthcare reform legislation or the impact of potential legislation on us. In addition, other legislative changes have been proposed and adopted since the ACA was enacted. These changes included aggregate reductions to Medicare payments to providers of up to 2% per fiscal year, effective April 1, 2013, which, due to subsequent legislative amendments, will stay in effect through 2025 unless additional Congressional action is taken. In January 2013, President Obama signed into law the American Taxpayer Relief Act of 2012, which, among other things, reduced Medicare payments to several providers, and increased the statute of limitations period for the government to recover overpayments to providers from three to five years. These new laws may result in additional reductions in Medicare and other healthcare funding, which could have a material adverse effect on customers for our drugs, if approved, and accordingly, our financial operations.

We expect that the ACA, as well as other healthcare reform measures that may be adopted in the future, may result in more rigorous coverage criteria and in additional downward pressure on the price that we receive for any approved product. Any reduction in reimbursement from Medicare or other government programs may result in a similar reduction in payments from private payors. The implementation of cost containment measures or other healthcare reforms may prevent us from being able to generate revenue, attain profitability or commercialize our product candidates.

Legislative and regulatory proposals have been made to expand post-approval requirements and restrict sales and promotional activities for biotechnology products. We cannot be sure whether additional legislative changes will be enacted, or whether FDA regulations, guidance or interpretations will be changed, or what the impact of such changes on the marketing approvals of our product candidates, if any, may be. In addition, increased scrutiny by the U.S. Congress of the FDA's approval process may significantly delay or prevent marketing approval, as well as subject us to more stringent product labeling and post-marketing testing and other requirements.

Our relationships with customers and third-party payors will be subject to applicable anti-kickback, fraud and abuse, transparency and other healthcare laws and regulations, which could expose us to, among other things, criminal sanctions, civil penalties, contractual damages, reputational harm, administrative burdens and diminished profits and future earnings.

Healthcare providers and third-party payors play a primary role in the recommendation and prescription of any product candidates for which we obtain marketing approval. Our future arrangements with third-party payors and customers may expose us to broadly applicable fraud and abuse and other healthcare laws and regulations that may constrain the business or financial arrangements and relationships through which we market, sell and distribute our products for which we obtain marketing approval. Restrictions under applicable federal and state healthcare laws and regulations, include the following:

- the federal Anti-Kickback Statute prohibits, among other things, persons and entities from knowingly and willfully soliciting, offering, receiving or providing remuneration, directly or indirectly, in cash or in kind, to induce or reward, or in return for, either the referral of an individual for, or the purchase, order or recommendation of, any good or service, for which payment may be made under a federal healthcare program such as Medicare and Medicaid;
- the federal false claims and civil monetary penalties laws, including the civil False Claims Act, impose criminal and civil penalties, including civil whistleblower or qui tam actions, against individuals or entities for, among other things, knowingly presenting, or causing to be presented, to the federal government, claims for payment that are false or fraudulent or making a false statement to avoid, decrease or conceal an obligation to pay money to the federal government;
- the federal Health Insurance Portability and Accountability Act of 1996 (“HIPAA”), imposes criminal and civil liability for, among other things, executing or attempting to execute a scheme to defraud any healthcare benefit program or making false statements relating to healthcare matters;
- HIPAA, as amended by the Health Information Technology for Economic and Clinical Health Act and its implementing regulations, also imposes obligations, including mandatory contractual terms, with respect to safeguarding the privacy, security and transmission of individually identifiable health information;
- the federal Physician Payments Sunshine Act requires applicable manufacturers of covered drugs, devices, biologics and medical supplies for which payment is available under Medicare, Medicaid or the Children’s Health Insurance Program, with specific exceptions, to annually report to CMS information regarding payments and other transfers of value to physicians and teaching hospitals as well as information regarding ownership and investment interests held by physicians and their immediate family members. The information was made publicly available on a searchable website in September 2014 and will be disclosed on an annual basis; and
- analogous state and foreign laws and regulations, such as state anti-kickback and false claims laws, may apply to sales or marketing arrangements and claims involving healthcare items or services reimbursed by non-governmental third-party payors, including private insurers.

Some state laws require biotechnology companies to comply with the biotechnology industry’s voluntary compliance guidelines and the relevant compliance guidance promulgated by the federal government and may require drug manufacturers to report information related to payments and other transfers of value to physicians and other healthcare providers or marketing expenditures. State and

foreign laws also govern the privacy and security of health information in some circumstances, many of which differ from each other in significant ways and often are not preempted by HIPAA, thus complicating compliance efforts.

Efforts to ensure that our current and future business arrangements with third parties will comply with applicable healthcare laws and regulations will involve substantial costs. It is possible that governmental authorities will conclude that our business practices may not comply with current or future statutes, regulations or case law involving applicable fraud and abuse or other healthcare laws and regulations. If our operations are found to be in violation of any of these laws or any other governmental regulations that may apply to us, we may be subject to significant penalties, including civil, criminal and administrative penalties, damages, fines, disgorgement, imprisonment, exclusion from participation in government funded healthcare programs, such as Medicare and Medicaid, contractual damages, reputational harm, diminished profits and future earnings and the curtailment or restructuring of our operations. Defending against any such actions can be costly, time-consuming and may require significant financial and personnel resources. Therefore, even if we are successful in defending against any such actions that may be brought against us, our business may be impaired. Further, if any of the physicians or other healthcare providers or entities with whom we expect to do business is found to be not in compliance with applicable laws, they may be subject to criminal, civil or administrative sanctions, including exclusions from government funded healthcare programs.

Our employees may engage in misconduct or other improper activities, including noncompliance with regulatory standards and requirements.

We are exposed to the risk of employee fraud or other misconduct. Misconduct by employees could include failures to comply with FDA regulations, provide accurate information to the FDA, comply with federal and state health care fraud and abuse laws and regulations, accurately report financial information or data or disclose unauthorized activities to us. In particular, sales, marketing and business arrangements in the health care industry are subject to extensive laws and regulations intended to prevent fraud, misconduct, kickbacks, self-dealing and other abusive practices. These laws and regulations may restrict or prohibit a wide range of pricing, discounting, marketing and promotion, sales commission, customer incentive programs and other business arrangements. Employee misconduct could also involve the improper use of information obtained in the course of clinical trials, which could result in regulatory sanctions and serious harm to our reputation. We have adopted a code of conduct, but it is not always possible to identify and deter employee misconduct, and the precautions we take to detect and prevent this activity may not be effective in controlling unknown or unmanaged risks or losses or in protecting us from governmental investigations or other actions or lawsuits stemming from a failure to comply with these laws or regulations. If any such actions are instituted against us, and we are not successful in defending ourselves or asserting our rights, those actions could have a significant impact on our business, including the imposition of significant fines or other sanctions.

If we fail to comply with environmental, health and safety laws and regulations, we could become subject to fines or penalties or incur costs that could have a material adverse effect on our business.

We are subject to numerous environmental, health and safety laws and regulations, including those governing laboratory procedures and the handling, use, storage, treatment and disposal of hazardous materials and wastes. Our operations involve the use of hazardous and flammable materials, including chemicals and biological materials. Our operations also produce hazardous waste products. We generally contract with third parties for the disposal of these materials and wastes. We cannot eliminate the risk of contamination or injury from these materials. In the event of contamination or injury resulting from our use of hazardous materials, we could be held liable for any resulting

damages, and any liability could exceed our resources. We also could incur significant costs associated with civil or criminal fines and penalties.

Although we maintain workers' compensation insurance to cover us for costs and expenses we may incur due to injuries to our employees resulting from the use of hazardous materials, this insurance may not provide adequate coverage against potential liabilities. We do not maintain insurance for environmental liability or toxic tort claims that may be asserted against us in connection with our storage or disposal of hazardous and flammable materials, including chemicals and biological materials.

In addition, we may incur substantial costs in order to comply with current or future environmental, health and safety laws and regulations. These current or future laws and regulations may impair our research, development or commercialization efforts. Failure to comply with these laws and regulations also may result in substantial fines, penalties or other sanctions.

Our business activities may be subject to the Foreign Corrupt Practices Act ("FCPA"), and similar anti-bribery and anti-corruption laws of other countries in which we operate.

We have conducted and have ongoing studies in international locations, and may in the future initiate additional studies in countries other than the United States. Our business activities may be subject to the FCPA and similar anti-bribery or anti-corruption laws, regulations or rules of other countries in which we operate. The FCPA generally prohibits offering, promising, giving or authorizing others to give anything of value, either directly or indirectly, to a non-U.S. government official in order to influence official action or otherwise obtain or retain business. The FCPA also requires public companies to make and keep books and records that accurately and fairly reflect the transactions of the corporation and to devise and maintain an adequate system of internal accounting controls. Our business is heavily regulated and therefore involves significant interaction with public officials, including officials of non-U.S. governments. Additionally, in many other countries, the health care providers who prescribe pharmaceuticals are employed by their government, and the purchasers of pharmaceuticals are government entities; therefore, our dealings with these prescribers and purchasers are subject to regulation under the FCPA. Recently the Securities and Exchange Commission ("SEC") and Department of Justice have increased their FCPA enforcement activities with respect to biotechnology and pharmaceutical companies. There is no certainty that all of our employees, agents or contractors, or those of our affiliates, will comply with all applicable laws and regulations, particularly given the high level of complexity of these laws. Violations of these laws and regulations could result in fines, criminal sanctions against us, our officers or our employees, the closing down of our facilities, requirements to obtain export licenses, cessation of business activities in sanctioned countries, implementation of compliance programs and prohibitions on the conduct of our business. Any such violations could include prohibitions on our ability to offer our products in one or more countries and could materially damage our reputation, our brand, our international expansion efforts, our ability to attract and retain employees and our business, prospects, operating results and financial condition.

Risks Related to Employee Matters, Managing Our Growth and Other Risks Related to Our Business

Our success is highly dependent on the services of our President and Chief Executive Officer, Dr. Robert Alexander, and our Chief Financial Officer and Chief Operating Officer, Dr. Adam Tomasi, and our ability to attract and retain highly skilled executive officers and employees.

To succeed, we must recruit, retain, manage and motivate qualified clinical, scientific, technical and management personnel, and we face significant competition for experienced personnel. We are highly dependent on the principal members of our management and scientific and medical staff,

particularly our President and Chief Executive Officer, Dr. Robert Alexander, and our Chief Financial Officer and Chief Operating Officer, Dr. Adam Tomasi. If we do not succeed in attracting and retaining qualified personnel, particularly at the management level, it could adversely affect our ability to execute our business plan and harm our operating results. In particular, the loss of one or more of our executive officers, including Dr. Alexander or Dr. Tomasi, could be detrimental to us if we cannot recruit suitable replacements in a timely manner. The competition for qualified personnel in the biotechnology field is intense and as a result, we may be unable to continue to attract and retain qualified personnel necessary for the future success of our business. In addition to competition for personnel, the San Francisco Bay Area in particular is characterized by a high cost of living. We could in the future have difficulty attracting experienced personnel to our company and may be required to expend significant financial resources in our employee recruitment and retention efforts.

Many of the other biotechnology companies that we compete against for qualified personnel have greater financial and other resources, different risk profiles and a longer history in the industry than we do. They also may provide more diverse opportunities and better prospects for career advancement. Some of these characteristics may be more appealing to high-quality candidates than what we have to offer. If we are unable to continue to attract and retain high-quality personnel, the rate and success at which we can discover, develop and commercialize our product candidates will be limited and the potential for successfully growing our business will be harmed.

If we are unable to establish sales or marketing capabilities or enter into agreements with third parties to sell or market our product candidates, we may not be able to successfully sell or market our product candidates that obtain regulatory approval.

We currently do not have and have never had a marketing or sales team for the marketing, sales and distribution of any of our product candidates that may be able to obtain regulatory approval. In order to commercialize any product candidates, we must build marketing, sales, distribution, managerial and other non-technical capabilities or make arrangements with third parties to perform these services for each of the territories in which we may have approval to sell or market our product candidates. We may not be successful in accomplishing these required tasks.

Establishing an internal sales or marketing team with technical expertise and supporting distribution capabilities to commercialize our product candidates will be expensive and time-consuming, and will require significant attention of our executive officers to manage. Any failure or delay in the development of our internal sales, marketing and distribution capabilities could adversely impact the commercialization of any of our product candidates that we obtain approval to market, if we do not have arrangements in place with third parties to provide such services on our behalf. Alternatively, if we choose to collaborate, either globally or on a territory-by-territory basis, with third parties that have direct sales forces and established distribution systems, either to augment our own sales force and distribution systems or in lieu of our own sales force and distribution systems, we will be required to negotiate and enter into arrangements with such third parties relating to the proposed collaboration. If we are unable to enter into such arrangements when needed on acceptable terms, or at all, we may not be able to successfully commercialize any of our product candidates that receive regulatory approval or any such commercialization may experience delays or limitations. If we are unable to successfully commercialize our approved product candidates, either on our own or through collaborations with one or more third parties, our future product revenue will suffer and we may incur significant additional losses.

In order to successfully implement our plans and strategies, we will need to grow the size of our organization, and we may experience difficulties in managing this growth.

At June 30, 2018, we had 44 full-time employees, including 32 employees engaged in research and development. In order to successfully implement our development and commercialization plans

and strategies, and as we transition into operating as a public company, we expect to need additional managerial, operational, sales, marketing, financial and other personnel. Future growth would impose significant added responsibilities on members of management, including:

- identifying, recruiting, integrating, maintaining and motivating additional employees;
- managing our internal development efforts effectively, including the clinical and FDA review process for AK002 and any other future product candidates, while complying with any contractual obligations to contractors and other third parties we may have; and
- improving our operational, financial and management controls, reporting systems and procedures.

Our future financial performance and our ability to successfully develop and, if approved, commercialize AK002 and any other future product candidates will depend, in part, on our ability to effectively manage any future growth, and our management may also have to divert a disproportionate amount of its attention away from day-to-day activities in order to devote a substantial amount of time to managing these growth activities.

We currently rely, and for the foreseeable future will continue to rely, in substantial part on certain independent organizations, advisors and consultants to provide certain services, including substantially all aspects of clinical management and manufacturing. We cannot assure you that the services of independent organizations, advisors and consultants will continue to be available to us on a timely basis when needed, or that we can find qualified replacements. In addition, if we are unable to effectively manage our outsourced activities or if the quality or accuracy of the services provided by third party service providers is compromised for any reason, our clinical trials may be extended, delayed or terminated, and we may not be able to obtain marketing approval of AK002 and any other future product candidates or otherwise advance our business. We cannot assure you that we will be able to manage our existing third party service providers or find other competent outside contractors and consultants on economically reasonable terms, or at all.

If we are not able to effectively expand our organization by hiring new employees and/or engaging additional third party service providers, we may not be able to successfully implement the tasks necessary to further develop and commercialize AK002 and any other future product candidates and, accordingly, may not achieve our research, development and commercialization goals.

We may experience disruptions and delays or incur financial damages as a result of system failures or security breaches.

Despite the implementation of security measures, any of the internal computer systems belonging to us or our third-party service providers are vulnerable to damage from computer viruses, unauthorized access, natural disasters, terrorism, war and telecommunication and electrical failure. Any system failure, accident or security breach that causes interruptions in our own or in third-party service providers' operations could result in a material disruption of our drug discovery and development programs. A system failure or security breach that causes the loss of clinical trial data from completed or future clinical trials could result in delays in our regulatory approval efforts and significantly increase our costs in order to recover or reproduce the lost data. In addition, to the extent that any disruption or security breach results in a loss or damage to our data or applications, or inappropriate disclosure of confidential or proprietary information, we may incur liability as a result, our drug discovery programs and competitive position may be adversely affected, and further development of our product candidates may be delayed. Any such disruption, failure or security breach could also cause us to incur additional costs to remedy the damages that arise from such disruption, failure or security breach.

Our insurance policies may not be adequate to compensate us for the potential losses arising from any such disruption, failure or security breach. In addition, such insurance may not be available to us in the future on economically reasonable terms, or at all. Further, our insurance may not cover all claims made against us and could have high deductibles in any event, and defending a suit, regardless of its merit, could be costly and divert management attention.

Our operations are vulnerable to interruption by fire, earthquake, power loss, telecommunications failure, terrorist activity and other events beyond our control, which could harm our business.

Our facility is located in a seismically active region, which also experiences large scale wildfires from time to time. We have not undertaken a systematic analysis of the potential consequences to our business and financial results from a major earthquake, fire, power loss, terrorist activity or other disasters and do not have a recovery plan for such disasters. In addition, we do not carry sufficient insurance to compensate us for actual losses from interruption of our business that may occur, and any losses or damages incurred by us could harm our business. We maintain multiple copies of each of our antibody sequences and electronic data records, most of which we maintain at our headquarters. If our facility were impacted by a seismic event, we could lose all our antibody sequences, which would have an adverse effect on our ability to perform our obligations under our collaborations and discover new targets.

Our ability to utilize our net operating loss carryforwards and certain other tax attributes may be limited.

Under Sections 382 and 383 of the Internal Revenue Code of 1986, as amended, if a corporation undergoes an “ownership change” (generally defined as a greater than 50 percentage points change (by value) in the ownership of its equity over a rolling three-year period), the corporation’s ability to use its pre-change net operating loss carryforwards and certain other pre-change tax attributes to offset its post-change income and taxes may be limited. We may have experienced such ownership changes in the past, and we may experience ownership changes in the future as a result of this offering or subsequent shifts in our stock ownership, some of which are outside our control. As of December 31, 2017, we had federal net operating loss carryforwards of approximately $61.8 million, and our ability to utilize those net operating loss carryforwards could be limited by an “ownership change” as described above, which could result in increased tax liability to our company.

Risks Related to Intellectual Property

If we are unable to obtain or protect intellectual property rights, we may not be able to compete effectively in our market.

Our success depends in significant part on our and our current or future licensors’ ability to establish, maintain and protect patents and other intellectual property rights and operate without infringing the intellectual property rights of others. We have filed numerous patent applications both in the United States and in foreign jurisdictions to obtain patent rights to inventions we have developed. We have also licensed from third parties rights to patent portfolios. Some of these licenses give us the right to prepare, file and prosecute patent applications and maintain and enforce patents we have licensed, and other licenses may not give us such rights.

The patent prosecution process is expensive and time-consuming, and we and our current or future licensors may not be able to prepare, file and prosecute all necessary or desirable patent applications at a reasonable cost or in a timely manner. It is also possible that we or our current and future licensors will fail to identify patentable aspects of inventions made in the course of development

and commercialization activities before it is too late to obtain patent protection on them. Moreover, in some circumstances, we may not have the right to control the preparation, filing and prosecution of patent applications, or to maintain the patents, covering technology that we license from third parties and are reliant on our current and future licensors. Therefore, these patents and applications may not be prosecuted and enforced in a manner consistent with the best interests of our business. If our current or future licensors fail to establish, maintain or protect such patents and other intellectual property rights, such rights may be reduced or eliminated. If our current and future licensors are not fully cooperative or disagree with us as to the prosecution, maintenance or enforcement of any patent rights, such patent rights could be compromised.

The patent position of biotechnology companies generally is highly uncertain, involves complex legal and factual questions and has in recent years been the subject of much litigation. As a result, the issuance, scope, validity, enforceability and commercial value of our and our current or future licensors' patent rights are highly uncertain. Our and our current or future licensors' pending and future patent applications may not result in patents being issued which protect our technology or products, in whole or in part, or which effectively prevent others from commercializing competitive technologies and products. The patent examination process may require us or our current and future licensors to narrow the scope of the claims of our or our current and future licensors' pending and future patent applications, which may limit the scope of patent protection that may be obtained.

We cannot assure you that all of the potentially relevant prior art relating to our patents and patent applications has been found. If such prior art exists, it can invalidate a patent or prevent a patent from issuing from a pending patent application. Even if patents do successfully issue and even if such patents cover our product candidates, third parties may initiate an opposition, interference, re-examination, post-grant review, *inter partes* review, nullification or derivation action in court or before patent offices, or similar proceedings challenging the validity, enforceability or scope of such patents, which may result in the patent claims being narrowed or invalidated. Our and our current or future licensors' patent applications cannot be enforced against third parties practicing the technology claimed in such applications unless and until a patent issues from such applications, and then only to the extent the issued claims cover the technology.

Because patent applications in the United States and most other countries are confidential for a period of time after filing, and some remain so until issued, we cannot be certain that we or our current and future licensors were the first to file any patent application related to a product candidate. Furthermore, if third parties have filed such patent applications on or before March 15, 2013, an interference proceeding in the United States can be initiated by such third parties to determine who was the first to invent any of the subject matter covered by the patent claims of our applications. If third parties have filed such applications after March 15, 2013, a derivation proceeding in the United States can be initiated by such third parties to determine whether our invention was derived from theirs. Even where we have a valid and enforceable patent, we may not be able to exclude others from practicing our invention where the other party can show that they used the invention in commerce before our filing date or the other party benefits from a compulsory license. In addition, patents have a limited lifespan. In the United States, if all maintenance fees are timely paid, the natural expiration of a patent is generally 20 years from its earliest U.S. filing date. Various extensions may be available, but the life of a patent, and the protection it affords, is limited. Even if patents covering our product candidates are obtained, once the patent life has expired for a product, we may be open to competition from competitive medications, including biosimilar or generic medications. For example, some of the patents that we exclusively licensed from The Johns Hopkins University will expire in 2021, one of our owned patent families that claims one of the product candidates will expire in 2035 in the United States and similar patent applications are pending in foreign jurisdictions with a projected expiration date in 2034, at which time the underlying technology covered by such patents can be used by any third party, including competitors. Although the patent term extensions under the Hatch-Waxman Act in the

United States may be available to extend the patent term, we cannot provide any assurances that any such patent term extension will be obtained and, if so, for how long.

Due to the amount of time required for the development, testing and regulatory review of new product candidates, patents protecting such candidates might expire before or shortly after such candidates are commercialized. As a result, our owned and licensed patent portfolio may not provide us with sufficient rights to exclude others from commercializing products similar or identical to ours. We expect to seek extensions of patent terms where these are available in any countries where we are prosecuting patents. This includes in the United States under the Drug Price Competition and Patent Term Restoration Act of 1984, which permits a patent term extension of up to five years beyond the expiration of the patent. However the applicable authorities, including the FDA and the U.S. Patent and Trademark Office ("USPTO") in the United States, and any equivalent foreign regulatory authority, may not agree with our assessment of whether such extensions are available, and may refuse to grant extensions to our patents, or may grant more limited extensions than we request. If this occurs, our competitors may take advantage of our investment in development and clinical trials by referencing our clinical and preclinical data and launch their product earlier than might otherwise be the case.

We may not be able to protect our intellectual property rights throughout the world.

Filing, prosecuting, enforcing and defending patents on product candidates in all countries throughout the world would be prohibitively expensive, and our or our current and future licensors' intellectual property rights may not exist in some countries outside the United States or may be less extensive in some countries than in the United States. In addition, the laws of some foreign countries do not protect intellectual property rights to the same extent as federal and state laws in the United States. Consequently, we and our current and future licensors may not be able to prevent third parties from practicing our and our current or future licensors' inventions in all countries outside the United States, or from selling or importing products made using our and our current or future licensors' inventions in and into the United States or other jurisdictions. Competitors may use our and our current or future licensors' technologies in jurisdictions where we have not obtained patent protection to develop their own products and, further, may export otherwise infringing products to territories where we and our current and future licensors have patent protection, but enforcement is not as strong as that in the United States. These products may compete with our product candidates, and our and our current or future licensors' patents or other intellectual property rights may not be effective or sufficient to prevent them from competing.

Many companies have encountered significant problems in protecting and defending intellectual property rights in foreign jurisdictions. The legal systems of certain countries, particularly certain developing countries, do not favor the enforcement of patents and other intellectual property protection, particularly those relating to biotechnology, which could make it difficult for us and our current and future licensors to stop the infringement of our and our current or future licensors' patents or marketing of competing products in violation of our and our current or future licensors' proprietary rights generally. Proceedings to enforce our and our current or future licensors' patent rights in foreign jurisdictions could result in substantial costs and divert our and our current or future licensors' efforts and attention from other aspects of our business, could put our and our current or future licensors' patents at risk of being invalidated or interpreted narrowly and our and our current or future licensors' patent applications at risk of not issuing and could provoke third parties to assert claims against us or our current and future licensors. We or our current and future licensors may not prevail in any lawsuits that we or our current and future licensors initiate, and the damages or other remedies awarded, if any, may not be commercially meaningful.

Many countries have compulsory licensing laws under which a patent owner may be compelled to grant licenses to third parties. In addition, many countries limit the enforceability of patents against

government agencies or government contractors. In these countries, the patent owner may have limited remedies, which could materially diminish the value of such patent. If we or our current and future licensors are forced to grant a license to third parties with respect to any patents relevant to our business, our competitive position may be impaired, and our business, financial condition, results of operations and prospects may be adversely affected.

Changes in patent law could diminish the value of patents in general, thereby impairing our ability to protect our product candidates.

Obtaining and enforcing patents in the biopharmaceutical industry involves both technological and legal complexity and is therefore costly, time-consuming and inherently uncertain. Changes in either the patent laws or interpretation of the patent laws in the United States could increase the uncertainties and costs. Recent patent reform legislation in the United States and other countries, including the Leahy-Smith America Invents Act ("Leahy-Smith Act"), signed into law on September 16, 2011, could increase those uncertainties and costs surrounding the prosecution of our patent applications and the enforcement or defense of our issued patents. The Leahy-Smith Act includes a number of significant changes to U.S. patent law. These include provisions that affect the way patent applications are prosecuted, redefine prior art and provide more efficient and cost-effective avenues for competitors to challenge the validity of patents. These include allowing third-party submission of prior art to the USPTO during patent prosecution and additional procedures to attack the validity of a patent by USPTO administered post-grant proceedings, including post-grant review, *inter partes* review and derivation proceedings. After March 15, 2013, under the Leahy-Smith Act, the United States transitioned to a first inventor to file system in which, assuming that the other statutory requirements are met, the first inventor to file a patent application will be entitled to the patent on an invention regardless of whether a third party was the first to invent the claimed invention. However, the Leahy-Smith Act and its implementation could increase the uncertainties and costs surrounding the prosecution of our patent applications and the enforcement or defense of our issued patents, all of which could have a material adverse effect on our business, financial condition, results of operations and prospects.

The U.S. Supreme Court has ruled on several patent cases in recent years, either narrowing the scope of patent protection available in certain circumstances or weakening the rights of patent owners in certain situations. Depending on future actions by the U.S. Congress, the U.S. courts, the USPTO and the relevant law-making bodies in other countries, the laws and regulations governing patents could change in unpredictable ways that would weaken our ability to obtain new patents or to enforce our existing patents and patents that we might obtain in the future.

Obtaining and maintaining our patent protection depends on compliance with various procedural, document submission, fee payment and other requirements imposed by governmental patent agencies, and our patent protection could be reduced or eliminated for non-compliance with these requirements.

Periodic maintenance and annuity fees on any issued patent are due to be paid to the USPTO and foreign patent agencies in several stages over the lifetime of the patent. The USPTO and various foreign governmental patent agencies require compliance with a number of procedural, documentary, fee payment and other similar provisions during the patent application process. While an inadvertent lapse can in many cases be cured by payment of a late fee or by other means in accordance with the applicable rules, there are situations in which noncompliance can result in abandonment or lapse of the patent or patent application, resulting in partial or complete loss of patent rights in the relevant jurisdiction. Non-compliance events that could result in abandonment or lapse of a patent or patent application include failure to respond to official actions within prescribed time limits, non-payment of fees and failure to properly legalize and submit formal documents. If we or our current and future

licensors fail to maintain the patents and patent applications covering our product candidates, our patent protection could be reduced or eliminated and our competitors might be better able to enter the market with competing products.

If our trademark and tradenames are not adequately protected, then we may not be able to build name recognition in our markets and our business may be adversely affected.

We cannot assure you that competitors will not infringe our trademarks or that we will have adequate resources to enforce our trademarks. In addition, we do not own any registered trademarks for the mark "ALLAKOS." We cannot assure you that any future trademark applications that we will file will be approved. During trademark registration proceedings, we may receive rejections and although we are given an opportunity to respond to those rejections, we may be unable to overcome such rejections. In addition, in proceedings before the USPTO and in proceedings before comparable agencies in many foreign jurisdictions, third parties are given an opportunity to oppose pending trademark applications and to seek to cancel registered trademarks. Opposition or cancellation proceeding may be filed against our trademarks and our trademarks may not survive such proceedings, which may force us to rebrand our name.

If we breach the license agreements related to our product candidates, we could lose the ability to continue the development and commercialization of our product candidates.

Our commercial success depends upon our ability, and the ability of our current and future licensors, to develop, manufacture, market and sell our product candidates and use our and our current or future licensors' wholly-owned technologies without infringing the proprietary rights of third parties. A third party may hold intellectual property, including patent rights that are important or necessary to the development of our products. As a result, we are a party to a number of technology licenses that are important to our business. For example, we have obtained an exclusive license under certain intellectual property related to Siglec-8 from The Johns Hopkins University to develop certain products and a non-exclusive license from BioWa Inc. and Lonza Sales AG ("Lonza") to develop and commercialize products manufactured in a particular mammalian host cell line. If we fail to comply with the obligations under these agreements, including payment and diligence terms, our current and future licensors may have the right to terminate these agreements, in which event we may not be able to develop, manufacture, market or sell any product that is covered by these agreements or may face other penalties under the agreements. Such an occurrence could adversely affect the value of the product candidate being developed under any such agreement. Termination of these agreements or reduction or elimination of our rights under these agreements may result in our having to negotiate new or reinstated agreements, which may not be available to us on equally favorable terms, or at all, or cause us to lose our rights under these agreements, including our rights to intellectual property or technology important to our development programs.

Disputes may arise regarding intellectual property subject to a licensing agreement, including:

- the scope of rights granted under the license agreement and other interpretation-related issues;
- the extent to which our technology and processes infringe on intellectual property of the licensor that is not subject to the licensing agreement;
- the sublicensing of patent and other rights under any collaboration relationships we might enter into in the future;
- our diligence obligations under the license agreement and what activities satisfy those diligence obligations;

- the inventorship and ownership of inventions and know-how resulting from the joint creation or use of intellectual property by our current and future licensors and us; and
- the priority of invention of patented technology.

If disputes over intellectual property that we have licensed prevent or impair our ability to maintain our current licensing arrangements on acceptable terms, we may be unable to successfully develop and commercialize the affected product candidates.

Third parties may initiate legal proceedings against us alleging that we infringe their intellectual property rights or we may initiate legal proceedings against third parties to challenge the validity or scope of intellectual property rights controlled by third parties, the outcome of which would be uncertain and could have an adverse effect on the success of our business.

Third parties may initiate legal proceedings against us or our current and future licensors alleging that we or our current and future licensors infringe their intellectual property rights, or we or our current and future licensors may initiate legal proceedings against third parties to challenge the validity or scope of intellectual property rights controlled by third parties, including in oppositions, interferences, reexaminations, *inter partes* reviews or derivation proceedings in the United States or other jurisdictions. These proceedings can be expensive and time-consuming, and many of our or our current and future licensors' adversaries in these proceedings may have the ability to dedicate substantially greater resources to prosecuting these legal actions than we or our current and future licensors.

Parties making claims against us may obtain injunctive or other equitable relief, which could effectively block our ability to further develop and commercialize one or more of our product candidates. Defense of these claims, regardless of their merit, would involve substantial litigation expense and would be a substantial diversion of management and employee resources from our business. An unfavorable outcome could require us or our current and future licensors to cease using the related technology or developing or commercializing our product candidates, or to attempt to license rights to it from the prevailing party. Our business could be harmed if the prevailing party does not offer us or our current and future licensors a license on commercially reasonable terms or at all. Even if we or our current and future licensors obtain a license, it may be non-exclusive, thereby giving our competitors access to the same technologies licensed to us or our current and future licensors. In addition, we could be found liable for monetary damages, including treble damages and attorneys' fees, if we are found to have willfully infringed a patent. A finding of infringement could prevent us from commercializing our product candidates or force us to cease some of our business operations, which could harm our business.

We may be subject to claims by third parties asserting that our employees or we have misappropriated their intellectual property, or claiming ownership of what we regard as our own intellectual property.

Many of our employees, including our senior management, were previously employed at other biopharmaceutical companies, including potential competitors. Some of these employees executed proprietary rights, non-disclosure and/or non-competition agreements in connection with such previous employment. Although we try to ensure that our employees do not use the proprietary information or know-how of others in their work for us, we may be subject to claims that we or these employees have used or disclosed confidential information or intellectual property, including trade secrets or other proprietary information, of any such employee's former employer. Litigation may be necessary to defend against these claims.

If we fail in prosecuting or defending any such claims, in addition to paying monetary damages, we may lose valuable intellectual property rights or personnel or sustain damages. Such intellectual

property rights could be awarded to a third party, and we could be required to obtain a license from such third party to commercialize our technology or products. Such a license may not be available on commercially reasonable terms or at all. Even if we successfully prosecute or defend against such claims, litigation could result in substantial costs and distract management.

Our inability to protect our confidential information and trade secrets would harm our business and competitive position.

In addition to seeking patents for some of our technology and products, we also rely on trade secrets, including unpatented know-how, technology and other proprietary information, to maintain our competitive position. Trade secrets can be difficult to protect. We seek to protect these trade secrets, in part, by entering into non-disclosure and confidentiality agreements with parties who have access to them, such as our employees, contract manufacturers, consultants, advisors and other third parties. We also enter into confidentiality and invention or patent assignment agreements with our employees and consultants. Despite these efforts, any of the parties may breach the agreements and disclose our proprietary information, including our trade secrets, and we may not be able to obtain adequate remedies for such breaches. Misappropriation or unauthorized disclosure of our trade secrets could significantly affect our competitive position and may have a material adverse effect on our business. Enforcing a claim that a party illegally disclosed or misappropriated a trade secret is difficult, expensive and time-consuming, and the outcome is unpredictable. Some courts both within and outside the United States may be less willing or unwilling to protect trade secrets. Furthermore, trade secret protection does not prevent competitors from independently developing substantially equivalent information and techniques and we cannot guarantee that our competitors will not independently develop substantially equivalent information and techniques. If a competitor lawfully obtained or independently developed any of our trade secrets, we would have no right to prevent such competitor from using that technology or information to compete with us. Failure on our part to adequately protect our trade secrets and our confidential information would harm our business and our competitive position.

Risks Related to Our Dependence on Third Parties

We rely on third parties to conduct our clinical trials and those third parties may not perform satisfactorily, including failing to meet deadlines for the completion of such trials, research and studies.

We do not have the ability to independently conduct our clinical trials. We currently rely on third parties, such as CROs, clinical data management organizations, medical institutions and clinical investigators, to conduct our clinical trials of AK002 and expect to continue to rely upon third parties to conduct additional clinical trials of AK002 and our other product candidates. Third parties have a significant role in the conduct of our clinical trials and the subsequent collection and analysis of data. These third parties are not our employees, and except for remedies available to us under our agreements, we have limited ability to control the amount or timing of resources that any such third party will devote to our clinical trials. Some of these third parties may terminate their engagements with us at any time. If we need to enter into alternative arrangements, it would delay our drug development activities.

Our reliance on these third parties for research and development activities will reduce our control over these activities but will not relieve us of our regulatory responsibilities. For example, we will remain responsible for ensuring that each of our clinical trials is conducted in accordance with the general investigational plan and protocols for the trial. Moreover, the FDA requires us to comply with GCP standards, regulations for conducting, recording and reporting the results of clinical trials to assure that data and reported results are credible and accurate and that the rights, integrity and

confidentiality of trial participants are protected. The EMA also requires us to comply with similar standards. Regulatory authorities enforce these GCP requirements through periodic inspections of trial sponsors, principal investigators and trial sites. If we or any of our CROs fail to comply with applicable GCP requirements, the clinical data generated in our clinical trials may be deemed unreliable and the FDA, EMA or comparable foreign regulatory authorities may require us to perform additional clinical trials before approving our marketing applications. We cannot assure you that upon inspection by a given regulatory authority, such regulatory authority will determine that any of our clinical trials comply with GCP regulations. In addition, our clinical trials must be conducted with product produced under current cGMP regulations. Our failure to comply with these regulations may require us to repeat clinical trials, which would delay the marketing approval process. We also are required to register certain ongoing clinical trials and post the results of certain completed clinical trials on a government-sponsored database, ClinicalTrials.gov, within certain timeframes. Failure to do so can result in fines, adverse publicity and civil and criminal sanctions.

The third parties we rely on for these services may also have relationships with other entities, some of which may be our competitors. If these third parties do not successfully carry out their contractual duties, meet expected deadlines or conduct our clinical trials in accordance with regulatory requirements or our stated protocols, we will not be able to obtain, or may be delayed in obtaining, marketing approvals for our product candidates and will not be able to, or may be delayed in our efforts to, successfully commercialize our product candidates.

We contract with third parties for the production of our product candidates for preclinical studies and, in the case of AK002, our ongoing clinical trials, and expect to continue to do so for additional clinical trials and ultimately for commercialization. This reliance on third parties increases the risk that we will not have sufficient quantities of our product candidates or drugs or such quantities at an acceptable cost, which could delay, prevent or impair our development or commercialization efforts.

We do not currently have the infrastructure or internal capability to manufacture supplies of our product candidates for use in development and commercialization. We rely, and expect to continue to rely, on third-party manufacturers for the production of our product candidates for preclinical studies and clinical trials under the guidance of members of our organization. In the case of AK002, we rely on a single third-party manufacturer, Lonza, and we currently have no alternative manufacturer in place. We do not have long-term supply agreements and we purchase our required drug product on a purchase order basis. If we were to experience an unexpected loss of supply of AK002, or any of our other product candidates, for any reason, whether as a result of manufacturing, supply or storage issues or otherwise, we could experience delays, disruptions, suspensions or terminations of, or be required to restart or repeat, any pending or ongoing clinical trials. Replacement of our sole manufacturer of AK002 would result in substantial delay and interrupt our clinical trials involving AK002.

We expect to continue to rely on third-party manufacturers for the commercial supply of any of our product candidates for which we obtain marketing approval. We may be unable to maintain or establish required agreements with third-party manufacturers or to do so on acceptable terms. Even if we are able to establish agreements with third-party manufacturers, reliance on third-party manufacturers entails additional risks, including:

- the possible failure of the third party to manufacture our product candidate according to our schedule, or at all, including if our third-party contractors give greater priority to the supply of other products over our product candidates or otherwise do not satisfactorily perform according to the terms of the agreements between us and them;
- the possible termination or nonrenewal of agreements by our third-party contractors at a time that is costly or inconvenient for us;

- the possible breach by the third-party contractors of our agreements with them;
- the failure of third-party contractors to comply with applicable regulatory requirements;
- the possible failure of the third party to manufacture our product candidates according to our specifications;
- the possible mislabeling of clinical supplies, potentially resulting in the wrong dose amounts being supplied or active drug or placebo not being properly identified;
- the possibility of clinical supplies not being delivered to clinical sites on time, leading to clinical trial interruptions, or of drug supplies not being distributed to commercial vendors in a timely manner, resulting in lost sales; and
- the possible misappropriation of our proprietary information, including our trade secrets and know-how.

We do not have complete control over all aspects of the manufacturing process of, and are dependent on, our contract manufacturing partners, including Lonza, for compliance with cGMP regulations for manufacturing both active drug substances and finished drug products. Third-party manufacturers may not be able to comply with cGMP regulations or similar regulatory requirements outside of the United States. If our contract manufacturers, including Lonza, cannot successfully manufacture material that conforms to our specifications and the strict regulatory requirements of the FDA or others, they will not be able to secure and/or maintain marketing approval for their manufacturing facilities. In addition, we do not have control over the ability of our contract manufacturers to maintain adequate quality control, quality assurance and qualified personnel. If the FDA or a comparable foreign regulatory authority does not approve these facilities for the manufacture of our product candidates or if it withdraws any such approval in the future, we may need to find alternative manufacturing facilities, which would significantly impact our ability to develop, obtain marketing approval for or market our product candidates, if approved. Our failure, or the failure of our third-party manufacturers, to comply with applicable regulations could result in sanctions being imposed on us, including fines, injunctions, civil penalties, delays, suspension or withdrawal of approvals, license revocation, seizures or recalls of product candidates or drugs, operating restrictions and criminal prosecutions, any of which could significantly and adversely affect supplies of our drugs and harm our business and results of operations.

Our current and anticipated future dependence upon others for the manufacture of our product candidates or drugs may adversely affect our future profit margins and our ability to commercialize any drugs that receive marketing approval on a timely and competitive basis.

We may not gain the efficiencies we expect from further scale-up of manufacturing of AK002, and our third-party manufacturers may be unable to successfully scale-up manufacturing in sufficient quality and quantity for AK002 or our other product candidates, which could delay or prevent the conducting of our clinical trials or the development or commercialization of our other product candidates.

Our third-party manufacturer, Lonza, is currently manufacturing AK002 at a scale that is sufficient for us to complete our planned clinical trials and, if we receive marketing approval, to commercialize AK002 for the indications we are currently targeting. However, we may consider increasing the batch scale to gain cost efficiencies. If Lonza is unable to scale-up the manufacture of AK002 at such time, we may not gain such cost efficiencies and may not realize the benefits that would typically be expected from further scale-up of manufacturing of AK002.

In addition, in order to conduct clinical trials of any of our other product candidates, we may need to manufacture them in large quantities. Our third-party manufacturers, including Lonza, may be unable

to successfully increase the manufacturing capacity for any of these product candidates in a timely or cost-effective manner, or at all. In addition, quality issues may arise during scale-up activities. If our third-party manufacturers are unable to successfully scale up the manufacture of our other product candidates in sufficient quality and quantity, the development, testing and clinical trials of that product candidate may be delayed or become infeasible, and marketing approval or commercial launch of any resulting product may be delayed or not obtained, which could significantly harm our business.

Changes in methods of product candidate manufacturing or formulation may result in additional costs or delay.

As product candidates progress through preclinical and late stage clinical trials to marketing approval and commercialization, it is common that various aspects of the development program, such as manufacturing methods and formulation, are altered along the way in an effort to optimize yield, manufacturing batch size, minimize costs and achieve consistent quality and results. Such changes carry the risk that they will not achieve these intended objectives. Any of these changes could cause our product candidates to perform differently and affect the results of planned clinical trials or other future clinical trials conducted with the altered materials. This could delay completion of clinical trials, require the conduct of bridging clinical trials or the repetition of one or more clinical trials, increase clinical trial costs, delay approval of our product candidates and jeopardize our ability to commercialize our product candidates and generate revenue.

The manufacture of biologics is complex and our third-party manufacturers may encounter difficulties in production. If any of our third-party manufacturers encounter such difficulties, our ability to provide adequate supply of our product candidates for clinical trials or our products for patients, if approved, could be delayed or prevented.

Manufacturing biologics, especially in large quantities, is complex and may require the use of innovative technologies to handle living cells. Each lot of an approved biologic must undergo thorough testing for identity, strength, quality, purity and potency. Manufacturing biologics requires facilities specifically designed for and validated for this purpose, and sophisticated quality assurance and quality control procedures are necessary. Slight deviations anywhere in the manufacturing process, including filling, labeling, packaging, storage and shipping and quality control and testing, may result in lot failures, product recalls or spoilage. Lonza, our current third-party manufacturer, has, and our future third-party manufacturers may have, multiple locations at which they conduct manufacturing. However, AK002 and our other product candidates are currently only being manufactured at one of Lonza's locations. If this location becomes unavailable at its anticipated capacity or the location of the manufacture of AK002 or our other product candidates is changed for any reason, it could result in a delay or disruption to the manufacturing process or lead to difficulties that we did not experience at the original manufacturing location. When changes are made to the manufacturing process, we may be required to provide preclinical and clinical data showing the comparable identity, strength, quality, purity or potency of the products before and after such changes. If microbial, viral or other contaminations are discovered at the facilities of our manufacturer, such facilities may need to be closed for an extended period of time to investigate and remedy the contamination, which could delay clinical trials and adversely harm our business. The use of biologically derived ingredients can also lead to allegations of harm, including infections or allergic reactions, or closure of product facilities due to possible contamination. If our manufacturers are unable to produce sufficient quantities for clinical trials or for commercialization as a result of these challenges, our development and commercialization efforts would be impaired, which would have an adverse effect on our business, financial condition, results of operations and growth prospects.

If we engage in future acquisitions or strategic partnerships, this may increase our capital requirements, dilute our stockholders, cause us to incur debt or assume contingent liabilities, and subject us to other risks.

We may evaluate various acquisition opportunities and strategic partnerships, including licensing or acquiring complementary products, intellectual property rights, technologies or businesses. Any potential acquisition or strategic partnership may entail numerous risks, including:

- increased operating expenses and cash requirements;
- the assumption of additional indebtedness or contingent liabilities;
- the issuance of our equity securities;
- assimilation of operations, intellectual property and products of an acquired company, including difficulties associated with integrating new personnel;
- the diversion of our management's attention from our existing product programs and initiatives in pursuing such a strategic merger or acquisition;
- retention of key employees, the loss of key personnel and uncertainties in our ability to maintain key business relationships;
- risks and uncertainties associated with the other party to such a transaction, including the prospects of that party and their existing products or product candidates and marketing approvals; and
- our inability to generate revenue from acquired technology and/or products sufficient to meet our objectives in undertaking the acquisition or even to offset the associated acquisition and maintenance costs.

In addition, if we undertake acquisitions, we may issue dilutive securities, assume or incur debt obligations, incur large one-time expenses and acquire intangible assets that could result in significant future amortization expense. Moreover, we may not be able to locate suitable acquisition opportunities, and this inability could impair our ability to grow or obtain access to technology or products that may be important to the development of our business.

If we decide to establish collaborations, but are not able to establish those collaborations, we may have to alter our development and commercialization plans.

Our drug development programs and the potential commercialization of our product candidates will require substantial additional cash to fund expenses. We may seek to selectively form collaborations to expand our capabilities, potentially accelerate research and development activities and provide for commercialization activities by third parties.

We would face significant competition in seeking appropriate collaborators. Whether we reach a definitive agreement for a collaboration will depend, among other things, upon our assessment of the collaborator's resources and expertise, the terms and conditions of the proposed collaboration and the proposed collaborator's evaluation of a number of factors. Those factors may include the design or results of clinical trials, the likelihood of approval by the FDA or comparable foreign regulatory authorities, the potential market for the subject product candidate, the costs and complexities of manufacturing and delivering such product candidate to patients, the potential of competing drugs, the existence of uncertainty with respect to our ownership of intellectual property and industry and market conditions generally. The potential collaborator may also consider alternative product candidates or technologies for similar indications that may be available to collaborate on and whether such a collaboration could be more attractive than the one with us for our product candidate.

Collaborations are complex and time-consuming to negotiate and document. In addition, there have been a significant number of recent business combinations among large pharmaceutical companies that have resulted in a reduced number of potential future collaborators. Even if we are successful in entering into a collaboration, the terms and conditions of that collaboration may restrict us from entering into future agreements on certain terms with potential collaborators.

If and when we seek to enter into collaborations, we may not be able to negotiate collaborations on a timely basis, on acceptable terms, or at all. If we are unable to do so, we may have to curtail the development of a product candidate, reduce or delay its development program or one or more of our other development programs, delay its potential commercialization or reduce the scope of any sales or marketing activities, or increase our expenditures and undertake development or commercialization activities at our own expense.

Risks Related to this Offering and Ownership of Our Common Stock

We do not know whether an active, liquid and orderly trading market will develop for our common stock or what the market price of our common stock will be and as a result it may be difficult for you to sell your shares of our common stock.

Prior to this offering, no market for shares of our common stock existed and an active trading market for our shares may never develop or be sustained following this offering. We have determined the initial public offering price for our common stock through negotiations with the underwriters, and the negotiated price may not be indicative of the market price of our common stock after this offering. The market value of our common stock may decrease from the initial public offering price. As a result of these and other factors, you may be unable to resell your shares of our common stock at or above the initial public offering price. The lack of an active market may impair your ability to sell your shares at the time you wish to sell them or at a price that you consider reasonable. The lack of an active market may also reduce the fair market value of your shares. Furthermore, an inactive market may also impair our ability to raise capital by selling shares of our common stock and may impair our ability to enter into strategic collaborations or acquire companies or products by using our shares of common stock as consideration.

The market price of our stock may be volatile, and you could lose all or part of your investment.

The trading price of our common stock following this offering is likely to be highly volatile and subject to wide fluctuations in response to various factors, some of which we cannot control. In addition to the factors discussed in this “Risk Factors” section and elsewhere in this prospectus, these factors include:

- the timing and results of preclinical studies and clinical trials of our product candidates or those of our competitors;
- the success of competitive products or announcements by potential competitors of their product development efforts;
- regulatory actions with respect to our products or our competitors’ products;
- actual or anticipated changes in our growth rate relative to our competitors;
- regulatory or legal developments in the United States and other countries;
- developments or disputes concerning patent applications, issued patents or other proprietary rights;
- the recruitment or departure of key personnel;

- announcements by us or our competitors of significant acquisitions, strategic collaborations, joint ventures, collaborations or capital commitments;
- actual or anticipated changes in estimates as to financial results, development timelines or recommendations by securities analysts;
- fluctuations in the valuation of companies perceived by investors to be comparable to us;
- market conditions in the pharmaceutical and biotechnology sector;
- changes in the structure of healthcare payment systems;
- share price and volume fluctuations attributable to inconsistent trading volume levels of our shares;
- announcement or expectation of additional financing efforts;
- sales of our common stock by us, our insiders or our other stockholders;
- expiration of market stand-off or lock-up agreements; and
- general economic, industry and market conditions.

In addition, the stock market in general, and pharmaceutical and biotechnology companies in particular, have experienced extreme price and volume fluctuations that have often been unrelated or disproportionate to the operating performance of these companies. Broad market and industry factors may negatively affect the market price of our common stock, regardless of our actual operating performance. The realization of any of the above risks or any of a broad range of other risks, including those described in this “Risk Factors” section, could have a dramatic and adverse impact on the market price of our common stock.

If securities or industry analysts do not publish research or reports about our business, or if they issue an adverse or misleading opinion regarding our stock, our stock price and trading volume could decline.

The trading market for our common stock will be influenced by the research and reports that industry or securities analysts publish about us or our business. We do not currently have and may never obtain research coverage by securities and industry analysts. If no or few securities or industry analysts commence coverage of us, the trading price for our stock would be negatively impacted. In the event we obtain securities or industry analyst coverage, if any of the analysts who cover us issue an adverse or misleading opinion regarding us, our business model, our intellectual property or our stock performance, or if our operating results fail to meet the expectations of analysts, our stock price would likely decline. If one or more of these analysts cease coverage of us or fail to publish reports on us regularly, we could lose visibility in the financial markets, which in turn could cause our stock price or trading volume to decline.

Our operating results may fluctuate significantly, which makes our future operating results difficult to predict and could cause our operating results to fall below expectations or our guidance.

Our quarterly and annual operating results may fluctuate significantly in the future, which makes it difficult for us to predict our future operating results. From time to time, we may enter into license or collaboration agreements or strategic partnerships with other companies that include development funding and significant upfront and milestone payments and/or royalties, which may become an important source of our revenue. These upfront and milestone payments may vary significantly from period to period and any such variance could cause a significant fluctuation in our operating results from one period to the next.

In addition, we measure compensation cost for stock-based awards made to employees at the grant date of the award, based on the fair value of the award as determined by our board of directors, and recognize the cost as an expense over the employee's requisite service period. As the variables that we use as a basis for valuing these awards change over time, including, after the closing of this offering, our underlying stock price and stock price volatility, the magnitude of the expense that we must recognize may vary significantly.

Furthermore, our operating results may fluctuate due to a variety of other factors, many of which are outside of our control and may be difficult to predict, including the following:

- the timing and cost of, and level of investment in, research and development activities relating to our current and any future product candidates, which will change from time to time;
- our ability to enroll patients in clinical trials and the timing of enrollment;
- the cost of manufacturing our current and any future product candidates, which may vary depending on FDA guidelines and requirements, the quantity of production and the terms of our agreements with manufacturers;
- expenditures that we will or may incur to acquire or develop additional product candidates and technologies;
- the timing and outcomes of clinical trials for AK002 and any of our future product candidates or competing product candidates;
- the need to conduct unanticipated clinical trials or trials that are larger or more complex than anticipated;
- competition from existing and potential future products that compete with AK002 and any of our future product candidates, and changes in the competitive landscape of our industry, including consolidation among our competitors or partners;
- any delays in regulatory review or approval of AK002 or any of our future product candidates;
- the level of demand for AK002 and any of our future product candidates, if approved, which may fluctuate significantly and be difficult to predict;
- the risk/benefit profile, cost and reimbursement policies with respect to our products candidates, if approved, and existing and potential future products that compete with AK002 and any of our future product candidates;
- our ability to commercialize AK002 and any of our future product candidates, if approved, inside and outside of the United States, either independently or working with third parties;
- our ability to establish and maintain collaborations, licensing or other arrangements;
- our ability to adequately support future growth;
- potential unforeseen business disruptions that increase our costs or expenses;
- future accounting pronouncements or changes in our accounting policies; and
- the changing and volatile global economic environment.

The cumulative effect of these factors could result in large fluctuations and unpredictability in our quarterly and annual operating results. As a result, comparing our operating results on a period-to-period basis may not be meaningful. Investors should not rely on our past results as an indication of our future performance. This variability and unpredictability could also result in our failing to meet the expectations of industry or financial analysts or investors for any period. If our revenue or operating results fall below the expectations of analysts or investors or below any forecasts we may

provide to the market, or if the forecasts we provide to the market are below the expectations of analysts or investors, the price of our common stock could decline substantially. Such a stock price decline could occur even when we have met any previously publicly stated guidance we may provide.

Our principal stockholders and management own a significant percentage of our stock and will be able to exert significant control over matters subject to stockholder approval.

Prior to this offering, our executive officers, directors, holders of 5% or more of our capital stock and their respective affiliates beneficially owned approximately 85.4% of our voting stock and, upon the closing of this offering and the proposed concurrent private placement, that same group will beneficially own approximately 74.3% of our outstanding voting stock (based on the number of shares of common stock outstanding as of March 31, 2018 assuming no exercise of the underwriters' option to purchase additional shares, no exercise of outstanding options or warrants and no purchases of shares in this offering by any of this group), in each case assuming the conversion of all outstanding shares of our convertible preferred stock into shares of our common stock immediately prior to the closing of this offering. After this offering and the proposed concurrent private placement, this group of stockholders will have the ability to control us through this ownership position even if they do not purchase any additional shares in this offering or the proposed concurrent private placement. These stockholders may be able to determine all matters requiring stockholder approval. For example, these stockholders may be able to control elections of directors, amendments of our organizational documents or approval of any merger, sale of assets or other major corporate transaction. This may prevent or discourage unsolicited acquisition proposals or offers for our common stock that you may feel are in your best interest as one of our stockholders. The interests of this group of stockholders may not always coincide with your interests or the interests of other stockholders and they may act in a manner that advances their best interests and not necessarily those of other stockholders, including seeking a premium value for their common stock, and might affect the prevailing market price for our common stock.

Certain of our existing stockholders, including certain stockholders affiliated with our directors and that beneficially own more than 5% of our outstanding common stock, have indicated an interest in purchasing approximately $35.0 million in shares of our common stock in this offering at the initial public offering price. The previously discussed ownership percentage upon completion of this offering does not reflect the potential purchase of any shares in this offering by such stockholders.

You will incur immediate and substantial dilution as a result of this offering.

If you purchase common stock in this offering, you will incur immediate and substantial dilution of $11.66 per share, representing the difference between the assumed initial public offering price of $16.00 per share, which is the midpoint of the estimated offering price range set forth on the cover page of this prospectus, after deducting the estimated underwriting discounts and commissions and estimated offering expenses payable by us, and our pro forma net tangible book value per share after giving effect to this offering, completion of the proposed concurrent private placement and the automatic conversion of all outstanding shares of our convertible preferred stock upon the closing of this offering. As of March 31, 2018, there were 6,224,533 shares subject to outstanding options with a weighted-average exercise price of $1.39 per share. To the extent that these outstanding options are ultimately exercised or the underwriters exercise their option to purchase additional shares, you will incur further dilution. See the section titled "Dilution" for a further description of the dilution you will experience immediately after this offering.

Sales of a substantial number of shares of our common stock in the public market could cause our stock price to fall.

Sales of a substantial number of shares of our common stock in the public market could occur at any time. These sales, or the perception in the market that the holders of a large number of shares

intend to sell shares, could reduce the market price of our common stock. After this offering, we will have outstanding 39,710,859 shares of common stock based on the number of shares outstanding as of March 31, 2018, assuming: (i) no exercise of the underwriters' option to purchase additional shares, (ii) completion of the proposed concurrent private placement to NEA and (iii) the conversion of all outstanding shares of our convertible preferred stock into 30,971,627 shares of common stock immediately prior to the closing of this offering. This includes the shares that we sell in this offering, which may be resold in the public market immediately without restriction, unless purchased by our affiliates. Of the remaining shares, 34,126,353 shares of our common stock are currently restricted as a result of securities laws or lock-up agreements but will be able to be sold after this offering as described in the "Shares Eligible for Future Sale" section of this prospectus. Moreover, after this offering and the proposed concurrent private placement, holders of an aggregate of 31,596,627 shares of our common stock will have rights, subject to certain conditions, to require us to file registration statements covering their shares or to include their shares in registration statements that we may file for ourselves or other stockholders. We also intend to register all shares of common stock that we may issue under our equity incentive plans. Once we register these shares, they can be freely sold in the public market upon issuance, subject to volume limitations applicable to affiliates and the lock-up agreements described in the "Underwriting" section of this prospectus.

Our executive officers, directors and the holders of substantially all of our capital stock and securities convertible into or exchangeable for our capital stock have entered into market stand-off agreements with us and lock-up agreements with the underwriters under which they have agreed, subject to specific exceptions described in the section titled "Underwriting", not to sell, directly or indirectly, any shares of common stock without the permission of Goldman Sachs & Co. LLC and Jefferies LLC for a period of 180 days following the date of this prospectus. We refer to such period as the lock-up period. When the lock-up period expires, we and our securityholders subject to a lock-up agreement or market stand-off agreement will be able to sell our shares in the public market. In addition, Goldman Sachs & Co. LLC and Jefferies LLC may, in their sole discretion, release all or some portion of the shares subject to lock-up agreements at any time and for any reason. See "Shares Eligible for Future Sale" for more information. Sales of a substantial number of such shares upon expiration of the lock-up and market stand-off agreements, the perception that such sales may occur, or early release of these agreements, could cause our market price to fall or make it more difficult for you to sell your common stock at a time and price that you deem appropriate.

Raising additional capital may cause dilution to our existing stockholders, restrict our operations or require us to relinquish rights to our product candidates on unfavorable terms to us.

We may seek additional capital through a variety of means, including through public or private equity, debt financings or other sources, including up-front payments and milestone payments from strategic collaborations. To the extent that we raise additional capital through the sale of equity or convertible debt or equity securities, your ownership interest will be diluted, and the terms may include liquidation or other preferences that adversely affect your rights as a stockholder. Such financing may result in dilution to stockholders, imposition of debt covenants, increased fixed payment obligations or other restrictions that may affect our business. If we raise additional funds through up-front payments or milestone payments pursuant to strategic collaborations with third parties, we may have to relinquish valuable rights to our product candidates, or grant licenses on terms that are not favorable to us. In addition, we may seek additional capital due to favorable market conditions or strategic considerations even if we believe we have sufficient funds for our current or future operating plans.

We are an emerging growth company, and we cannot be certain if the reduced reporting requirements applicable to emerging growth companies will make our common stock less attractive to investors.

We are an emerging growth company, as defined in the Jumpstart Our Business Startups Act of 2012 ("JOBS Act"). For as long as we continue to be an emerging growth company, we may take advantage of exemptions from various reporting requirements that are applicable to other public companies that are not emerging growth companies, including not being required to comply with the auditor attestation requirements of Section 404 of the Sarbanes-Oxley Act of 2002, as amended ("Sarbanes-Oxley Act"), reduced disclosure obligations regarding executive compensation in this prospectus and our periodic reports and proxy statements and exemptions from the requirements of holding nonbinding advisory stockholder votes on executive compensation and stockholder approval of any golden parachute payments not previously approved. We cannot predict if investors will find our common stock less attractive because we may rely on these exemptions. If some investors find our common stock less attractive as a result, there may be a less active trading market for our common stock and our stock price may be more volatile.

We will remain an emerging growth company until the earlier of (i) the last day of the fiscal year (a) following the fifth anniversary of the closing of our initial public offering, (b) in which we have total annual gross revenue of at least $1.07 billion or (c) in which we are deemed to be a large accelerated filer, which requires the market value of our common stock that is held by non-affiliates to exceed $700 million as of the prior June 30th, and (ii) the date on which we have issued more than $1 billion in non-convertible debt during the prior three-year period.

Under the JOBS Act, emerging growth companies can also delay adopting new or revised accounting standards until such time as those standards apply to private companies. We have irrevocably elected not to avail ourselves of this exemption from new or revised accounting standards and, therefore, will be subject to the same new or revised accounting standards as other public companies that are not emerging growth companies. As a result, changes in rules of U.S. generally accepted accounting principles or their interpretation, the adoption of new guidance or the application of existing guidance to changes in our business could significantly affect our financial position and results of operations.

We will incur increased costs as a result of operating as a public company, and our management will devote substantial time to related compliance initiatives.

As a public company, we will incur significant legal, accounting and other expenses that we did not incur as a private company, and these expenses may increase even more after we are no longer an "emerging growth company." We will be subject to the reporting requirements of the Exchange Act, the Sarbanes-Oxley Act, the Dodd-Frank Wall Street Reform and Protection Act, as well as rules adopted, and to be adopted, by the SEC and NASDAQ. Our management and other personnel will need to devote a substantial amount of time to these compliance initiatives. Moreover, we expect these rules and regulations to substantially increase our legal and financial compliance costs and to make some activities more time-consuming and costly, which will increase our operating expenses. For example, we expect these rules and regulations to make it more difficult and more expensive for us to obtain director and officer liability insurance and we may be required to incur substantial costs to maintain sufficient coverage. We cannot predict or estimate the amount or timing of additional costs we may incur to respond to these requirements. The impact of these requirements could also make it more difficult for us to attract and retain qualified persons to serve on our board of directors, our board committees or as executive officers.

In addition, as a public company we will be required to incur additional costs and obligations in order to comply with SEC rules that implement Section 404 of the Sarbanes-Oxley Act. Under these

rules, beginning with our second annual report on Form 10-K after we become a public company, we will be required to make a formal assessment of the effectiveness of our internal control over financial reporting, and once we cease to be an emerging growth company, we will be required to include an attestation report on internal control over financial reporting issued by our independent registered public accounting firm. To achieve compliance with Section 404 within the prescribed period, we will be engaging in a process to document and evaluate our internal control over financial reporting, which is both costly and challenging. In this regard, we will need to continue to dedicate internal resources, potentially engage outside consultants and adopt a detailed work plan to assess and document the adequacy of our internal control over financial reporting, continue steps to improve control processes as appropriate, validate through testing that controls are designed and operating effectively, and implement a continuous reporting and improvement process for internal control over financial reporting.

The rules governing the standards that must be met for management to assess our internal control over financial reporting are complex and require significant documentation, testing and possible remediation to meet the detailed standards under the rules. During the course of its testing, our management may identify material weaknesses or deficiencies which may not be remedied in time to meet the deadline imposed by the Sarbanes-Oxley Act. These reporting and other obligations place significant demands on our management and administrative and operational resources, including accounting resources.

Our disclosure controls and procedures may not prevent or detect all errors or acts of fraud.

Upon the closing of this offering, we will become subject to the periodic reporting requirements of the Exchange Act. We designed our disclosure controls and procedures to reasonably assure that information we must disclose in reports we file or submit under the Exchange Act is accumulated and communicated to management, and recorded, processed, summarized and reported within the time periods specified in the rules and forms of the SEC. We believe that any disclosure controls and procedures or internal controls and procedures, no matter how well-conceived and operated, can provide only reasonable, not absolute, assurance that the objectives of the control system are met.

These inherent limitations include the facts that judgments in decision-making can be faulty and that breakdowns can occur because of simple error or mistake. Additionally, controls can be circumvented by the individual acts of some persons, by collusion of two or more people or by an unauthorized override of the controls. Accordingly, because of the inherent limitations in our control system, misstatements due to error or fraud may occur and not be detected.

We will have broad discretion in the use of the net proceeds from this offering and the proposed concurrent private placement and may not use them effectively.

Our management will have broad discretion in the application of the net proceeds from this offering and the proposed concurrent private placement, and you will be relying on the judgment of our management regarding the application of these proceeds. You will not have the opportunity, as part of your investment decision, to assess whether we are using the proceeds appropriately. Our management might not apply the net proceeds in ways that ultimately increase the value of your investment. If we do not invest or apply the net proceeds from this offering and the proposed concurrent private placement in ways that enhance stockholder value, we may fail to achieve expected financial results, which could cause our stock price to decline.

We may be subject to securities litigation, which is expensive and could divert management attention.

The market price of our common stock may be volatile and, in the past, companies that have experienced volatility in the market price of their stock have been subject to securities class action

litigation. We may be the target of this type of litigation in the future. Securities litigation against us could result in substantial costs and divert our management's attention from other business concerns, which could seriously harm our business.

We do not intend to pay dividends on our common stock so any returns will be limited to the value of our stock.

We have never declared or paid any cash dividends on our common stock. We currently anticipate that we will retain future earnings for the development, operation and expansion of our business and do not anticipate declaring or paying any cash dividends for the foreseeable future. Any return to stockholders will therefore be limited to any appreciation in the value of their stock.

Provisions in our restated certificate of incorporation and restated bylaws and Delaware law might discourage, delay or prevent a change in control of our company or changes in our management and, therefore, depress the market price of our common stock.

Our restated certificate of incorporation and restated bylaws, as we expect they will be in effect upon closing of the offering, will contain provisions that could depress the market price of our common stock by acting to discourage, delay or prevent a change in control of our company or changes in our management that the stockholders of our company may deem advantageous. These provisions, among other things:

- establish a classified board of directors so that not all members of our board are elected at one time;
- permit only the board of directors to establish the number of directors and fill vacancies on the board;
- provide that directors may only be removed "for cause" and only with the approval of two-thirds of our stockholders;
- authorize the issuance of "blank check" preferred stock that our board could use to implement a stockholder rights plan (also known as a "poison pill");
- eliminate the ability of our stockholders to call special meetings of stockholders;
- prohibit stockholder action by written consent, which requires all stockholder actions to be taken at a meeting of our stockholders;
- prohibit cumulative voting;
- authorize our board of directors to amend the bylaws;
- establish advance notice requirements for nominations for election to our board or for proposing matters that can be acted upon by stockholders at annual stockholder meetings; and
- require a super-majority vote of stockholders to amend some provisions described above.

In addition, Section 203 of the General Corporation Law of the State of Delaware ("DGCL"), prohibits a publicly-held Delaware corporation from engaging in a business combination with an interested stockholder, generally a person which together with its affiliates owns, or within the last three years has owned, 15% of our voting stock, for a period of three years after the date of the transaction in which the person became an interested stockholder, unless the business combination is approved in a prescribed manner.

Any provision of our amended and restated certificate of incorporation, amended and restated bylaws or Delaware law that has the effect of delaying or preventing a change in control could limit the

opportunity for our stockholders to receive a premium for their shares of our capital stock and could also affect the price that some investors are willing to pay for our common stock.

Our amended and restated certificate of incorporation that will become effective upon the closing of this offering provides that the Court of Chancery of the State of Delaware and the federal district courts of the United States of America will be the exclusive forums for substantially all disputes between us and our stockholders, which could limit our stockholders' ability to obtain a favorable judicial forum for disputes with us or our directors, officers or employees.

Our amended and restated certificate of incorporation that will become effective upon the closing of this offering provides that the Court of Chancery of the State of Delaware is the exclusive forum for:

- any derivative action or proceeding brought on our behalf;
- any action asserting a claim of breach of fiduciary duty;
- any action asserting a claim against us arising under the DGCL, our amended and restated certificate of incorporation or our amended and restated bylaws; and
- any action asserting a claim against us that is governed by the internal-affairs doctrine.

Our amended and restated certificate of incorporation further provides that the federal district courts of the United States of America will be the exclusive forum for resolving any complaint asserting a cause of action arising under the Securities Act.

These exclusive-forum provisions may limit a stockholder's ability to bring a claim in a judicial forum that it finds favorable for disputes with us or our directors, officers or other employees, which may discourage lawsuits against us and our directors, officers and other employees. If a court were to find either exclusive-forum provision in our amended and restated certificate of incorporation to be inapplicable or unenforceable in an action, we may incur additional costs associated with resolving the dispute in other jurisdictions, which could seriously harm our business.

SPECIAL NOTE REGARDING FORWARD-LOOKING STATEMENTS

This prospectus contains forward-looking statements. All statements other than statements of historical facts contained in this prospectus, including statements regarding our future results of operations and financial position, business strategy, product candidates, planned preclinical studies and clinical trials, results of clinical trials, research and development costs, regulatory approvals, timing and likelihood of success, as well as plans and objectives of management for future operations, are forward-looking statements. These statements involve known and unknown risks, uncertainties and other important factors that are in some cases beyond our control and may cause our actual results, performance or achievements to be materially different from any future results, performance or achievements expressed or implied by the forward-looking statements.

In some cases, you can identify forward-looking statements by terms such as “may,” “will,” “should,” “would,” “expect,” “plan,” “anticipate,” “could,” “intend,” “target,” “project,” “contemplate,” “believe,” “estimate,” “predict,” “potential” or “continue” or the negative of these terms or other similar expressions. Forward-looking statements contained in this prospectus include, but are not limited to, statements about:

- the ability of our clinical trials to demonstrate safety and efficacy of our product candidates, and other positive results;
- the timing and focus of our future clinical trials, and the reporting of data from those trials;
- our plans relating to commercializing AK002, if approved, including the geographic areas of focus and sales strategy;
- the size of the market opportunity for AK002 in each of the diseases we are targeting;
- the number of diseases represented in the patient population enrolled in our clinical trials, and our ability to evaluate response to treatment of AK002 in diseases other than the primary indication in our clinical trials;
- our estimates of the number of patients in the United States who suffer from the diseases we are targeting and the number of patients that will enroll in our clinical trials;
- the beneficial characteristics, safety, efficacy and therapeutic effects of AK002;
- the timing or likelihood of regulatory filings and approvals, including our expectation to seek special designations, such as orphan drug designation, for AK002 or our other product candidates for various diseases;
- our ability to obtain and maintain regulatory approval of AK002 or our other product candidates;
- our plans relating to the further development of AK002 and our other product candidates;
- existing regulations and regulatory developments in the United States and other jurisdictions;
- our plans and ability to obtain or protect intellectual property rights, including extensions of existing patent terms where available;
- our continued reliance on third parties to conduct additional clinical trials of AK002 and our other product candidates, and for the manufacture of our product candidates for preclinical studies and clinical trials;
- the need to hire additional personnel and our ability to attract and retain such personnel;
- the accuracy of our estimates regarding expenses, future revenue, capital requirements and needs for additional financing;

- our financial performance;
- the sufficiency of our existing cash and cash equivalents to fund our future operating expenses and capital expenditure requirements;
- our expectations regarding the period during which we will qualify as an emerging growth company under the JOBS Act; and
- our anticipated use of the proceeds from this offering and the proposed concurrent private placement.

We have based these forward-looking statements largely on our current expectations and projections about our business, the industry in which we operate and financial trends that we believe may affect our business, financial condition, results of operations and prospects, and these forward-looking statements are not guarantees of future performance or development. These forward-looking statements speak only as of the date of this prospectus and are subject to a number of risks, uncertainties and assumptions described in the section titled “Risk Factors” and elsewhere in this prospectus. Because forward-looking statements are inherently subject to risks and uncertainties, some of which cannot be predicted or quantified, you should not rely on these forward-looking statements as predictions of future events. The events and circumstances reflected in our forward-looking statements may not be achieved or occur and actual results could differ materially from those projected in the forward-looking statements. Except as required by applicable law, we do not plan to publicly update or revise any forward-looking statements contained herein until after we distribute this prospectus, whether as a result of any new information, future events or otherwise.

In addition, statements that “we believe” and similar statements reflect our beliefs and opinions on the relevant subject. These statements are based upon information available to us as of the date of this prospectus, and while we believe such information forms a reasonable basis for such statements, such information may be limited or incomplete, and our statements should not be read to indicate that we have conducted an exhaustive inquiry into, or review of, all potentially available relevant information. These statements are inherently uncertain and you are cautioned not to unduly rely upon these statements.

MARKET, INDUSTRY AND OTHER DATA

This prospectus contains estimates, projections and other information concerning our industry, our business and the markets for our product candidates, including data regarding the estimated size of such markets and the incidence of certain medical conditions. We obtained the industry, market and similar data set forth in this prospectus from our internal estimates and research and from academic and industry research, publications, surveys and studies conducted by third parties, including governmental agencies. Information that is based on estimates, forecasts, projections, market research or similar methodologies is inherently subject to uncertainties and actual events or circumstances may differ materially from events and circumstances that are assumed in this information. While we believe that the data we use from third parties are reliable, we have not separately verified these data. Further, while we believe our internal research is reliable, such research has not been verified by any third party. You are cautioned not to give undue weight to any such information, projections and estimates.

USE OF PROCEEDS

We estimate that the net proceeds to us from the sale of the shares of our common stock in this offering will be approximately $86.3 million, or approximately $99.7 million if the underwriters exercise their option to purchase additional shares in full, based upon an assumed initial public offering price of $16.00 per share, which is the midpoint of the estimated offering price range set forth on the cover page of this prospectus, and after deducting estimated underwriting discounts and commissions and estimated offering expenses payable by us. We also expect to receive net proceeds of approximately $10.0 million from the sale of shares of common stock to New Enterprise Associates 16, L.P. (“NEA”) in the proposed concurrent private placement, based on the assumed initial public offering price of $16.00 per share, for aggregate net proceeds to be raised by us in this offering and the concurrent private placement of $96.3 million, or $109.7 million if the underwriters exercise their option to purchase additional shares in full. We will receive the full proceeds from and will not pay any underwriting discounts or commissions with respect to the shares that are sold in the proposed concurrent private placement. Because we have not entered into any definitive agreement with NEA related to the proposed concurrent private placement, there can be no assurance that the concurrent private placement will take place or that more or fewer shares will not be issued in the concurrent private placement.

Each $1.00 increase (decrease) in the assumed initial public offering price of $16.00 per share would increase (decrease) the net proceeds to us from this offering and the proposed concurrent private placement by approximately $5.6 million, assuming the number of shares offered by us, as set forth on the cover page of this prospectus, remains the same, and after deducting estimated underwriting discounts and commissions and estimated offering expenses payable by us. Similarly, each increase (decrease) of 1.0 million shares in the number of shares offered by us in this offering would increase (decrease) the net proceeds to us from this offering by approximately $14.9 million, assuming that the assumed initial public offering price and the number of shares offered by us in the proposed concurrent placement, in each case, remains the same, and after deducting the estimated underwriting discounts and commissions and estimated offering expenses payable by us. We do not expect that a change in the initial public offering price or the number of shares by these amounts would have a material effect on our uses of the proceeds from this offering, although it may accelerate the time at which we will need to seek additional capital.

The principal purposes of this offering are to obtain additional capital to support our operations, establish a public market for our common stock and facilitate our future access to the public capital markets. We currently anticipate that we will use the net proceeds from this offering as follows:

- approximately $70.0 million for the development of our lead compound, AK002; and
- the remainder for other research and development activities, working capital and general corporate purposes.

We expect that the net proceeds from this offering will allow us to complete our Phase 2 trial for eosinophilic gastritis, Phase 2 trial for chronic urticaria, Phase 1 trial for indolent systemic mastocytosis and Phase 1 trial for severe allergic conjunctivitis. We also anticipate that the net proceeds will allow us to complete a nine-month safety exposure trial for eosinophilic gastritis. Progressing the development of AK002 through FDA approval for any of these indications will require additional financing, which may not be available on acceptable terms, if at all.

We believe opportunities may exist from time to time to expand our current business through license or acquisitions of, or investments in, complementary businesses, products or technologies. While we have no current agreements, commitments or understandings for any specific licenses, acquisitions or investments at this time, we may use a portion of the net proceeds for these purposes.

Pending their uses, we plan to invest the net proceeds of this offering and the proposed concurrent private placement in short-term, interest-bearing, investment-grade instruments, certificates of deposit or direct or guaranteed obligations of the U.S. government.

DIVIDEND POLICY

We have not declared or paid any cash dividends on our capital stock since our inception. We intend to retain future earnings, if any, to finance the operation and expansion of our business and do not anticipate paying any cash dividends in the foreseeable future. Payment of future cash dividends, if any, will be at the discretion of our board of directors after taking into account various factors, including our financial condition, operating results, current and anticipated cash needs, the requirements and contractual restrictions of then-existing debt instruments and other factors that our board of directors deems relevant.

CAPITALIZATION

The following table sets forth our cash and cash equivalents and capitalization as of March 31, 2018, as follows:

- on an actual basis;
- on a pro forma basis to reflect the automatic conversion of all outstanding shares of our convertible preferred stock into an aggregate of 38,714,587 shares of common stock upon the closing of this offering; and
- on a pro forma as adjusted basis to further reflect (i) our issuance and sale of 6,000,000 shares of common stock in this offering at an assumed initial public offering price of $16.00 per share, which is the midpoint of the estimated offering price range set forth on the cover page of this prospectus, after deducting the estimated underwriting discounts and commissions and estimated offering expenses payable by us and (ii) our issuance and sale of $10.0 million in shares of our common stock at a price per share equal to the initial public offering price (or 625,000 shares based on the assumed initial public offering price of $16.00 per share) in the proposed concurrent private placement. Because we have not entered into any definitive agreement related to the concurrent private placement, there can be no assurance that the concurrent private placement will take place or that more or fewer shares will not be issued in the concurrent private placement.

You should read this information in conjunction with our financial statements and the related notes appearing elsewhere in this prospectus, as well as the sections of this prospectus titled “Selected Financial Data” and “Management’s Discussion and Analysis of Financial Condition and Results of Operations.”

	As of March 31, 2018 (unaudited)		
	Actual	Pro Forma	Pro Forma As Adjusted (1)
	(in thousands, except per share data)		
Cash and cash equivalents	$ 74,600	$ 74,600	$ 170,927
Series A Convertible preferred stock, par value $0.001 per share; 26,083 shares authorized, 20,866 shares issued and outstanding, actual; no shares authorized, issued or outstanding, pro forma and pro forma as adjusted	$ 42,996	$ —	$ —
Series B Convertible preferred stock, par value $0.001 per share; 12,632 shares authorized, 10,105 shares issued and outstanding, actual; no shares authorized, issued or outstanding, pro forma and pro forma as adjusted	99,973	—	—
Stockholders' equity (deficit):			
Preferred stock, par value $0.001 per share; no shares authorized, issued and outstanding, actual; 20,000 shares authorized, no shares issued and outstanding, pro forma and pro forma as adjusted	—	—	—
Common stock, par value $0.001 per share; 55,000 shares authorized, 2,114 shares issued and outstanding, actual; 200,000 shares authorized, 33,086 shares issued and outstanding, pro forma; 200,000 shares authorized, 39,711 shares issued and outstanding, pro forma as adjusted	3	41	48
Additional paid-in capital	2,423	145,354	241,227
Accumulated deficit	(69,059)	(69,059)	(69,059)
Total stockholders' equity (deficit)	(66,633)	76,336	172,216
Total capitalization	$ 76,336	$ 76,336	$ 172,216

(1) Each $1.00 increase (decrease) in the assumed initial public offering price of $16.00 per share, which is the midpoint of the estimated offering price range set forth on the cover page of this prospectus, would increase (decrease) our pro forma as adjusted cash, additional paid-in capital, total stockholders' equity (deficit) and total capitalization by approximately $5.6 million, assuming that the number of shares of common stock offered by us in this offering, as set forth on the cover page of this prospectus, remains the same, and after deducting the estimated underwriting discounts and commissions and estimated offering expenses payable by us.

Each increase (decrease) of 1.0 million shares in the number of shares of common stock offered by us in this offering would increase (decrease) our pro forma as adjusted cash, additional paid-in capital, total stockholders' equity (deficit) and total capitalization by approximately $14.9 million, assuming the assumed initial public offering price of $16.00 per share, which is the midpoint of the estimated offering price range set forth on the cover page of this prospectus, and the number of shares of common stock offered by us in the proposed concurrent private placement, in each case, remains the same, and after deducting estimated underwriting discounts and commissions and estimated offering expenses payable by us. The pro forma as adjusted information discussed above is illustrative only and will be adjusted based on the actual public offering price and other terms of this offering determined at pricing.

The number of shares of common stock that will be outstanding after this offering, assuming completion of the proposed concurrent private placement, is based on 33,085,859 shares of common stock (including convertible preferred stock on an as-converted basis) outstanding as of March 31, 2018, and excludes the following:

- 6,224,533 shares of common stock issuable upon exercise of options to purchase shares of our common stock outstanding as of March 31, 2018, at a weighted-average exercise price of $1.39 per share;
- 1,122,160 shares of common stock issuable upon exercise of options to purchase shares of our common stock that we granted after March 31, 2018, at a weighted-average exercise price of $6.27 per share;
- 47,616 shares of common stock issuable upon exercise of a warrant to purchase shares of common stock outstanding as of March 31, 2018, at a weighted-average exercise price of $0.61 per share; and
- 4,596,872 shares of common stock reserved for future issuance under our stock-based compensation plans, consisting of:
    - 96,872 shares of common stock reserved for future issuance under our 2012 Equity Incentive Plan, as amended (“2012 Plan”);
    - 4,000,000 shares of common stock reserved for future issuance under our 2018 Equity Incentive Plan (“2018 Plan”), which will become effective in connection with this offering, and any additional shares that become available under our 2018 Plan pursuant to provisions thereof that automatically increase the share reserve under the plan each year, as more fully described in the section titled “Executive Compensation—Employee Benefit and Stock Plans”; and
    - 500,000 shares of common stock reserved for future issuance under our ESPP, which will become effective in connection with this offering, and any additional shares that become available under our ESPP pursuant to provisions thereof that automatically increase the share reserve under the plan each year, as more fully described in the section titled “Executive Compensation—Employee Benefit and Stock Plans.”

DILUTION

If you invest in our common stock in this offering, your ownership interest will be diluted immediately to the extent of the difference between the initial public offering price per share of our common stock and the pro forma as adjusted net tangible book value per share of our common stock immediately after this offering and the proposed concurrent private placement.

Our historical net tangible book value (deficit) as of March 31, 2018 was $(66.6) million, or $(31.52) per share of our common stock. Our historical net tangible book value (deficit) is the amount of our total tangible assets less our total liabilities and convertible preferred stock, which is not included within our stockholders' (deficit) equity. Historical net tangible book value per share represents historical net tangible book value (deficit) divided by the number of shares of our common stock outstanding as of March 31, 2018.

Our pro forma net tangible book value (deficit) as of March 31, 2018 was $76.3 million, or $2.31 per share of our common stock. Pro forma net tangible book value (deficit) represents the amount of our total tangible assets less our total liabilities, after giving effect to the automatic conversion of all outstanding shares of our convertible preferred stock into an aggregate of 30,971,627 shares of common stock upon the completion of this offering. Pro forma net tangible book value per share represents pro forma net tangible book value divided by the total number of shares outstanding as of March 31, 2018, after giving effect to the automatic conversion of all outstanding shares of our convertible preferred stock into an aggregate of 30,971,627 shares of our common stock upon the completion of this offering.

After giving further effect to (i) our sale of 6,000,000 shares of common stock in this offering at an assumed initial public offering price of $16.00 per share, which is the midpoint of the estimated offering price range set forth on the cover page of this prospectus, and after deducting estimated underwriting discounts and commissions and estimated offering expenses payable by us and (ii) our issuance and sale of $10.0 million in shares of our common stock at a price per share equal to the initial public offering price (or 625,000 shares based on the assumed initial public offering price of $16.00 per share) in the proposed concurrent private placement, our pro forma as adjusted net tangible book value as of March 31, 2018 would have been approximately $172.2 million, or approximately $4.34 per share. This represents an immediate increase in pro forma as adjusted net tangible book value per share of $2.03 to our existing stockholders and an immediate dilution in pro forma as adjusted net tangible book value per share of approximately $11.66 to new investors purchasing common stock in this offering. Dilution per share to new investors purchasing common stock in this offering is determined by subtracting pro forma as adjusted net tangible book value per share after this offering and the completion of the proposed concurrent private placement from the assumed initial public offering price per share paid by new investors. Because we have not entered into any definitive agreement related to the concurrent private placement, there can be no assurance that the concurrent private placement will take place or that more or fewer shares will not be issued in the concurrent private placement.

The following table illustrates this dilution on a per share basis:

Assumed initial public offering price per share		$16.00
Historical net tangible book value (deficit) per share as of March 31, 2018	$(31.52)	
Pro forma increase in net tangible book value (deficit) per share as of March 31, 2018	$ 33.83	
Pro forma net tangible book value (deficit) per share as of March 31, 2018	$ 2.31	
Increase in pro forma as adjusted net tangible book value per share attributable to new investors purchasing shares in this offering and the concurrent private placement	$ 2.03	
Pro forma as adjusted net tangible book value per share after this offering and the concurrent private placement		$ 4.34
Dilution per share to new investors purchasing shares in this offering		$11.66

Each $1.00 increase (decrease) in the assumed initial public offering price of $16.00 per share, which is the midpoint of the estimated offering price range set forth on the cover page of this prospectus, would increase (decrease) the pro forma as adjusted net tangible book value per share after this offering and the proposed concurrent private placement by $0.14 per share and the dilution to new investors purchasing common stock in this offering by $0.86 per share, assuming the number of shares offered by us in this offering, as set forth on the cover page of this prospectus, remains the same, and after deducting estimated underwriting discounts and commissions and estimated offering expenses payable by us. An increase of 1.0 million shares in the number of shares offered by us in this offering would increase the pro forma as adjusted net tangible book value per share after this offering and the proposed concurrent private placement by $0.26 and decrease the dilution per share to new investors participating in this offering by $0.26, assuming no change in the assumed initial public offering price or in the number of shares of common stock offered by us in the concurrent private placement and after deducting estimated underwriting discounts and commissions and estimated offering expenses payable by us. A decrease of 1.0 million shares in the number of shares offered by us in this offering would decrease the pro forma as adjusted net tangible book value per share after this offering and the proposed concurrent private placement by $0.28 and increase the dilution per share to new investors participating in this offering by $0.28, assuming no change in the assumed initial public offering price or in the number of shares of common stock offered by us in the concurrent private placement and after deducting estimated underwriting discounts and commissions and estimated offering expenses payable by us.

If the underwriters exercise their option to purchase 900,000 additional shares of common stock in this offering in full at the assumed initial public offering price of $16.00 per share, which is the midpoint of the estimated offering price range set forth on the cover of this prospectus and assuming the number of shares offered by us, as set forth on the cover page of this prospectus, remains the same, and after deducting estimated underwriting discounts and commissions and estimated offering expenses payable by us, the pro forma as adjusted net tangible book value per share after this offering and the proposed concurrent private placement would be $0.23 per share, and the dilution in pro forma as adjusted net tangible book value per share to new investors purchasing common stock in this offering would be $0.23 per share.

The following table summarizes, on a pro forma as adjusted basis, as of March 31, 2018, the number of shares of common stock purchased from us on an as converted to common stock basis, the total consideration paid, or to be paid and the weighted-average price per share paid, or to be paid, by existing stockholders, by new investors in this offering at an assumed initial public offering price of $16.00 per share, which is the midpoint of the estimated offering price range set forth on the cover page of this prospectus, before deducting estimated underwriting discounts and commissions and estimated offering expenses payable by us and by the private placement investor purchasing shares at

an assumed initial public offering price of $16.00 per share, which is the midpoint of the estimated offering price range set forth on the cover page of this prospectus.

	Shares Purchased		Total Consideration		Weighted-Average Price Per Share
	Number	Percent	Amount	Percent	
Existing stockholders before this offering	33,085,859	83%	$147,457,000	58%	$ 4.46
Investors participating in this offering	6,000,000	15	96,000,000	38	$ 16.00
Concurrent private placement investor	625,000	2	10,000,000	4	$ 16.00
Total	39,170,859	100%	$253,457,000	100%	

The table above assumes no exercise of the underwriters' option to purchase 900,000 additional shares in this offering. If the underwriters' option to purchase additional shares is exercised in full, the number of shares of our common stock held by existing stockholders would be reduced to 81% of the total number of shares of our common stock outstanding after this offering, and the number of shares of common stock held by new investors participating in the offering would be increased to 17% of the total number of shares outstanding after this offering.

Each $1.00 increase (decrease) in the assumed initial public offering price of $16.00 per share, which is the midpoint of the estimated offering price range set forth on the cover page of this prospectus, would increase (decrease) the total consideration paid by new investors in this offering by $6.0 million, assuming that the number of shares offered by us in this offering, as set forth on the cover page of this prospectus, remains the same. An increase (decrease) of 1.0 million shares in the number of shares offered by us would increase (decrease) the total consideration paid by new investors in this offering by $16.0 million, assuming no change in the assumed initial public offering price.

The number of shares of common stock that will be outstanding after this offering, assuming completion of the proposed concurrent private placement, is based on 33,085,859 shares of common stock (including convertible preferred stock on an as-converted basis) outstanding as of March 31, 2018, and excludes the following:

- 6,224,533 shares of common stock issuable upon exercise of options to purchase shares of our common stock outstanding as of March 31, 2018, at a weighted-average exercise price of $1.39 per share;
- 1,122,160 shares of common stock issuable upon exercise of options to purchase shares of our common stock that we granted after March 31, 2018, at a weighted-average exercise price of $6.27 per share;
- 47,616 shares of common stock issuable upon exercise of a warrant to purchase shares of common stock outstanding as of March 31, 2018, at a weighted-average exercise price of $0.61 per share; and
- 4,596,872 shares of common stock reserved for future issuance under our stock-based compensation plans, consisting of:
  - 96,872 shares of common stock reserved for future issuance under our 2012 Equity Incentive Plan, as amended ("2012 Plan");
  - 4,000,000 shares of common stock reserved for future issuance under our 2018 Equity Incentive Plan ("2018 Plan"), which will become effective in connection with this offering, and any additional shares that become available under our 2018 Plan pursuant to provisions thereof that automatically increase the share reserve under the plan each year, as more fully described in the section titled "Executive Compensation—Employee Benefit and Stock Plans"; and

- 500,000 shares of common stock reserved for future issuance under our ESPP, which will become effective in connection with this offering, and any additional shares that become available under our ESPP pursuant to provisions thereof that automatically increase the share reserve under the plan each year, as more fully described in the section titled “Executive Compensation—Employee Benefit and Stock Plans.”

Certain of our existing stockholders, including certain stockholders affiliated with our directors and that beneficially own more than 5% of our outstanding common stock, have indicated an interest in purchasing approximately $35.0 million in shares of our common stock in this offering at the initial public offering price. The foregoing discussion does not reflect the potential purchase of any shares in this offering by these existing stockholders.

To the extent that any outstanding options are exercised or new options are issued under the equity benefit plans, or we issue additional shares of common stock or other securities convertible into or exercisable or exchangeable for shares of our capital stock in the future, there will be further dilution to investors participating in this offering.

SELECTED FINANCIAL DATA

The following tables summarize our selected financial data for the periods and as of the dates indicated. We have derived our selected statements of operations and comprehensive loss data for the years ended December 31, 2016 and 2017, and the balance sheets as of December 31, 2016 and 2017, from our audited financial statements and related notes included elsewhere in this prospectus. The statements of operations and comprehensive loss data for the three months ended March 31, 2017 and 2018 and the balance sheet data as of March 31, 2018 have been derived from our unaudited interim financial statements included elsewhere in this prospectus and have been prepared in accordance with generally accepted accounting principles in the United States on the same basis as the annual audited financial statements and, in the opinion of management, the unaudited data reflects all adjustments, consisting only of normal recurring adjustments, necessary for the fair presentation of the financial information in those statements, and our results for the three months ended March 31, 2018 are not necessarily indicative of results to be expected for the full year. Our historical results are not necessarily indicative of the results that may be expected in the future. You should read the financial and other data below in conjunction with the section titled “Management’s Discussion and Analysis of Financial Condition and Results of Operations” and our financial statements and related notes included elsewhere in this prospectus.

	Year Ended December 31,		Three Months Ended March 31,	
	2016	2017	2017	2018
	(in thousands, except per share data)			
Statements of Operations Data:				
Operating expenses:				
Research and development	$ 14,672	$ 18,506	$ 4,364	$ 6,401
General and administrative	2,388	3,748	613	2,308
Total operating expenses	17,060	22,254	4,977	8,709
Loss from operations	(17,060)	(22,254)	(4,977)	(8,709)
Interest income (expense), net	(51)	(1,302)	(64)	224
Other income (expense), net	11	(287)	(15)	—
Loss before benefit from income taxes	(17,100)	(23,843)	(5,056)	(8,485)
Provision for (benefit from) income taxes	—	(291)	—	—
Net loss and comprehensive loss	$(17,100)	$(23,552)	$(5,056)	$ (8,485)
Net loss per share: (1)				
Basic and diluted	$ (13.03)	$ (14.54)	$ (3.56)	$ (4.19)
Weighted-average shares of common stock outstanding: (1)				
Basic and diluted	1,312	1,620	1,420	2,024
Pro forma net loss per share: (1)				
Basic and diluted (unaudited)		$ (1.01)		$ (0.26)
Pro forma weighted-average shares of common stock outstanding: (1)				
Basic and diluted (unaudited)		23,372		32,995

(1) See our statements of operations and comprehensive loss and Note 2 to our financial statements for further details on the calculation of net loss per share, basic and diluted, attributable to common stockholders and the weighted-average number of shares used in the computation of the per share amounts and unaudited pro forma information.

	As of December 31,		As of March 31,
	2016	2017	2018
		(in thousands)	
Balance Sheet Data:			
Cash and cash equivalents	$ 13,416	$ 85,207	$ 74,600
Working capital (1)	11,031	83,452	73,904
Total assets	14,176	87,029	79,777
Total liabilities	7,616	2,828	3,441
Convertible preferred stock	42,996	142,969	142,969
Accumulated deficit	(37,022)	(60,574)	(69,059)
Total stockholders' deficit	(36,436)	(58,768)	(66,633)

(1) We define working capital as current assets less current liabilities. See our financial statements included elsewhere in this prospectus for further details regarding our current assets and current liabilities.

MANAGEMENT'S DISCUSSION AND ANALYSIS OF FINANCIAL CONDITION AND RESULTS OF OPERATIONS

You should read the following discussion and analysis of our financial condition and results of operations together with our audited and unaudited financial statements and the related notes and other financial information included elsewhere in this prospectus. Some of the information contained in this discussion and analysis or set forth elsewhere in this prospectus, including information with respect to our plans and strategy for our business, include forward-looking statements that involve risks and uncertainties. You should review "Risk Factors" for a discussion of important factors that could cause our actual results to differ materially from the results described in or implied by the forward-looking statements contained in the following discussion and analysis.

Overview

We are a clinical stage biotechnology company developing AK002, our wholly owned monoclonal antibody, for the treatment of various eosinophil and mast cell related diseases. AK002 demonstrated pharmacodynamic activity in both of our completed Phase 1 trials, and in the single ascending dose Phase 1 trial involving patients with indolent systemic mastocytosis ("ISM"), patients reported improvements in their symptoms. AK002 selectively targets both eosinophils and mast cells, which are types of white blood cells that are widely distributed in the body and play a central role in the inflammatory response. Inappropriately activated eosinophils and mast cells have been identified as key drivers in a number of severe diseases affecting the gastrointestinal tract, eyes, skin, lungs and other organs. As such, AK002 has the potential to treat a large number of severe diseases. We are developing AK002 for the treatment of eosinophilic gastritis ("EG") and eosinophilic gastroenteritis ("EGE"). In addition, we are conducting studies in ISM, chronic urticaria ("CU") and severe allergic conjunctivitis ("SAC") and are evaluating additional indications for future development.

Despite the knowledge that eosinophils and mast cells drive many pathological conditions, there are no approved therapies that selectively target both eosinophils and mast cells. Current treatments for the diseases we are pursuing are non-selective and often come with serious side effects that make them unsuitable for long term use. AK002 binds to Siglec-8, an inhibitory receptor found on eosinophils and mast cells, which represents a novel way to selectively deplete or inhibit these important immune cells and thereby resolve inflammation. We believe AK002 is the only Siglec-8 targeting antibody currently in clinical development and has the potential to be an alternative to current treatments.

Since our inception in 2012, we have devoted substantially all of our resources and efforts towards the research and development of our product candidates. We initially began developing two product candidates, AK001 and AK002, both of which are monoclonal antibodies targeting Siglec-8. These compounds entered clinical trials in 2015 and 2016, respectively. Due to the greater activity of AK002, we decided to focus our development efforts on AK002 and discontinued the development of AK001 in 2017. We have no current plans to continue development of AK001 at this time but may choose to do so in the future. In addition to activities conducted internally at our facilities, we have utilized significant financial resources to engage contractors, consultants and other third parties to conduct various preclinical and clinical development activities on our behalf.

To date, we have not had any products approved for sale and have not generated any revenue nor been profitable. Further, we do not expect to generate revenue from product sales until such time, if ever, that we are able to successfully complete the development and obtain marketing approval for one of our product candidates. We will continue to require additional capital to develop our product candidates and fund operations for the foreseeable future. We have incurred significant operating losses to date and expect to incur significant operating losses for the foreseeable future. Our net loss was $23.6 million for the year ended December 31, 2017 and $8.5 million for the three months ended March 31, 2018. As of March 31, 2018, we had an accumulated deficit of $69.1 million.

Our operations have been financed primarily through the private placements of convertible debt instruments and convertible preferred stock. These private placements provided gross proceeds of $146.9 million. We also had a debt facility with Silicon Valley Bank ("SVB") for an aggregate of $5.0 million, which was fully repaid and terminated during 2017. As of March 31, 2018, we had cash and cash equivalents of $74.6 million, which we believe will be sufficient to fund our planned operations for at least the next 12 months.

Components of Operating Results

Revenue

We have not generated any revenue from product sales or otherwise, and do not expect to generate any revenue for at least the next several years.

Operating Expenses

We classify operating expenses into two categories: (i) research and development and (ii) general and administrative.

Research and Development Expenses

Research and development expenses represent the following costs incurred by us for the discovery, development and manufacturing of our product candidates:

- consultant and personnel-related costs including salaries, benefits, travel and stock-based compensation expense;
- costs incurred under service agreements with contract research organizations ("CROs") that conduct nonclinical and clinical research activities on our behalf;
- costs incurred under service agreements with contract development and manufacturing organizations ("CDMOs") for the manufacture and fill finish of our preclinical and clinical materials;
- costs related to in-house research and development activities conducted at our facilities including laboratory supplies, non-capital laboratory equipment and depreciation of capital laboratory equipment and leasehold improvements to laboratories;
- costs incurred under exclusive and non-exclusive license agreements with third parties; and
- allocated facility and other costs including the rent and maintenance of our facilities, insurance premiums, depreciation of shared-use leasehold improvements and general office supplies.

We expense research and development costs as incurred. We recognize costs for certain development activities, such as clinical trials, based on an evaluation of the progress to completion of specific tasks using data such as clinical site activations, patient enrollment or information provided to us by our vendors and our clinical investigative sites, along with analysis by our in-house clinical operations personnel. Advance payments for goods or services to be received in the future for use in research and development activities are deferred and capitalized as prepaid expenses, even when there is no alternative future use for the research and development. The capitalized amounts are expensed as the related goods are delivered or the services are performed.

The successful development of our product candidates is highly uncertain. Accordingly, it is difficult to estimate the nature, timing and extent of costs necessary to complete the remainder of the development of our product candidates. We are also unable to predict when, if ever, we will be able to

generate revenue from our product candidates. This is due to the numerous risks and uncertainties associated with developing drugs, including the uncertainty surrounding:

- demonstrating sufficient safety and tolerability profiles of product candidates;
- successful enrollment and completion of clinical trials;
- requisite clearance and approvals from applicable regulatory authorities;
- establishing and maintaining commercial manufacturing capabilities with CDMOs;
- obtaining and maintaining protection of intellectual property; and
- commercializing product candidates, if and when approved, alone or in collaboration with third parties.

A change pertaining to any of these variables would significantly impact the timing and extent of costs incurred with respect to the development and commercialization of our product candidates.

External costs incurred from third party CROs and CDMOs have comprised a significant portion of our research and development expenses since inception. We track external CRO and CDMO costs on a program-by-program basis following the advancement of a product candidate into clinical development. To date, we have advanced two product candidates, AK001 and AK002, into clinical development, although we discontinued the development of AK001 in 2017. Consulting and personnel-related costs, laboratory supplies and non-capital equipment utilized in the conduct of in-house research, in-licensing fees and general overhead, are not tracked on a program-by-program basis, nor are they allocated, as they commonly benefit projects in our pipeline or span multiple programs.

The following table summarizes our research and development expenses for the periods indicated (in thousands):

	Year Ended December 31,		Three Months Ended March 31,	
	2016	2017	2017	2018
AK002 contract research and development	$ 2,989	$ 5,133	$ 719	$ 2,299
AK001 contract research and development	5,460	3,820	1,850	413
Consulting and personnel-related costs	3,452	6,033	931	2,579
Other unallocated research and development costs	2,771	3,520	864	1,110
Total	$14,672	$18,506	$ 4,364	$ 6,401

General and Administrative Expenses

General and administrative expenses consist of fees paid to consultants, salaries, benefits and other personnel-related costs, including stock-based compensation, for our personnel in executive, finance, accounting and other administrative functions, legal costs, fees paid for accounting and tax services and facility costs not otherwise included in research and development expenses. Legal costs include general corporate and patent legal fees and related costs.

We anticipate that our general and administrative expenses will increase in the future to support our continued research and development activities including costs related to personnel, outside consultants, attorneys and accountants, among others. Additionally, we expect to incur incremental costs associated with operating as a public company, including expenses related to maintaining compliance with the rules and regulations of the Securities and Exchange Commission (“SEC”), and those of any national securities exchange on which our securities are traded, additional insurance premiums, investor relations activities and other ancillary administrative and professional services.

Interest Income (Expense), Net

Interest income (expense), net primarily consists of stated interest on outstanding principal amounts drawn under our historical debt facility with SVB, amortization of debt discounts and beneficial conversion feature associated with convertible notes payable to related parties and the amortization and accretion of debt discounts and deferred issuance costs associated with amounts drawn under our historical debt facility with SVB. Also included within interest income (expense), net is interest earned on cash, cash equivalents and restricted cash included on the associated balance sheets.

Other Income (Expense), Net

Other income (expense), net primarily consists of charges related to the extinguishment of our historical debt facility with SVB, as well as amounts realized from disposals of laboratory equipment and gains and losses related to fluctuations in foreign currencies.

In-Licensing Agreements

We have entered into a number of exclusive and nonexclusive, royalty bearing license agreements with third-parties for certain intellectual property. Under the terms of the license agreements described below, we are obligated to pay milestone payments upon the achievement of specified clinical, regulatory and commercial milestones. Actual amounts due under the license agreements vary depending on factors including, but not limited to, the number of product candidates we develop and our ability to successfully develop and commercialize our product candidates covered under the respective agreements. In addition to milestone payments, we are also subject to future royalty payments based on sales of our product candidates covered under the agreements, as well as certain minimum annual royalty and commercial reservation fees. Because the achievement of milestones and the timing and extent of future royalties is not fixed and determinable, these contingent amounts have not been included on our balance sheet or as part of Contractual Obligations and Commitments discussion below.

Exclusive License Agreement with The Johns Hopkins University

In December 2013, we entered into a license agreement with The Johns Hopkins University, (“JHU”) for a worldwide exclusive license to develop, use, manufacture and commercialize covered product candidates including AK001 and AK002, which was amended in September 30, 2016. Under the terms of the agreement, we have made upfront and milestone payments of $0.3 million as of March 31, 2018 and we may be required to make aggregate additional milestone payments of up to $4.0 million. We also issued 88,887 shares of common stock as consideration under the JHU license agreement. In addition to milestone payments, we are also subject to single-digit royalties to JHU based on future net sales of each licensed therapeutic product candidate by us and our affiliates and sublicensees, with up to a low six digit dollar minimum annual royalty payment.

Non-exclusive License Agreement with BioWa Inc. and Lonza Sales AG

In October 2013, we entered into a tripartite agreement with BioWa Inc. (“BioWa”), and Lonza Sales AG (“Lonza”), for the non-exclusive worldwide license to develop and commercialize product candidates including AK002 that are manufactured using a technology jointly developed and owned by BioWa and Lonza. Under the terms of the agreement, we have made milestone payments of $0.4 million as of March 31, 2018 and we may be required to make aggregate additional milestone payments of up to $41.0 million. In addition to milestone payments, we are also subject to minimum annual commercial license fees of $40,000 per year to BioWa until such time as BioWa receives royalty payments, as well as low single-digit royalties to BioWa and to Lonza. Royalties are based on future net sales by us and our affiliates and sublicensees and vary dependent on Lonza’s participation as sole manufacturer for commercial production.

Critical Accounting Policies and Use of Estimates

Our management's discussion and analysis of our financial condition and results of operations is based on our financial statements, which have been prepared in accordance with generally accepted accounting principles in the United States ("U.S. GAAP"). The preparation of our financial statements requires us to make estimates and assumptions that affect the reported amounts of assets and liabilities and the disclosure of contingent assets and liabilities at the date of the financial statements, as well as the reported expenses incurred during the reporting periods. Our estimates are based on our historical experience and on various other factors that we believe are reasonable under the circumstances, the results of which form the basis for making judgments about the carrying value of assets and liabilities that are not readily apparent from other sources. Actual results may differ from these estimates under different assumptions or conditions.

We believe that the accounting policies discussed below are critical to understanding our historical and future performance, as these policies relate to the more significant areas involving management's judgments and estimates.

Research and Development Expenses

As part of the process of preparing our financial statements, we estimate our accrued research and development expenses at each balance sheet date. This process involves reviewing purchase orders and open contracts, communicating with our personnel to identify services that have been performed on our behalf and estimating the level of service performed and the associated costs incurred for the services when we have not yet been invoiced or otherwise notified of the actual cost. The majority of our service providers invoice us monthly in arrears for services performed or when contractual milestones are met; however, some require advance payments. We make estimates of our accrued expenses as of each balance sheet date in our financial statements based on facts and circumstances known to us at that time. We periodically confirm the accuracy of our estimates with the service providers and make adjustments as necessary. The significant estimates in our accrued research and development expenses include the costs incurred for services performed by CROs and CDMOs in connection with research and development activities for which we have not yet been invoiced.

We base our expenses related to research and development activities on our estimates of the services received and efforts expended pursuant to quotes and contracts with vendors that conduct research and development on our behalf. The financial terms of these agreements are subject to negotiation, vary from contract to contract and may result in uneven payment flows. There may be instances in which payments made to our vendors will exceed the level of services provided and result in a prepayment of the research and development expense. In accruing service fees, we estimate the time period over which services will be performed and the level of effort to be expended in each period. If the actual timing of the performance of services or the level of effort varies from our estimate, we adjust the accrual or prepaid accordingly. Non-refundable advance payments for goods and services that will be used in future research and development activities are expensed when the activity has been performed or when the goods have been received rather than when the payment is made.

Although we do not expect our estimates to be materially different from amounts incurred, our understanding of the status and timing of services performed relative to the actual status and timing of services performed may vary and may result in us reporting amounts that are too high or too low in any period. To date, there have been no material differences between our estimates of such expenses and the amounts incurred.

Stock-Based Compensation

We account for stock-based compensation expense resulting from stock-based awards granted to employees and directors in accordance with ASC 718, *Compensation—Stock Compensation*, ("ASC 718"). Per ASC 718, we measure the fair value of stock-based awards on the date of grant and recognize the associated compensation expense, net of impact from estimated forfeitures, over the requisite service period on a straight-line basis. The vesting period of the stock-based award has historically served as the requisite service period for the respective grants to our employees and directors. At each subsequent reporting date, we are required to evaluate whether the achievement of any associated vesting conditions is probable and whether or not any such events have occurred that would have resulted in the acceleration of vesting.

Determining the amount of stock-based compensation expense to be recorded requires us to develop estimates of the fair value of stock options as of the date of grant. We estimate the fair value of each stock-based award using the Black-Scholes option-pricing model. The Black-Scholes option-pricing model uses highly subjective inputs such as the fair value of our common stock, as well as other assumptions including the expected volatility of our common stock, the expected term of the respective stock-based award, the risk-free interest rate for a period that approximates the expected term of the stock-based award being valued and the expected dividend yield on our common stock over the expected term.

Expected volatility. Due to the lack of a public market for our common stock and a lack of company-specific historical and implied volatility data, we have based our computation of expected volatility on the historical volatility of a representative group of public life science companies with similar characteristics to us, including company age and stage of product development. The historical volatility data is calculated based on a period of time commensurate with the expected term of the stock-based award being valued. We will continue to utilize this approach until a sufficient amount of historical information regarding the volatility of our own stock price becomes available or until other relevant circumstances change, such as our assessment that our identified entities are no longer appropriate to use as representative companies. In the latter case, more suitable, similar entities with publicly available stock prices would be incorporated in the calculation.

Expected term. In order to estimate the expected term of a stock-based award, we use the simplified method prescribed by SEC Staff Accounting Bulletin No. 107, *Share-Based Payment*, as we do not have sufficient historical exercise data to provide a reasonable basis upon which to estimate the expected term. Under this approach, the expected term is presumed to be the average of the contractual term (ten years) and the vesting term (generally four years) of the stock-based award. We have not historically experienced, nor do we expect there to be substantially different exercise or post-vesting termination behavior among our employees and directors.

Risk-free interest rate. The risk-free interest rate is based on publicly available yields of U.S Treasury instruments with maturities consistent with the expected term of the stock-based award.

Expected dividend yield. The expected dividend yield is assumed to be zero as we have never paid dividends and have no current plans to pay any dividends on our common stock.

The following weighted-average assumptions were used to calculate the fair value of stock-based awards granted to employees and directors during the periods indicated:

	Year Ended December 31,		Three Months Ended March 31,	
	2016	2017	2017	2018
Risk-free interest rate	1.64%	1.83%	1.98%	2.48%
Expected volatility	73.22%	77.59%	78.00%	77.82%
Expected dividend yield	—	—	—	—
Expected term (in years)	6.02	6.08	6.08	5.93

We will continue to use judgment in evaluating these assumptions on a prospective basis.

Stock-based compensation expense is reflected in the statements of operations and comprehensive loss for the periods indicated as follows (in thousands):

	Year Ended December 31,		Three Months Ended March 31,	
	2016	2017	2017	2018
Research and development	$108	$175	$ 27	$ 168
General and administrative	74	227	19	446
Total	$182	$402	$ 46	$ 614

Stock-based compensation expense related to unvested stock option grants not yet recognized as of March 31, 2018 was $5.4 million. The weighted-average period over which these grants are expected to vest is 2.9 years. We expect to continue to grant stock options in the future, and to the extent we do, our actual stock-based compensation expense recognized in future periods will likely increase.

The intrinsic value of all outstanding options as of March 31, 2018 was approximately $90.9 million, based on the assumed initial public offering price of $16.00 per share, which is the midpoint of the estimated initial public offering price range set forth on the cover page of this prospectus, of which approximately $17.1 million is related to vested options and approximately $73.8 million is related to unvested options.

Determination of Fair Value of Common Stock on Grant Dates

The estimated fair value of the common stock underlying our stock options was determined at each grant date by our board of directors, with input from management. All options to purchase shares of our common stock are intended to be exercisable at a price per share not less than the per-share fair value of our common stock underlying those options on the date of grant. As a private company with no active public market for our common stock, our board of directors has periodically determined the estimated per-share fair value of our common stock considering, among other things, contemporaneous valuations performed by independent valuation specialists in accordance with the guidance outlined in the American Institute of Certified Public Accountants' Accounting and Valuation Guide, *Valuation of Privately-Held-Company Equity Securities Issued as Compensation*, (the "Practice Aid").

The Practice Aid identifies various available methods for allocating enterprise value across classes and series of capital stock in order to determine the estimated fair value of common stock at each valuation date. In accordance with the Practice Aid, our board of directors considered a number of available methods including those described below. Each of these methods requires the use of

significant judgments including making assumptions regarding our future operating performance, as well as the timing and probability of future financing and liquidity events. The relative probabilities and timing surrounding each future event were determined based on an analysis of our prospects and market conditions at the time. The enterprise valuations utilized in each method were historically determined using either the guideline public company method, the similar transaction method or backsolved using a contemporaneous transaction of our convertible preferred stock. For valuations derived using the guideline public company method and similar transaction method, we focused on life science companies at similar stages of development that recently completed initial public offerings or had recently consummated a liquidation event. Resulting valuations associated with these future scenarios were discounted back to the valuation date using an appropriate risk-adjusted discount rate. Finally, we applied discounts for lack of marketability to our common stock to account for the lack of access to an active public market. If different methodologies or assumptions were used, our stock-based compensation expense, net loss and net loss per share applicable to common stockholders could have been significantly different.

Option-Pricing Method. The option-pricing method ("OPM"), treats the various classes of capital stock as call options on the total equity value of a company, with exercise prices determined using thresholds for each equity value that results in a change in the allocation to each class of capital stock. Accordingly, common stock only has value if the funds available for distribution to stockholders exceeds all current and future preferred stock liquidation preferences modeled at the time of a liquidity event, such as a strategic sale, merger or disposition of the Company. In order to calculate the fair value of the various call options, the OPM incorporates the Black-Scholes option-pricing model. The Black-Scholes option-pricing model requires management to make additional assumptions such as the expected volatility of the underlying equity securities. Expected volatility utilized in our valuation models was based on the historical trading volatility of our publicly traded peer companies, which we assess for reasonableness and update on a continuous basis as necessary.

Probability-Weighted Expected Return Method. The probability-weighted expected return method ("PWERM"), is a scenario-based analysis that estimates value per share based upon an analysis of future values for the company, assuming various outcomes. The common stock value is based on the probability-weighted present value of expected future investment returns considering each of the possible outcomes available as well as the rights of each class of stock. The future value of the common stock under each outcome is discounted back to the valuation date at an appropriate risk-adjusted discount rate and probability weighted to arrive at an indication of value for the common stock.

Hybrid Method. The Hybrid Method is a blended approach using aspects of both the PWERM and OPM, in which the equity value in one of the scenarios is calculated using an OPM. In the hybrid method used by us, two types of future-event scenarios were considered: an IPO and an unspecified liquidity event.

Based on our early stage of development and other relevant factors, we determined that an OPM was the most appropriate method for allocating enterprise value for our November 2015 common stock valuation. For the common stock valuation that we performed in December 2016, we determined the PWERM to be the most appropriate as we were within twelve to eighteen months from a potential IPO. We determined the Hybrid Method to be the most appropriate for subsequent valuations performed in August 2017, December 2017 and March 2018, as our expectations around the timing and form of liquidity became better understood.

The dates of our contemporaneous valuations have not always coincided with the dates of our stock option grants. In determining the exercise prices of the stock options, our board of directors considered, among other things, the most recent contemporaneous valuations of our common stock

and our assessment of additional objective and subjective factors we believed were relevant as of the grant date. The additional factors considered when determining any changes in fair value between the most recent contemporaneous valuation and the grant dates included our stage of research and development, our operating and financial performance and current business conditions.

Once a public trading market for our common stock has been established in connection with the completion of this offering, it will no longer be necessary for us to estimate the fair value of our common stock in connection with our accounting for stock-based awards, as the fair value of our common stock will be equal to its trading price on the primary stock exchange on which our common stock is traded.

Income Taxes

We account for income taxes under the asset and liability method. Current income tax expense or benefit represents the amount of income taxes we expect to pay or have refunded in the current year. Our deferred income tax assets and liabilities are determined based on differences between financial statement reporting and tax basis accounting of assets and liabilities and net operating loss and credit carryforwards, which we measure using the enacted tax rates and laws that will be in effect when such items are expected to reverse. We reduce deferred income tax assets, as necessary, by applying a valuation allowance to the extent that we determined it is more likely than not that some or all of our tax benefits will not be realized.

We account for uncertain tax positions in accordance with ASC 740-10, *Accounting for Uncertainty in Income Taxes*. We assess all material positions reflected in our income tax returns, including all significant uncertain positions, for all tax years that are subject to assessment or challenge by relevant taxing authorities. Upon determining the sustainability of our positions, we measure the largest amount of benefit possessing greater than fifty percent likelihood of being realized upon ultimate settlement. We reassess such positions at each balance sheet date to determine whether any factors underlying the sustainability assertion have changed and whether or not the amount of the recognized tax benefit is still appropriate.

As of December 31, 2017, our gross deferred tax assets were $18.1 million. Due to our lack of earnings history and uncertainties surrounding our ability to generate future taxable income, we have offset the total net deferred tax assets with a full valuation allowance. The deferred tax assets were primarily comprised of federal and state tax net operating losses, (“NOLs”), which may be limited by certain rules governing changes in ownership, as defined in Section 382 of the Internal Revenue Code of 1986, as amended. Similar rules may apply under state tax laws. Our ability to use our remaining NOLs may be further limited if we experience future ownership changes, including changes experienced in connection with this offering.

The recognition and measurement of tax benefits requires significant judgment, especially in assessing uncertain tax positions. Judgments concerning the recognition and measurement of our tax benefits, as well as limitations surrounding their realizability, might change as new information becomes available.

Recent Accounting Pronouncements

See Note 2 to our financial statements for recently issued accounting pronouncements, including the respective effective dates of adoption and effects on our results of operations and financial condition.

JOBS Act

In April 2012, the Jumpstart Our Business Startups Act of 2012 (the "JOBS Act"), was enacted. Section 107 of the JOBS Act provides that an emerging growth company ("EGC"), can take advantage of the extended transition period provided in Section 7(a)(2)(B) of the Securities Act of 1933 as amended, (the "Securities Act"), for complying with new or revised accounting standards. Thus, an EGC can delay the adoption of certain accounting standards until those standards would otherwise apply to private companies. We have irrevocably elected not to avail ourselves of this extended transition period and, as a result, we will adopt new or revised accounting standards on the relevant dates on which adoption of such standards is required for other public companies.

We will remain an emerging growth company until the earliest of (i) the last day of our first fiscal year in which we have total annual gross revenues of $1.07 billion or more, (ii) the date on which we are deemed to be a "large accelerated filer" under the rules of the SEC with at least $700.0 million of outstanding equity securities held by non-affiliates, (iii) the date on which we have issued more than $1.0 billion in non-convertible debt securities during the previous three years or (iv) the last day of our fiscal year following the fifth anniversary of the date of the completion of this offering.

Results of Operations

Comparison of the Three Months Ended March 31, 2017 and 2018

The following table summarizes our results of operations for the periods indicated (in thousands):

	Three Months Ended March 31,	
	2017	2018
Operating expenses		
Research and development	$ 4,364	$ 6,401
General and administrative	613	2,308
Total operating expenses	4,977	8,709
Loss from operations	(4,977)	(8,709)
Interest income (expense), net	(64)	224
Other expense, net	(15)	—
Net loss and comprehensive loss	$ (5,056)	$ (8,485)

Research and Development Expenses

Research and development expenses were $6.4 million for the three months ended March 31, 2018 compared to $4.4 million for the three months ended March 31, 2017, an increase of $2.0 million. The increase in research and development expenses was attributable to an additional $1.6 million in consulting and personnel-related costs resulting primarily from our increased employee headcount, $1.6 million of incremental AK002 contract research and development costs primarily attributable to the expansion of our clinical development efforts including our Phase 2 trial in patients with CU and our Phase 1 trial in patients with SAC, and an increase of $0.2 million in other unallocated research and development costs primarily related to the conduct of in-house research, including activities supporting the continued development of antibodies in our pipeline. The increases were offset in part by a period-over-period decrease of $1.4 million in AK001 contract research and development costs as a result of our discontinuation of AK001 development efforts during 2017. Residual costs incurred during the three months ended March 31, 2018 are related to the winding down of historically contracted research and development activities.

General and Administrative Expenses

General and administrative expenses were $2.3 million for the three months ended March 31, 2018 compared to $0.6 million for the three months ended March 31, 2017, an increase of $1.7 million. The increase in general and administrative expenses was primarily attributable to an additional $1.1 million in personnel-related costs as a result of our increase in employee headcount, as well as $0.4 million of incremental expense incurred from outside professional service providers for legal, audit, and tax services in preparation for the planned filing of our S-1 registration statement and $0.2 million of facilities and other administrative costs not otherwise included in research and development expenses.

Interest Income (Expense), Net

Interest income (expense), net was $0.2 million for the three months ended March 31, 2018 compared to ($0.1) million for the three months ended March 31, 2017. The period-over-period change was attributable to increased interest income of $0.2 million earned on capital raised by our Series B preferred stock financing in November 2017 and decreased interest expense of $0.1 million resulting from the repayment and termination of our debt facility during the year ended December 31, 2017.

Comparison of the Years Ended December 31, 2016 and 2017

The following table summarizes our results of operations for the periods indicated (in thousands):

	Year Ended December 31,	
	2016	2017
Operating expenses:		
Research and development	$ 14,672	$ 18,506
General and administrative	2,388	3,748
Total operating expenses	17,060	22,254
Loss from operations	(17,060)	(22,254)
Interest expense, net	(51)	(1,302)
Other income (expense), net	11	(287)
Loss before benefit from income taxes	(17,100)	(23,843)
Provision for (benefit from) income taxes	—	(291)
Net loss and comprehensive loss	$ (17,100)	$ (23,552)

Research and Development Expenses

Research and development expenses were $18.5 million for 2017 compared to $14.7 million for 2016, an increase of $3.8 million. The increase in research and development expenses was primarily attributable to an additional $2.6 million in consulting and personnel-related costs resulting primarily from our increased employee headcount, as well as $2.1 million of incremental AK002 contract research and development costs, primarily attributable to the production of clinical material in 2017. Further increases of $0.7 million in other unallocated research and development costs were primarily related to the conduct of in-house research, including activities supporting the continued development of antibodies in our pipeline. Increases were offset by a year-over-year decrease of $1.6 million in AK001 contract research and development costs as a result of our discontinuation of AK001 development efforts during 2017.

General and Administrative Expenses

General and administrative expenses were $3.7 million for 2017 compared to $2.4 million for 2016, an increase of $1.3 million. The increase in general and administrative expenses was primarily

attributable to an additional $1.1 million in personnel-related costs as a result of our increase in employee headcount, as well as an additional $0.2 million in other allocated costs.

Interest Expense, Net

Interest expense, net was $1.3 million for 2017 compared to $51,000 for 2016, an increase of $1.2 million. The increase in interest expense, net was primarily attributable to interest expense of $1.1 million associated with convertible promissory notes payable to related parties that were outstanding during 2017, as well as additional interest expense of $0.2 million associated with our debt facility with SVB.

Other Expense, Net

Other expense, net was $0.3 million for 2017 compared to other income, net of $11,000 for 2016. The increase in other expense, net of $0.3 million was primarily attributable to $0.2 million from loss on extinguishment of our debt facility with SVB that was repaid during 2017.

Provision for (Benefit from) Income Taxes

Benefit from income taxes was $0.3 million for 2017, which was solely attributable to the intra-period tax accounting effect related to the beneficial conversion feature associated with our convertible promissory notes payable to related parties. See Note 7 to the Financial Statements. We did not record a benefit from income taxes for 2016.

Liquidity and Capital Resources

Sources of Liquidity

We are a clinical stage biotechnology company with a limited operating history, and due to our significant research and development expenditures, we have generated losses since our inception. Through March 31, 2018, we have financed our operations to date primarily through private placements of convertible preferred stock. These private placements provided gross proceeds of $146.9 million. We also had a debt facility with SVB, for an aggregate of $5.0 million, which was fully repaid and terminated during 2017. As of March 31, 2018, we had cash and cash equivalents of $74.6 million.

Based on our existing business plan, we believe that our existing cash and cash investments, prior to this offering and the proposed concurrent private placement, will be sufficient to fund our anticipated level of operations through at least the next 12 months.

Summary Cash Flows

Comparison of the Three Months Ended March 31, 2017 and 2018

The following table summarizes the primary sources and uses of our cash, cash equivalents and restricted cash for the periods indicated (in thousands):

	Three Months Ended March 31,	
	2017	2018
Net cash used in operating activities	$ (5,435)	$ (9,341)
Net cash used in investing activities	(93)	(17)
Net cash provided by (used in) financing activities	3	(447)
Net decrease in cash, cash equivalents and restricted cash	$ (5,525)	$ (9,805)

Cash Used in Operating Activities

Net cash used in operating activities was $9.3 million for the three months ended March 31, 2018, which was primarily attributable to our net loss of $8.5 million. Cash used in operating activities included a net decrease of $1.5 million in operating assets and liabilities, offset by non-cash charges of $0.7 million related to stock-based compensation and depreciation and amortization.

Net cash used in operating activities was $5.4 million for the three months ended March 31, 2017, which was primarily attributable to our net loss of $5.1 million. Cash used in operating activities included a net decrease of $0.5 million in operating assets and liabilities, offset by non-cash charges of $0.1 million related to stock-based compensation and depreciation and amortization.

Cash Used in Investing Activities

Net cash used in investing activities was $17,000 for the three months ended March 31, 2018, which was attributable to purchases of property and equipment.

Net cash used in investing activities was $93,000 for the three months ended March 31, 2017, which was attributable to purchases of property and equipment.

Cash Provided by (Used In) Financing Activities

Net cash used in financing activities was $0.4 million for the three months ended March 31, 2018, which was the result of $0.4 million of deferred financing costs incurred in connection with the planned filing of our S-1 registration statement.

Net cash provided by financing activities was $3,000 for the three months ended March 31, 2017, which was the result of proceeds received from employees for the exercise of stock options.

Comparison of the Year Ended December 31, 2016 and 2017

The following table summarizes the primary sources and uses of our cash, cash equivalents and restricted cash for the periods indicated (in thousands):

	Year Ended December 31,	
	2016	2017
Net cash used in operating activities	$ (17,578)	$ (22,568)
Net cash used in investing activities	(234)	(264)
Net cash provided by financing activities	24,012	94,623
Net increase in cash, cash equivalents and restricted cash	$ 6,200	$ 71,791

Cash Used in Operating Activities

Net cash used in operating activities was $22.6 million for 2017, which was primarily attributable to our net loss of $23.6 million. Cash used in operating activities included a net decrease of $0.7 million in operating assets and liabilities, offset by non-cash charges related to the amortization of the beneficial conversion feature associated with convertible promissory notes payable to related parties of $0.9 million, stock-based compensation of $0.4 million, depreciation and amortization of $0.2 million, stated interest on convertible promissory notes payable to related parties of $0.2 million and our loss on extinguishment of debt of $0.2 million.

Net cash used in operating activities was $17.6 million for 2016, which was primarily attributable to our net loss of $17.1 million. Cash used in operating activities included a net decrease of $0.8 million in operating assets and liabilities, offset by non-cash charges related to stock-based compensation of $0.2 million and depreciation and amortization of $0.1 million.

Cash Used in Investing Activities

Net cash used in investing activities was $0.3 million for 2017, which was entirely attributable to purchases of property and equipment.

Net cash used in investing activities was $0.2 million for 2016, which was entirely attributable to purchases of property and equipment.

Cash Provided by Financing Activities

Net cash provided by financing activities was $94.6 million for 2017, which was primarily the result of $92.3 million of net proceeds received from private placements of our convertible preferred stock, as well as $7.4 million of net proceeds received from the issuance of convertible promissory notes payable to related parties and $0.2 million of net proceeds from the exercise of employee stock options. Cash used in financing activities included $5.3 million of repayments of our historical debt facility with SVB.

Net cash provided by financing activities was $24.0 million for 2016, which was primarily the result of $19.0 million of net proceeds received from private placements of our convertible preferred stock as well as $5.0 million of borrowings drawn as part of our historical debt facility with SVB.

Funding Requirements

We will continue to require additional capital to develop our product candidates and fund operations for the foreseeable future. We may seek to raise funding through private or public equity or debt financings, or other sources such as strategic collaborations. Adequate additional funding may not be available to us on acceptable terms or at all. Our failure to raise capital as and when needed could have a negative impact on our financial condition and our ability to pursue our business strategies.

The timing and amount of our capital expenditures will depend many factors, including:

- the number and scope of clinical indications and clinical trials we decide to pursue;
- the scope and costs of commercial manufacturing activities;
- the extent to which we acquire or in-license other product candidates and technologies, if any;
- the cost, timing and outcome of regulatory review of our product candidates;
- the cost and timing of establishing sales and marketing capabilities for product candidates receiving marketing approval, if any;
- the costs of preparing, filing and prosecuting patent applications, maintaining and enforcing our intellectual property rights and defending intellectual property-related claims;
- our efforts to enhance operational systems and our ability to attract, hire and retain qualified personnel, including personnel to support the development of our product candidates; and
- the costs associated with being a public company.

If we are unable to raise additional funds when needed, we may be required to delay, reduce or terminate some or all of our development and commercialization efforts. We may also be required to sell or license to others rights to our product candidates in certain territories or indications that we would prefer to develop and commercialize ourselves.

The issuance of additional equity securities may cause our stockholders to experience dilution. Future equity or debt financings may contain terms that are not favorable to us or our stockholders including debt instruments imposing covenants that restrict our operations and limit our ability to incur liens, issue additional debt, pay dividends, repurchase our common stock, make certain investments or engage in certain merger, consolidation, licensing or asset sale transactions.

Contractual Obligations and Commitments

The following table outlines our contractual obligations and commitments at March 31, 2018 (in thousands):

	Payments Due by Period				
	Total	Less than 1 Year	1-3 Years	3-5 Years	More Than 5 Years
Operating lease obligations (1)	$14,389	$ 417	$2,268	$2,611	$ 9,093
Purchase commitments (2)	1,885	1,885	—	—	—
Total	$16,274	$ 2,302	$2,268	$2,611	$ 9,093

(1) Operating lease obligations represent future minimum lease payments due under our current facility leases.
(2) Purchase commitments represent noncancelable minimum purchase commitments due to a third party CDMO.

The purchase commitment amounts in the table above relate to contracts that are enforceable and legally binding and specify all significant terms, including fixed or minimum services to be used, fixed, minimum or variable price provisions and the approximate timing of the services to be received under the agreements. In addition to purchase commitments to our CDMO included in the table above, we also enter into contracts in the normal course of business with various CROs that generally provide for contract termination following a certain notice period. Accordingly, we believe that our non-cancelable obligations under such agreements are not material and therefore have excluded these from the table above.

We have not included contingent payments associated with our license agreements in the table above as we cannot reasonably estimate if or when they will occur, and we have not included minimum payment obligations because the license agreements are terminable by us upon prior notice.

Off-Balance Sheet Arrangements

Since our inception, we have not entered into any off-balance sheet arrangements as defined in the rules and regulations of the SEC.

Quantitative and Qualitative Disclosures About Market Risk

Interest Rate Sensitivity

We are exposed to market risk related to changes in interest rates. Our primary exposure to market risk is interest rate sensitivity, which is affected by changes in the general level of U.S. interest

rates, particularly because our investments, including cash equivalents, are in money market funds that invest in U.S. Treasury obligations. The primary objective of our investment activities is to preserve capital to fund our operations. We also seek to maximize income from our investments without assuming significant risk. Due to the short-term maturities and low credit risk profile of our balances held in money market funds, a hypothetical 10% change in interest rates would not have a material effect on the fair market value of our cash equivalents.

Foreign Currency Sensitivity

Our primary operations are transacted in U.S. Dollars, however, certain service agreements with third parties are denominated in currencies other than the U.S. Dollar, primarily the British Pound and Euro. As such, we are subject to foreign exchange risk and therefore, fluctuations in the value of the U.S. Dollar against the British Pound and Euro may impact the amounts reported for expenses and obligations incurred under such agreements. We do not currently engage in any hedging activity to reduce our potential exposure to currency fluctuations, although we may choose to do so in the future. A hypothetical 10% change in foreign exchange rates during any of the periods presented would not have had a material impact on our financial condition or results of operations.

BUSINESS

Overview

We are a clinical stage biotechnology company developing AK002, our wholly owned monoclonal antibody, for the treatment of various eosinophil and mast cell related diseases. AK002 demonstrated pharmacodynamic activity in both of our completed Phase 1 trials, and in the single ascending dose Phase 1 trial involving patients with indolent systemic mastocytosis ("ISM"), patients reported improvements in their symptoms. AK002 selectively targets both eosinophils and mast cells, which are types of white blood cells that are widely distributed in the body and play a central role in the inflammatory response. Inappropriately activated eosinophils and mast cells have been identified as key drivers in a number of severe diseases affecting the gastrointestinal tract, eyes, skin, lungs and other organs. As such, AK002 has the potential to treat a large number of severe diseases. We are developing AK002 for the treatment of eosinophilic gastritis ("EG") and eosinophilic gastroenteritis ("EGE"). In addition, we are conducting studies in ISM, chronic urticaria ("CU") and severe allergic conjunctivitis ("SAC") and are evaluating additional indications for future development.

Figure 1. Select Eosinophil and Mast Cell Related Diseases

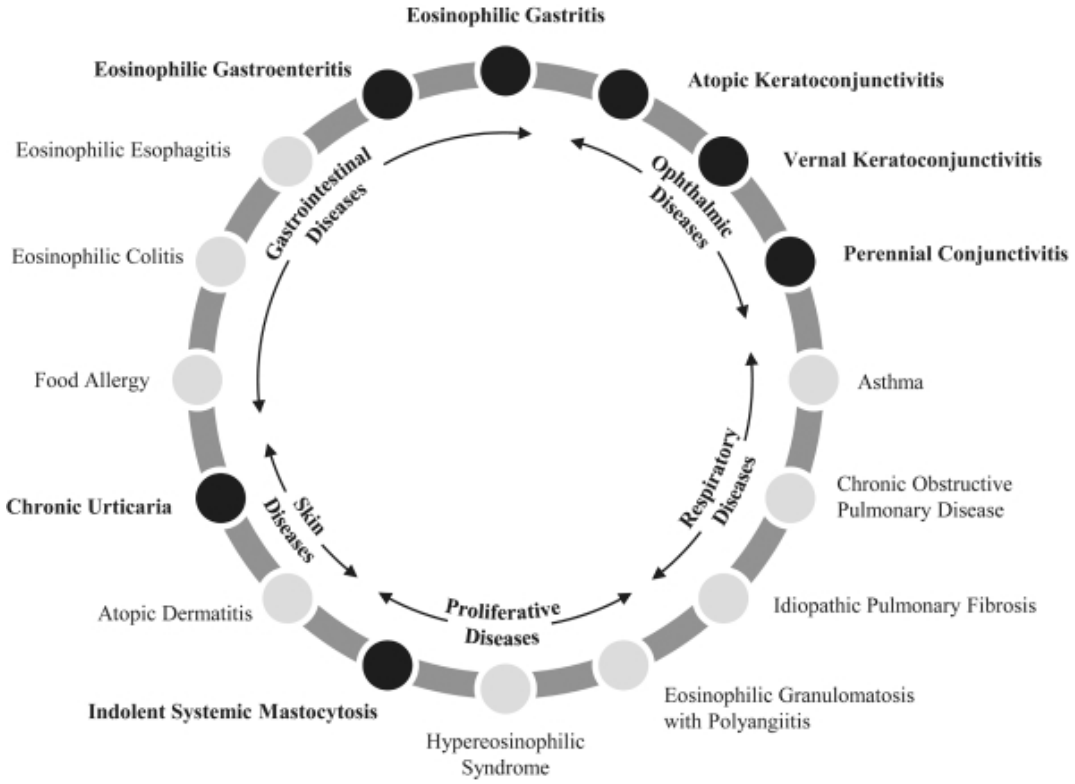


Figure 1: We are focusing our development efforts on AK002 for the treatment of the diseases shown in bold and are evaluating additional indications for future development.

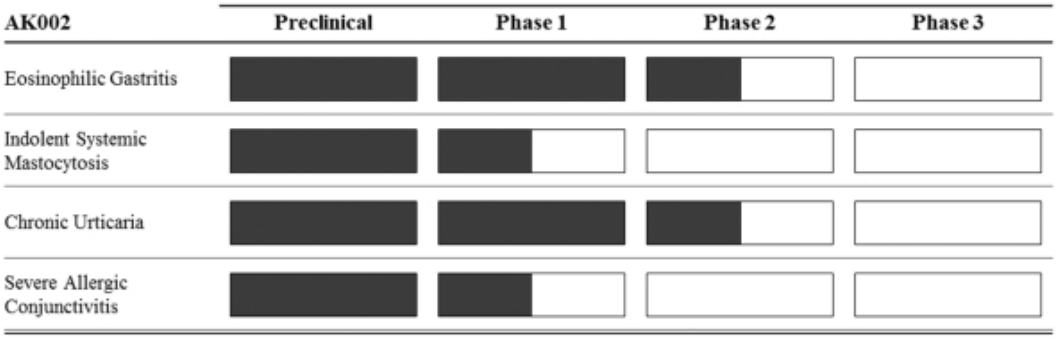
Despite the knowledge that eosinophils and mast cells drive many pathological conditions, there are no approved therapies that selectively target both eosinophils and mast cells. Current treatments for the diseases we are pursuing are non-selective and often come with serious side effects that make them unsuitable for long term use. AK002 binds to Siglec-8, an inhibitory receptor found on eosinophils

and mast cells, which represents a novel way to selectively deplete or inhibit these important immune cells and thereby resolve inflammation. We believe AK002 is the only Siglec-8 targeting antibody currently in clinical development and has the potential to be an alternative to current treatments.

We have shown that AK002 depletes eosinophils and inhibits mast cell activation in Phase 1 clinical trials. In a randomized, double-blind, placebo-controlled Phase 1 trial in 51 healthy volunteers, all doses of AK002 resulted in complete depletion of blood eosinophils within one hour after administration. The duration of depletion was dose-dependent, with a single dose of 1.0 mg/kg of AK002 suppressing eosinophils for up to 84 days. In addition, in the single dose portion of a Phase 1 trial in 13 patients with ISM, a disorder characterized by an increased number of mast cells throughout the body and symptoms related to mast cell activation, patients reported marked improvement in ISM mast cell related symptoms and blood eosinophils were depleted.

We are currently testing AK002 in a double-blind, placebo-controlled Phase 2 trial in patients with EG with or without eosinophilic gastroenteritis (“EGE”). EG and EGE are severe eosinophilic inflammatory diseases of the stomach and small intestine, respectively. AK002 has received orphan drug designation for EG and EGE from the U.S. Food and Drug Administration (“FDA”) and we expect to report top-line data from the Phase 2 trial in mid-2019. As a follow up to the single dose portion of the Phase 1 trial in patients with ISM, we are also testing AK002 in an ongoing six month multi-dose Phase 1 trial in ISM patients. Further, AK002 is being tested in an open-label Phase 2 trial in patients with CU and in a Phase 1 trial in patients with SAC. CU is a group of inflammatory skin diseases that are caused by the inappropriate activation of mast cells in the skin. SAC is a group of allergic eye diseases that are caused by eosinophil and mast cell driven inflammation in the tissues lining the eyes and eyelids. We expect to report top-line data from these three trials in ISM, CU and SAC patients in the first quarter of 2019. The status of our clinical trials is shown below.

Figure 2. AK002 Development Status



We have prioritized our AK002 development efforts based on our assessment of the probability of clinical and regulatory success, unmet medical need and potential market opportunity. We have assembled a team with a proven track record and deep experience in antibody discovery and in clinical development, commercialization, operations and finance from companies such as Genentech, Gilead, Intermune, Novo Nordisk, Pfizer, ZS Pharma and others. Since our inception, we have raised private capital from investors including Alta Partners, RiverVest Partners, Roche Finance Ltd, 3x5 Special Opportunity Partners, New Enterprise Associates, RedMile, Partner Fund Management, Samsara and RockSprings.

Understanding the Foundation of Our Approach

Background on Eosinophils, Mast Cells and Siglec-8

Eosinophils and mast cells are involved in many inflammatory conditions and therefore represent attractive drug targets. Eosinophils and mast cells can respond to signals from allergens, tissues, bacteria, viruses and also cells of the innate and adaptive immune system. In response, they release a large variety of mediators which can result in tissue damage, fibrosis and the recruitment and activation of other innate and adaptive immune cells. The ability to respond to signals from multiple cell types and the diverse array of mediators that they produce place eosinophils and mast cells in the center of multiple aspects of the inflammatory response.

Eosinophils are normally present in the blood and tissues, especially in the mucosal linings of the respiratory and gastrointestinal tract. However, they can be recruited to any site of the body in the setting of inflammation. Mast cells reside within the connective tissue of a variety of tissues and all vascularized organs, often located in close proximity to blood vessels, nerves and lymphatics. Sites include the dermis, gut mucosa and submucosa, conjunctiva and pulmonary alveoli and airways. As a result of their widespread location and potent inflammatory activity, eosinophils and mast cells have been identified as key drivers in a number of severe diseases of the gastrointestinal tract, eyes, skin and lungs as well as diseases which affect multiple organ systems.

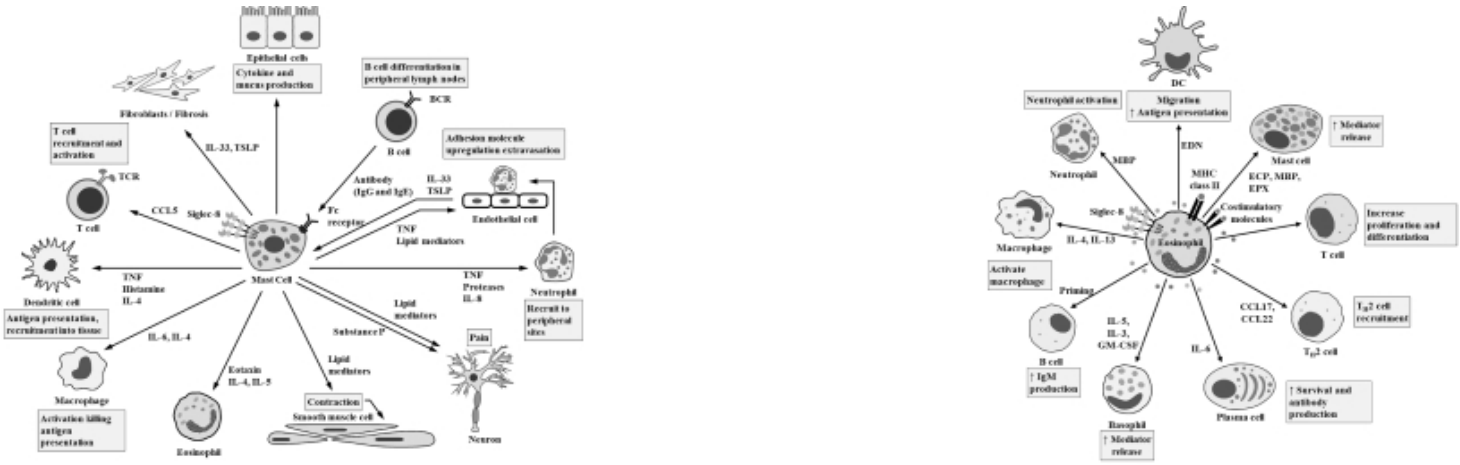
Siglec-8 is an inhibitory receptor located selectively on eosinophils, mast cells and, to a lesser extent, on basophils. Because Siglec-8 is expressed in high abundance only on eosinophils and mast cells, it presents a novel way to selectively target these important immune cells. As an inhibitory receptor, the natural function of Siglec-8 is to counteract activating signals within eosinophils and mast cells that lead to an inflammatory response. By binding to Siglec-8, AK002 is able to selectively target eosinophils and mast cells to resolve inflammation.

Eosinophils and Mast Cells are Effector Cells That are Central to Initiating and Maintaining Inflammatory Responses

Eosinophils and mast cells respond to a variety of activating signals including those from cell-cell contact, allergens bound to IgE, cytokines (including IL-33, thymic stromal lymphopoietin (“TSLP”), IL-5, IL-4 and IL-13) and viruses (through Toll-Like Receptor-3). In response to these and other activating signals, eosinophils and mast cells express a variety of cell surface receptors and also produce a broad range of inflammatory mediators that cause tissue damage and contribute to acute and chronic inflammation. These mediators include vasoactive amines, bioactive lipids, proteases, chemokines and cytokines. The mediators, their functions and their contribution to disease pathogenesis are described in more detail below.

- *Mast cells play an important role in inflammation as the main producer of histamine*. Histamine causes vasodilation and produces intense itching. It is believed to contribute to increased gastrointestinal peristalsis (diarrhea), the skin symptoms of urticaria and ISM, the diffuse vasodilation of anaphylaxis and bronchospasm in asthma.
- *Proteases and toxins secreted from eosinophils and mast cells are the key cause of tissue damage and contribute to tissue fibrosis.* Eosinophil and mast cell secretions are toxic to surrounding cells and break down tissues, resulting in fibrosis and tissue remodeling.
- *Eosinophils and mast cells drive inflammation by signaling to other cells of the immune system.* Eosinophils and mast cells release lipid mediators and a large variety of cytokines (including TNFa, IL-1, IL-3, IL-4, IL-5, IL-6, IL-8, IL-9, IL-13, MCP-1, CCL2, CCL3, CCL5, CCL17, TGFa, TGFb and granulocyte-macrophage colony stimulating factor (“GM-CSF”)) that attract and activate cells of the innate and adaptive immune system, such as neutrophils, monocytes, macrophages, basophils, B-cells, T-cells and dendritic cells, as well as other eosinophils and mast cells.

Figure 3. Eosinophil and Mast Cell Functions

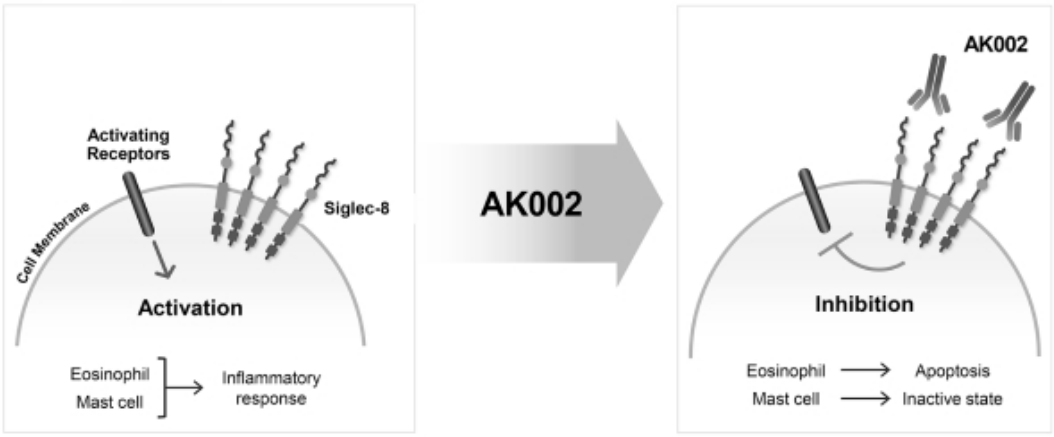


Due to their ability to respond to signals from multiple cell types and elicit responses from others, eosinophils and mast cells mediate the immediate hypersensitivity and late phase responses responsible for allergies and many innate and adaptive immune responses.

Siglec-8 is an Attractive Target for Eosinophils and Mast Cells

Siglec-8 (sialic acid immunoglobulin-like lectin 8) is a constitutively expressed inhibitory receptor that is restricted to eosinophils, mast cells and to a lesser extent basophils (approximately 1/100 the level on mast cells and eosinophils). The physiological function of Siglec-8 is to provide an inhibitory signal to eosinophils and mast cells. Siglec-8 exerts these effects through an intracellular immunoreceptor, tyrosine-based inhibitory motif (“ITIM”) and ITIM-like motif. In contrast to approaches which block a single activating cytokine or receptor, targeting the ITIM signaling cascade (via Siglec-8) has the potential to counteract a broad array of activating signals, which could allow for the treatment of multiple diseases. Antibodies to Siglec-8 have been shown to trigger apoptosis of blood and tissue eosinophils and to inhibit the release of inflammatory mediators from mast cells. This expression pattern and broad inhibitory function make Siglec-8 an attractive target for the selective depletion of eosinophils and inhibition of mast cells.

Figure 4. Siglec-8 Triggers Apoptosis of Eosinophils and Inhibition of Mast Cells



Our Strategy

AK002 has shown pharmacodynamic activity in humans and a broad array of animal disease models of eosinophilic and mast cell driven diseases. We have prioritized our development efforts based on our assessment of the probability of clinical and regulatory success, unmet medical need and potential market opportunity. We have chosen to focus our wholly-owned AK002 program initially on four indications: EG, ISM, CU and SAC. The key elements of our strategy are to:

- ***Rapidly advance AK002 through clinical development in EG.*** AK002 has secured orphan drug designation for the treatment of EG and EGE with the FDA. We have completed a Phase 1 trial in healthy volunteers. In this trial, AK002 exhibited clear signs of pharmacodynamic activity by depleting blood eosinophils as soon as one hour after dosing. We are conducting a Phase 2 trial in patients with EG with or without EGE. We believe this trial, if positive, in conjunction with a future Phase 3 trial will serve as the basis for demonstrating safety and efficacy in our biologics license application ("BLA") and market authorization application ("MAA") submissions.
- ***Develop AK002 for other EGIDs.*** EG is part of a group of related diseases called eosinophilic gastrointestinal diseases ("EGIDs"). These include EG, EGE, eosinophilic esophagitis and eosinophilic colitis. EGIDs share the common pathology of tissue inflammation caused by the presence of elevated numbers of eosinophils. If AK002 shows activity in EG, we expect to conduct clinical trials of AK002 in these related conditions.
- ***Expand opportunity to additional eosinophilic and mast cell driven conditions.*** We are currently conducting clinical trials with AK002 in other eosinophil and mast cell driven diseases, including two Phase 1 trials in patients with ISM and SAC and a Phase 2 trial in patients with CU. Patients in the single ascending dose portion of the ISM trial reported improvements in mast cell related symptoms, and one patient with cholinergic urticaria showed disease resolution for approximately four weeks following a single 0.3 mg/kg dose. Should these clinical trials confirm the activity of AK002 in these indications, we plan to continue to develop AK002 in these indications.
- ***Build commercial capability and retain rights in key markets.*** If AK002 receives regulatory approval, we intend to retain the rights to it in key markets, and plan to commercialize AK002 in both the United States and Europe through a specialty sales force.

EG and other EGIDs, ISM, CU and SAC are severe diseases which lack effective treatments. We believe a significant market opportunity for AK002 exists in each of these diseases.

- ***Coordinate clinical and manufacturing process development.*** AK002 has been produced under current good manufacturing practices ("cGMP") at commercial scale utilizing the commercial process at Lonza Sales AG ("Lonza"), a Contract Development Manufacturing Organization ("CDMO"). We have signed an agreement with Lonza for BLA activities.

AK002 Clinical Development Plan

AK002 was designed to take advantage of the selective expression pattern and inhibitory function of Siglec-8, an inhibitory receptor found on eosinophils, mast cells, and to a lesser extent, on basophils. AK002 is a humanized antibody that binds to Siglec-8 with high affinity (bivalent binding avidity (K_D) = 17 pM, determined by surface plasmon resonance analysis). The high expression level of Siglec-8 on eosinophils and mast cells allows AK002 to selectively deplete eosinophils and inhibit mast cells. AK002 is a non-fucosylated IgG1 antibody engineered to have potent antibody-dependent cellular cytotoxicity ("ADCC"). ADCC is a mechanism whereby the binding of an antibody like AK002 triggers an effector cell of the immune system (usually a natural killer ("NK") cell) to destroy the antibody-bound cell. This provides AK002 with an additional mechanism to deplete eosinophils present in blood, where NK cells also reside. As a result of these dual modes of action, AK002 has been shown to deplete eosinophils in blood and tissue, and to inhibit the release of inflammatory mediators from mast cells.

AK002 has demonstrated activity in a broad array of animal disease models of eosinophilic and mast cell-driven diseases. Consistent with these experiments, human trials have shown that AK002 depletes blood eosinophils and inhibits mast cell function. Across the healthy volunteer and ISM phase 1 studies, 61 subjects that have received AK002 to date. AK002 has generally been well tolerated.

Eosinophilic Gastritis and Eosinophilic Gastrointestinal Disorders

Disease Overview

Eosinophilic gastrointestinal disorders ("EGIDs") are chronic inflammatory disorders that share a similar eosinophilic driven inflammation that occurs along different segments of the gastrointestinal ("GI") tract. Based on the site of eosinophilic infiltration the EGIDs are subcategorized into eosinophilic esophagitis (esophagus, "EoE"), EG (stomach), EGE (duodenum and small intestine) and eosinophilic colitis (colon, "EC"). The EGIDs affect collectively up to 300,000 patients in the United States, though individually they are orphan diseases.

EG is a rare disease that is characterized by chronic inflammation due to patchy or diffuse infiltration of eosinophils into layers of the stomach. EG can occur with eosinophilia isolated to the stomach, or often in combination with eosinophilia of the small intestine. Diagnosis is established based on clinical presentation (gastrointestinal symptoms) combined with increased tissue eosinophils in biopsy specimens from the stomach and/or duodenum without any other cause for the eosinophilia. The presence of greater than 30 eosinophils per high powered field ("hpf") in 5 stomach biopsies identifies the presence of EG. The estimated prevalence of EG in the United States is approximately 20,000 to 25,000 patients, and the estimated prevalence of EGE in the United States is approximately 25,000 patients and we believe these diseases may be significantly underdiagnosed based on our conversations with gastroenterologists.

It is believed that EG and other EGIDs arise in some patients from food allergies or other allergens that cause a hypersensitivity reaction that leads to recruitment of eosinophils to the GI tract. The gastrointestinal symptoms are believed to be due to the release of inflammatory mediators from

activated eosinophils. Mast cells are also elevated and believed to play a role. Elevated serum immunoglobulin E ("IgE") levels and food-specific IgE are correlated with EG in some patients and provide evidence for the allergy hypothesis and mast cell involvement. Symptoms commonly include abdominal pain, nausea, vomiting, diarrhea, malnutrition and weight loss.

Current Therapies and Limitations

There are no FDA-approved treatments for EG or EGE. Current therapies and disease management strategies include restricted/elemental diets and systemic or topical corticosteroids. Restricted/elemental diets are designed to avoid foods which trigger symptoms. Unfortunately for most patients the restricted/elemental diets are only partially effective and mainly used as a strategy to provide nutrition despite continuing symptoms. Corticosteroids, systemic or topical, can provide symptom relief, but are not appropriate for long-term treatment due to their numerous side effects. By reducing the number of blood and tissue eosinophils and inhibiting mast cells, AK002 may be effective in the treatment of patients with EG or EGE.

Clinical Results

AK002 was tested in a randomized, double-blind, placebo-controlled, dose-escalating Phase 1 trial conducted in Melbourne, Australia. 51 healthy volunteers were randomized to receive doses of AK002 (0.001, 0.003, 0.01, 0.03, 0.1, 0.3, or 1.0 mg/kg) or placebo. The primary endpoints of the trial were safety and tolerability. The secondary endpoints included pharmacokinetic and pharmacodynamic ("PK/PD") measurements, including changes in the absolute peripheral blood counts of eosinophils.

As shown in Figure 5, with respect to the secondary endpoints, all doses of AK002 tested resulted in complete depletion of blood eosinophils one hour after administration, clearly demonstrating the pharmacodynamic activity of AK002. The duration of depletion was dose-dependent with a single dose of 1.0 mg/kg of AK002 suppressing eosinophils for up to 84 days. AK002's pharmacokinetic half-life was determined to be 18 days.

Figure 5. Single Dose Placebo and AK002 Eosinophil Response

	Blood Eosinophils 10^3/mL				
Dose Cohort (mg/kg)	**Placebo Pre-dose**	**Placebo 1 Hr Post-dose**	**AK002 Pre-dose**	**AK002 1 Hr Post-dose**	**Minimal Duration Eos Depletion**
0.001	NA	NA	70	0	1 Day
0.003	120	70	160	0	2 Days
0.01	210	150	160	0	4-7 Days
0.03	150	150	160	0	7-14 Days
0.1	100	80	250	0	14-28 Days
0.3	180	140	180	0	28 Days
1.0	60	40	120	0	56-84 Days

In the multi-dose portion of the trial, subjects received monthly doses of 0.3 mg/kg. Monthly administrations of this dose provided sustained eosinophil depletion for the duration of dosing.

Across the healthy volunteer and ISM Phase 1 trials, 61 subjects have received AK002 at single doses ranging from 0.0003 to 1.0 mg/kg and multiple doses of 0.3 to 3.0 mg/kg. These subjects received up to six doses of AK002 given monthly for six months. AK002 has generally been well tolerated in our clinical trials. The most common adverse event has been the occurrence of mild to

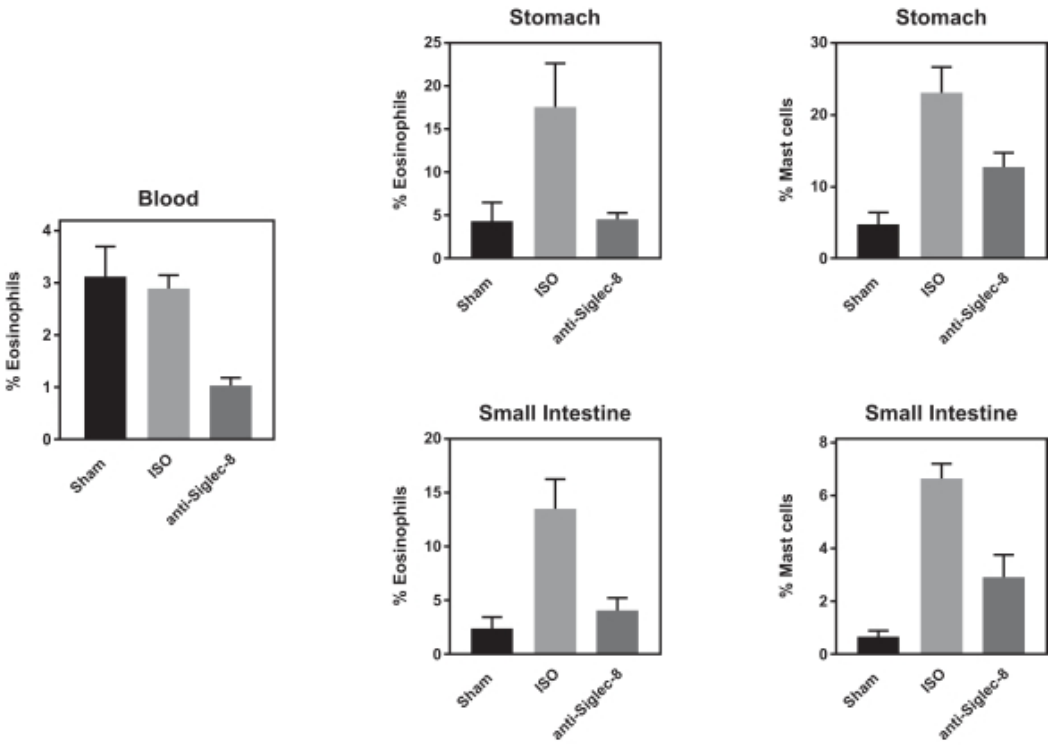
moderate infusion-related reactions (“IRRs”) (flushing, feeling of warmth, headache, nausea and dizziness), which occurred mostly during the first infusion and diminished or did not occur on subsequent infusions. In the Phase 1 healthy volunteer trial, one subject treated with 1.0 mg/kg administered over one hour experienced an infusion reaction three hours after dosing, including nausea, vomiting and hypotension, which was considered severe and led to the subject discontinuing from the trial. The subject was treated with standard therapies and no further symptoms occurred.

There were no clinically significant effects of AK002 identified in vital signs, ECGs, clinical laboratory parameters (including hematology, clinical chemistry and urinalysis) or physical examinations. In both trials, there was a transient decrease in lymphocyte count after the AK002 infusion (resolving within one day), as seen with certain other monoclonal antibodies, that was not associated with any adverse event and a sustained depletion in eosinophils, consistent with the mechanism of action of AK002.

Anti-Siglec-8 Antibody Reduces Eosinophil and Mast Cell Levels in EG/EGE Model

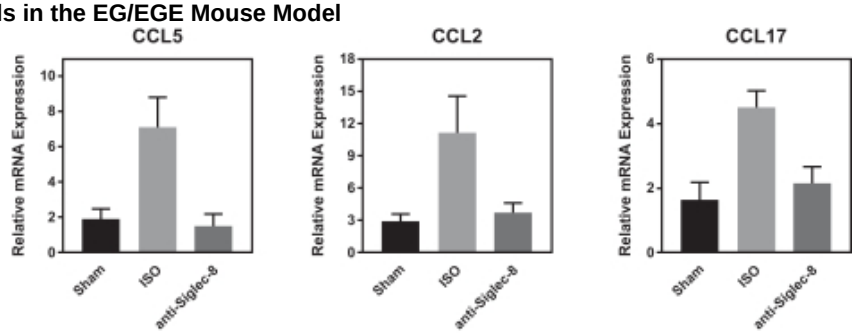
In this model, two groups of Siglec-8 transgenic mice were sensitized with ovalbumin to induce eosinophil and mast cell driven gastrointestinal inflammation similar to that observed in EG and other EGIDs. A third group of animals was administered phosphate buffered saline to serve as normal unsensitized sham controls (“sham”). Treatment with a single dose of anti-Siglec-8 antibody led to lower levels of eosinophils in the blood, stomach and small intestine and reduced numbers of mast cells in the stomach and small intestine compared to mice that received an isotype control antibody (“ISO”).

Figure 6. EG/EGE Model Eosinophil and Mast Cell Counts in Blood, Stomach and Small Intestine



Anti-Siglec-8 treatment also reduced the levels of multiple important chemokines (CCL5/Rantes, CCL2/MCP-1, CCL17) to the levels of sham control animals. Chemokines are known to recruit and activate cells of the innate and adaptive immune system. By normalizing chemokine secretions, AK002 may be able to reduce further recruitment of immune cells and thereby interrupt the inflammatory cascade.

Figure 7. Chemokine Levels in the EG/EGE Mouse Model



Development Plan

AK002 has received orphan drug designation in the United States for the treatment of EG and EGE. We have initiated a randomized, double-blind, placebo-controlled Phase 2 trial with AK002 in patients with EG with or without EGE. The trial is planned to enroll approximately 60 patients with active, moderate to severe, biopsy-confirmed EG (>30 eosinophils/hpf in 5 hpf), and will randomize patients 1:1:1 to receive: (a) 0.3 mg/kg for the first month followed by three doses of 1.0 mg/kg AK002 given monthly, (b) 0.3 mg/kg for the first month followed by 1.0 mg/kg, 3.0 mg/kg and 3.0 mg/kg given monthly, or (c) monthly placebo. The primary endpoint is the reduction in gastric eosinophils post-treatment with AK002. The secondary endpoints include changes in EG patient symptoms, such as abdominal pain, nausea, vomiting and diarrhea, as reported by patients using our proprietary daily Patient Reported Outcome (“PRO”) questionnaire. The PRO was developed based on published guidance from the FDA on the development of PRO instruments, and is expected to be used to help determine safety and efficacy in future clinical trials.

We anticipate that a number of EG patients enrolled in the trial will also have EoE or EGE. If sufficient patients with EoE and EGE are enrolled in the trial, it may be possible to evaluate response to treatment with AK002 in these diseases as well. Patients completing the randomized portion of the trial will be eligible to enroll in a nine month safety exposure trial. Top-line data from the Phase 2 trial are expected during mid-2019. Based on discussions with the FDA, we believe that this Phase 2 trial, if successful, and a single Phase 3 trial, if successful, may be sufficient for regulatory approval of AK002 in EG.

Figure 8. EG Phase 2 Trial Design

Design		Key Endpoints
• **Randomized, double-blind, placebo controlled** • **60 Patients – 3 arms** — **20 patients 0.3 mg/kg, then 1.0 mg/kg** — **20 patients 0.3 mg/kg, then 1.0 mg/kg, then 3.0 mg/kg and 3.0 mg/kg** — **20 patients placebo** • **Multiple doses (x4)**	**Primary**	• Eosinophils per high powered field from gastric biopsies
	Secondary	• Patient reported outcomes: abdominal pain, nausea, diarrhea, vomiting • Assessment of comorbid EGE

Indolent Systemic Mastocytosis

Disease Overview

Indolent systemic mastocytosis ("ISM") is a rare disease characterized by the clonal proliferation and accumulation of mast cells in the bone marrow, respiratory and gastrointestinal tracts, and organs such as the skin, liver, spleen and brain. Common symptoms include pruritus, flushing, headache, cognitive impairment, fatigue, diarrhea, gastrointestinal cramps, hypotension and skin lesions, as well as an increased risk for osteoporosis and anaphylaxis, which in some cases can be life threatening. The symptoms of ISM are attributed to mast cell activation and the systemic release of mediators. Approximately 30,000 patients in the United States suffer from ISM.

Current Therapies and Limitations

There are currently no drugs approved for the treatment of ISM by the FDA or EMA. ISM is treated with drugs targeting mast cell mediators, including antihistamines, cromolyn sodium and leukotriene blocking agents. Most patients' symptoms remain poorly controlled by these treatments. Glucocorticoids can provide temporary relief in some cases; however long-term treatment with steroids is not appropriate due to their many side effects.

Clinical Results

AK002 is being evaluated in an open-label, single and multiple ascending dose Phase 1 trial in patients with ISM. The single dose portion of this trial was completed during the second quarter of 2017, and the six month multi-dose portion is ongoing. In the single dose portion, 13 patients received single escalating doses of 0.0003 to 1.0 mg/kg, including three patients receiving 0.3 mg/kg and three patients receiving 1.0 mg/kg of AK002. Thus far in the multi-dose portion of the trial, six patients have received six doses of 1.0 mg/kg of AK002 given monthly and six patients have received 1.0 mg/kg for the first month and will be given monthly doses of 3.0 to 10 mg/kg of AK002 for five months. The primary endpoints of this trial are safety and tolerability. Key secondary endpoints are the PK/PD profile, peripheral counts of eosinophils and patient-reported mastocytosis disease symptoms including itching, hives, skin flushing, diarrhea, abdominal pain, fatigue, headache, difficulty concentrating and muscle and joint pain.

Secondary endpoint results from the completed single dose portion of the trial indicate that AK002 has pharmacodynamic activity; single doses of AK002 depleted blood eosinophils, with dose-dependent duration of depletion similar to the healthy volunteer trial. In addition, five out of six patients receiving 0.3 or 1.0 mg/kg reported to the study investigators that they had improvements in symptoms, including diarrhea, abdominal

pain, fatigue, pruritus, difficulty concentrating and headaches, and, in one patient, resolution of comorbid cholinergic urticaria (a disease that is believed to be caused by the activation of mast cells) for approximately four weeks. These encouraging initial reports of symptom improvement will be more fully explored in the multi-dose portion of the ISM trial.

The multi-dose portion of the trial is fully enrolled with 12 patients in two AK002 dosing cohorts. We have developed a proprietary daily PRO questionnaire to assess the change in ISM patient symptoms in our clinical trials. The PRO was based on published guidance from the FDA on the development of PRO instruments, and is expected to be used to help determine safety and efficacy in future clinical trials. The questionnaire consists of nine symptom assessments, with each symptom being scored on a 0-10 scale and higher values representing greater symptom burden (total score 0-90 points).

Development Plan

AK002 has received orphan drug designation from the European Medicines Agency for the treatment of ISM. AK002 has been evaluated in an open-label, single-arm, dose-escalating Phase 1 trial in patients with ISM. The single dose portion of this trial was completed in 2017, and the multi-dose portion is ongoing in 12 patients (Figure 9). Given that the trials are open-label observational studies, they are not designed to show statistical significance. We expect to report data from this trial in the first quarter of 2019. Encouraging reports of symptom improvements in the single dose phase have been reported. If similar responses are observed in the ongoing multi-dose trial, we anticipate conducting a placebo controlled double blind trial to confirm activity.

Figure 9. Ongoing Multi-Dose ISM Phase 1 Trial

Design		Key Endpoints
• **Open-label trial** • **12 patients – 2 cohorts** — **6 patients 1.0 mg/kg** — **6 patients 1.0 mg/kg, then 3.0 to 10 mg/kg** • **Multiple doses (x6)**	**Primary**	• Safety and tolerability
	Secondary	• Patient reported outcomes: itching, hives, skin flushing, diarrhea, abdominal pain, fatigue, headache, difficulty concentrating, muscle and joint pain

Chronic Urticarias – Cholinergic Urticaria, Chronic Spontaneous Urticaria, Symptomatic Dermatographism

Disease Overview

Chronic urticarias (“CU”) are a group of skin conditions which are characterized by recurrent transient pruritic wheal and flare type skin reactions and, in roughly 40% of patients, angioedema. Symptoms include itching, redness, raised welts, burning, warmth, tingling and irritation of the skin. Patients with CU are often severely impaired in their quality of life, with negative effects on sleep, daily activities, school/work life and social interactions. Urticaria symptoms are caused by degranulation of dermal mast cells, with IgE signaling believed to contribute to mast cell activation in many cases. The most common forms of CU are chronic spontaneous urticaria (“CSU”), cholinergic urticaria and symptomatic dermatographism.

Despite sharing similar inflammatory pathology, urticarias differ in the triggers that cause the inflammatory response. Cholinergic urticaria patients typically develop symptoms a few minutes after exercise or passive warming in a bath or shower. In some cholinergic patients, emotional stress or hot and spicy food or beverages can also elicit symptoms. Symptomatic dermatographism is characterized by

whealing and itching following a minor stroking pressure, rubbing or scratching of the skin. In CSU, itchy, wheal-and-flare-type skin reactions spontaneously appear on the skin at any time of the day or night. In most CSU patients, an underlying cause of CSU cannot be identified making a causal and/or curative treatment difficult. We estimate that approximately 200,000 patients with severe CSU, cholinergic urticaria and symptomatic dermatographism could be candidates for therapy with AK002.

Current Therapies and Limitations

The current treatment guidelines for the management of all forms of urticaria recommend the use of non-sedating oral H1-antihistamines as first-line therapy. For patients that do not respond to standard doses of H1-antihistamines, doses are increased to as high as four times the standard dose. Though this can increase the response rates, side effects also increase, including sedation and anticholinergic effects, such as dry mouth, blurred vision, urinary retention and constipation. Patients that do not respond to or are unable to tolerate high dose antihistamines have few options. For cholinergic urticaria and symptomatic dermatographism patients, it is recommended that they avoid target triggers such as overheated spaces, hot baths/showers, exercise, specific food allergens and excessive contact. For antihistamine refractory patients with CSU, the only currently approved treatment is omalizumab, a monoclonal anti-IgE antibody. Unfortunately, approximately 60% of CSU patients continue to have symptoms despite treatment with omalizumab (“Xolair”).

Development Plan

We are conducting an open-label Phase 2 trial with AK002 in patients with urticaria. The trial is enrolling patients with different forms of urticaria: CSU (Xolair naïve and Xolair failures), cholinergic urticaria and symptomatic dermatographism. Approximately 40 patients are expected to be enrolled, and will receive six monthly doses of AK002. The primary endpoint of the trial is patient-reported symptoms measured by the urticaria control test (“UCT”). Secondary endpoints include safety and tolerability, as well as patient-reported symptoms as measured by urticaria activity score 7 (“UAS7”) and cholinergic UAS7 (“cholUAS7”). Given that the trial is an open-label observational study, it is not designed to show statistical significance. We expect to report data from this trial in the first quarter of 2019.

Figure 10. CU Phase 2 Trial Design

Design		Key Endpoints
• **Open-label trial** • **40 patients – 4 cohorts** — **10 CSU Xolair naive** — **10 CSU Xolair failures** — **10 Cholinergic urticaria** — **10 Dermatographic urticaria** • **0.3 mg/kg, then 1.0 to 3.0 mg/kg** • **Multiple doses (x6)**	**Primary**	• Patient reported outcome (UCT)
	Secondary	• Safety and tolerability • Patient reported outcomes: itching, hives, swelling, UAS7 and cholUAS7

Severe Allergic Conjunctivitis

Disease Overview

Atopic keratoconjunctivitis (“AKC”), vernal keratoconjunctivitis (“VKC”) and perennial allergic conjunctivitis (“PAC”) are a set of allergic ocular conjunctival diseases primarily associated with an IgE-

mediated hypersensitivity reaction. We are focused on the severe forms of these diseases, which are collectively referred to as severe allergic conjunctivitis ("SAC"). These conditions are often caused by airborne allergens, such as grass and tree pollens, coming into contact with the eyes, which induces IgE mediated mast cell degranulation and allergic inflammation. The inflammatory mediators released by the mast cell result in inflammation and the infiltration of eosinophils, neutrophils and other immune cells. Eosinophils and mast cells are believed to be the main effector cells, with protease secretions directly damaging the conjunctiva, and play a key role in triggering and maintaining the inflammatory response. Symptoms include itching, hyperemia, light sensitivity (photophobia), pain, eye discharge and the sensation of having a foreign body in the eye. These symptoms can affect quality of life and daily activities, such as reading, driving and being in bright outdoor environments. In addition, patients with untreated disease, in particular those with VKC and AKC, can experience remodeling of the ocular surface tissues that can lead to vision loss. In addition to the primary symptoms of allergic conjunctivitis, a high correlation of allergic rhinitis, allergic asthma and atopic dermatitis comorbidities occur in this patient population. We believe that approximately 50,000-150,000 patients in the United States suffer from severe AKC, VKC or PAC and could be candidates for treatment with AK002.

Current Therapies and Limitations

PAC is treated with topical antihistamines and mast cell stabilizers. More serious forms are treated with topical and systemic corticosteroids, cyclosporine and other immunomodulatory drugs. There are no drugs approved for AKC and VKC, and as a result, patients are typically treated similarly to patients with PAC. Unfortunately, many patients continue to have symptoms despite these topical and/or systemic treatments and many of the drugs are not suitable for long-term treatment due to undesirable side effects.

Development Plan

We are conducting an open-label Phase 1 trial with AK002 in patients with SAC. The trial is enrolling patients with three different forms of allergic conjunctivitis: AKC, VKC and PAC. Approximately 30 patients are planned to be enrolled and will receive six monthly doses of AK002. The primary endpoint of the trial will be safety and tolerability. Key secondary endpoints include patient-reported symptom measures of ocular itch, pain, lacrimation, photophobia and foreign body sensation. Given that the trial is an open-label observational study, it is not designed to show statistical significance. We expect to report data from this trial in the first quarter of 2019.

Figure 11. SAC Phase 1 Trial Design

Design		Key Endpoints
• **Open-label trial** • **30 patients – 3 cohorts** — **Atopic keratoconjunctivitis** — **Vernal keratoconjunctivitis** — **Perennial allergic conjunctivitis** • **Multiple doses (x6)** • **0.3 mg/kg, then 1.0 to 3.0 mg/kg**	**Primary**	• Safety and tolerability
	Secondary	• Patient reported outcomes: ocular itch, pain, lacrimation, photophobia, foreign body sensation • Assessment of comorbid atopic dermatitis, asthma and/or rhinitis

Preclinical Results

AK002 Results in Animal Disease Models Suggest Broad Activity

Because Siglec-8 is found only in cells of humans and certain other primates, we have developed a proprietary Siglec-8 transgenic mouse, in which Siglec-8 is expressed with a similar tissue distribution to humans and is functionally active. The transgenic mouse provides us with a proprietary tool to assess the safety, tolerability and activity of anti-Siglec-8 antibodies.

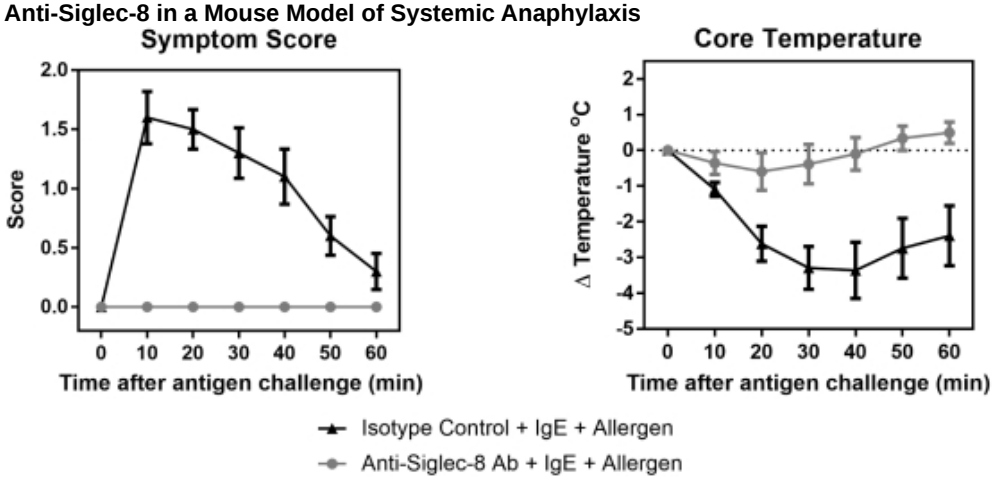
AK002 has completed short- and long-term toxicity studies in Siglec-8 transgenic mice. Chronic weekly dosing for six months with AK002 in transgenic mice at dose levels of 50 or 100 mg/kg resulted in no adverse AK002-related findings in mortality, clinical observations, body weight, food consumption and anatomic pathology after the end of dosing. Non-adverse findings included decreases in eosinophil counts in both sexes at ^{3}50 mg/kg/week, which persisted through the recovery period. These findings reflect the expected pharmacology of AK002. The no-observed-adverse-effect-level of AK002 after chronic dosing for six months was 100 mg/kg/week.

We have shown that AK002 or antibodies to Siglec-8 have broad activity in animal disease models (eosinophilic gastroenteritis, anaphylaxis, fibrosis and chronic obstructive pulmonary disease) and in human *ex vivo* diseased tissue (eosinophilic gastrointestinal disease, mastocytosis, atomic dermatitis and lung). In these models, anti-Siglec-8 antibodies have significantly reduced eosinophil and inhibited mast cells. The activity in these models suggests AK002 has the potential to treat eosinophil and mast cell inflammation in a number of disease settings and highlights AK002's ability to inhibit the inflammatory cascade triggered by different activating signals.

Anti-Siglec-8 Antibody Inhibits IgE Mediated Systemic Anaphylaxis in Mouse Model

The ability of an anti-Siglec-8 antibody to inhibit IgE-mediated mast cell activation was demonstrated in a mouse model of systemic anaphylaxis. Anaphylaxis occurs due to IgE-mediated release of inflammatory mediators and cytokines from mast cells, which results in vasodilation, a reduction in core body temperature, itchiness and bronchoconstriction, among other symptoms. In this model, "humanized" mice engrafted with human immune cells were pretreated with an anti-Siglec-8 antibody or an isotype control antibody, administered an allergen-specific IgE, and 24 hours later, anaphylaxis was triggered using an allergen. Mice treated with the isotype control antibody plus IgE and allergen displayed symptoms of anaphylaxis and body temperature decreases that peaked 10 to 40 minutes after inducing anaphylaxis. In contrast, mice treated with the anti-Siglec-8 antibody plus IgE and allergen displayed no observable symptoms and had no significant changes in core body temperature.

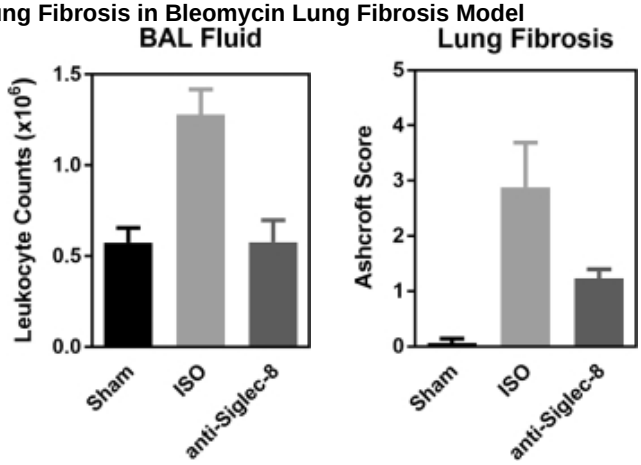
Figure 12. Effects of Anti-Siglec-8 in a Mouse Model of Systemic Anaphylaxis



Anti-Siglec-8 Antibody Decreases Bleomycin Induced Lung Fibrosis in Mouse Model

Lung fibrosis induced by bleomycin is believed to be due to the increased expression of IL-33. IL-33 induces mast cells to release mediators that activate fibroblasts leading to fibrosis and collagen deposition. In this model, lung fibrosis was induced by administering bleomycin to Siglec-8 transgenic mice every other day for 30 days. On days 14, 21 and 28, an anti-Siglec-8 or isotype control antibody was administered. Fibrosis was assessed on day 30 for anti-Siglec-8 or isotype control antibody treated mice and compared to sham treated mice (mice that did not receive bleomycin). Relative to control antibody mice, mice treated with an anti-Siglec-8 antibody displayed minimal fibrotic changes. In addition, the bronchoalveolar lavage (“BAL”) of anti-Siglec-8 treated mice displayed reduced levels of infiltrating leukocytes that were similar to sham treated animals.

Figure 13. Leukocyte Counts and Lung Fibrosis in Bleomycin Lung Fibrosis Model

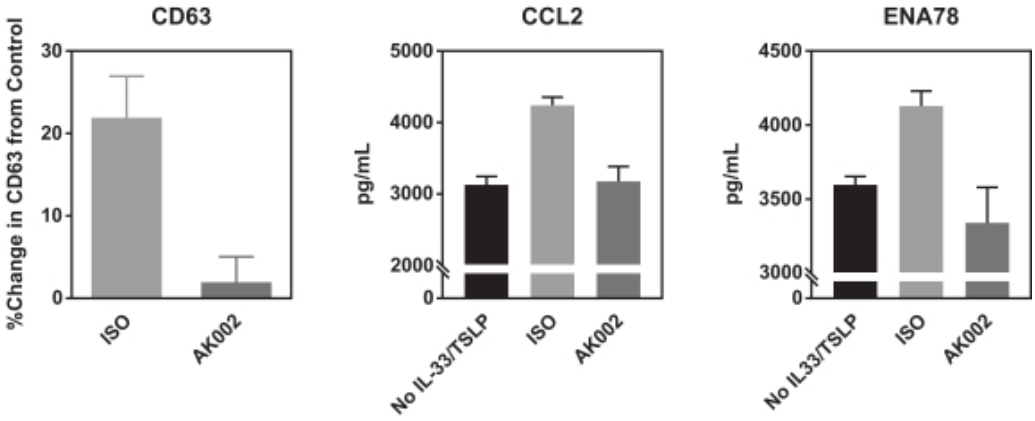


Anti-Siglec-8 Antibody Inhibits IL-33/TSLP Activation of Mast Cells from Human Skin

IL-33 combined with TSLP is a potent activator of mast cells and results in increased expression of the mast cell activation marker CD63. Mast cells isolated from skin showed a 20% increase in the

expression of CD63 after overnight exposure to IL-33 and TSLP. In contrast, skin mast cells treated with AK002 along with IL-33 and TSLP did not show increased activation, with CD63 levels remaining similar to control levels (no IL-33 and TSLP exposure). In addition, the levels of chemokines CCL2 and ENA78 did not increase after stimulation with IL-33 and TSLP in the presence of AK002. Chemokines are known to recruit and activate cells of the innate and adaptive immune system. By normalizing chemokine secretions, AK002 may be able to prevent further recruitment of immune cells and thereby interrupt the inflammatory cascade.

Figure 14. *Ex Vivo* Skin Tissue Response to IL33/TSLP



AK001

We initially began developing two product candidates, AK001 and AK002, both of which are monoclonal antibodies targeting Siglec-8. These compounds entered clinical development in 2015 and 2016, respectively. Due to the greater activity of AK002, we decided to focus our development efforts on AK002 and discontinued the development of AK001 in 2017. We have no current plans to continue development of AK001, but may choose to do so in the future.

Preclinical Programs

We are developing two additional antibodies targeting novel immune system receptors for the treatment of cancer. These antibodies are being assessed in a variety of animal models.

Competition

The biotechnology and pharmaceutical industries are characterized by rapid technological advancement, significant competition and an emphasis on intellectual property. We face potential competition from many different sources, including major and specialty pharmaceutical and biotechnology companies, academic research institutions, governmental agencies and public and private research institutions. Any product candidates that we successfully develop and commercialize will compete with current therapies and new therapies that may become available in the future. We believe that the key competitive factors affecting the success of any of our product candidates will include efficacy, safety profile, convenience, cost, level of promotional activity devoted to them and intellectual property protection.

We are not aware of any other company or organization that is conducting clinical trials of a product candidate that targets both eosinophils and mast cells, including any product candidate that

specifically targets Siglec-8. The competition we may face with respect to each of the indications we are targeting with AK002 includes:

- *EG and EGE*: Currently, there are no therapies that have been approved by the FDA specifically for EG or EGE, and we are not aware of any other planned pivotal trials in EG or EGE.
- *ISM*: We are not aware of any FDA-approved treatment options that target the underlying causes of ISM. Blueprint Medicines has announced it plans to begin a trial evaluating avapritinib in ISM in the second half of 2018.
- *CU*: Xolair is a FDA-approved drug approved for the treatment of CSU. We are not aware of any FDA-approved treatment options for cholinergic urticaria or symptomatic dermatographism. Novartis Pharmaceuticals is currently testing ligelizumab in a Phase 2 trial for chronic spontaneous urticaria.
- *SAC*: The products that are currently available for treatment of SAC only provide temporary relief for most patients and have little effect on moderate to severe cases. We are not aware of any other company specifically targeting SAC.

Many of the companies against which we may compete have significantly greater financial resources and expertise in research and development, manufacturing, preclinical testing, conducting clinical trials, obtaining regulatory approvals and marketing approved products than we do. Smaller or early-stage companies may also prove to be significant competitors, particularly through collaborative arrangements with large and established companies. These competitors also compete with us in recruiting and retaining qualified scientific and management personnel and establishing clinical trial sites and patient registration for clinical trials, as well as in acquiring technologies complementary to, or necessary for, our programs.

Sales and Marketing

In light of our stage of development, we currently have limited marketing and sales capabilities. We hold worldwide commercialization rights to all of our product candidates. We intend to retain the rights to our compounds in key markets, and plan to build our own focused, specialty sales force to commercialize approved products in both the United States and Europe.

Manufacturing

We must manufacture drug product for clinical trial use in compliance with cGMP regulations. The cGMP regulations include requirements relating to organization of personnel, buildings and facilities, equipment, control of components and drug product containers and closures, production and process controls, packaging and labeling controls, holding and distribution, laboratory controls, records and reports and returned or salvaged products. The manufacturing facilities for our product candidates must meet cGMP requirements and FDA or comparable foreign regulatory authority's satisfaction before any product is approved and our commercial products can be manufactured. Our third-party manufacturers will also be subject to periodic inspections of facilities by the FDA and other foreign authorities, including procedures and operations used in the testing and manufacture of our products to assess our compliance with applicable regulations.

We do not currently have the infrastructure or internal capability to manufacture our product candidates for use in clinical development and commercialization. We rely, and expect to continue to rely, on third-party manufacturers for the production of our product candidates in compliance with cGMP requirements clinical trials under the guidance of members of our organization. In the case of AK002, we rely on a single third-party manufacturer, Lonza, and we currently have no alternative

manufacturer in place. We do not have long-term supply agreements and we purchase our required drug product on a purchase order basis. We expect to continue to rely on third-party manufacturers for the commercial supply of any of our product candidates for which we obtain marketing approval. We have personnel with significant technical, manufacturing, analytical, quality, regulatory, including cGMP, and project management experience to oversee our third-party manufacturers and to manage manufacturing and quality data and information for regulatory compliance purposes.

Failure to comply with statutory and regulatory requirements subjects a manufacturer to possible legal or regulatory action, including warning letters, the seizure or recall of products, injunctions, consent decrees placing significant restrictions on or suspending manufacturing operations and civil and criminal penalties. Contract manufacturers often encounter difficulties involving production yields, quality control and quality assurance, as well as shortages of qualified personnel. Any of these actions or events could have a material impact on the availability of our products.

In-Licensing Agreements

Exclusive License Agreement with The Johns Hopkins University

We have exclusively licensed intellectual property from The Johns Hopkins University ("JHU") in a license agreement dated December 20, 2013 and amended and restated September 30, 2016. In December 2013, we entered into an agreement with JHU for an exclusive worldwide license to develop and commercialize for the treatment and prevention of disease products covered by the JHU licensed patent rights or derived from materials provided by JHU. In September 2016, we and JHU amended and restated the license agreement to an exclusive worldwide license to develop and commercialize in all fields products covered by the licensed patent rights, or derived from materials provided by JHU.

Under the license agreement we are obligated to make payments to JHU for therapeutic products aggregating up to $4.0 million based on achieving specified development and regulatory approval milestones. We will also pay single-digit royalties to JHU based on net sales of each licensed therapeutic product by us and our affiliates and sublicensees and have up to a low six digit dollar minimum annual royalty payment. In addition, in the event we sublicense the JHU intellectual property, we are obligated to pay JHU a specified portion of income we receive from sublicensing.

Our royalty obligation with respect to each licensed product in a country extends until the later of the expiration of the last-to-expire patent licensed from JHU covering the licensed product in the country or the expiration of a specified number of years after the first commercial sale of any licensed product in any country. The latest possible expiration date of patents licensed under the agreement is 2021 in all applicable countries, in the absence of any patent extensions that may be available for such patents.

Non-Exclusive License Agreement with BioWa Inc. and Lonza Sales AG

We have licensed on a non-exclusive basis intellectual property from BioWa Inc. ("BioWa") and Lonza pursuant to a license agreement dated October 31, 2013. The agreement grants Allakos a non-exclusive worldwide license to develop and commercialize certain products manufactured in a particular mammalian host cell line for the prevention, diagnosis or treatment of human disease.

Under the license agreement, we are obligated to pay BioWa an annual commercial license fee of $40,000 until such time as BioWa receives royalty payments. We may also become obligated to make payments to BioWa aggregating up to $41.0 million based on achieving specified milestones, and to pay low single-digit royalties to BioWa based on net sales of licensed product by us and our affiliates and sublicensees. Our royalty obligation to BioWa with respect to each licensed product in a country extends until the later of the expiration of the last-to-expire licensed patent covering the licensed product in the country or the expiration of either regulatory exclusivity or a specified number of years after the first commercial sale of the licensed product in the country, whichever is later.

We may also pay low single-digit royalties to Lonza based on net sales of each licensed product by us and our affiliates and sublicensees. We will be required to pay an annual license fees to Lonza if we (or our strategic partner) manufactures a particular product using the particular cell line, or if we utilize a third party CMO to manufacture a product using such system. Our royalty obligation to Lonza with respect to each licensed product in a country extends until the later of the expiration of the last-to-expire licensed patent covering the licensed product in the country or a specified number of years after the first commercial sale of the licensed product in the country, whichever is later. The latest possible expiration date of patents licensed under the agreement is 2021 or 2023, depending on the country, in the absence of any patent extensions that may be available for such patents.

Government Regulation

Government authorities in the United States at the federal, state and local level and in other countries regulate, among other things, the research, development, testing, manufacture, quality control, approval, labeling, packaging, storage, record-keeping, promotion, advertising, distribution, post-approval monitoring and reporting, marketing and export and import of drug and biological products. Generally, before a new drug or biologic can be marketed, considerable data demonstrating its quality, safety and efficacy must be obtained, organized into a format specific for each regulatory authority, submitted for review and approved by the regulatory authority.

U.S. Drug Development

In the United States, the FDA regulates drugs under the Federal Food, Drug, and Cosmetic Act (“FDCA”) and its implementing regulations, and biologics under the FDCA, the Public Health Service Act (“PHSA”) and their implementing regulations. Both drugs and biologics also are subject to other federal, state and local statutes and regulations. The process of obtaining regulatory approvals and the subsequent compliance with appropriate federal, state, local and foreign statutes and regulations requires the expenditure of substantial time and financial resources. Failure to comply with the applicable U.S. requirements at any time during the product development process, approval process or post-market may subject an applicant to administrative or judicial sanctions. These sanctions could include, among other actions, the FDA’s refusal to approve pending applications, withdrawal of an approval, a clinical hold, untitled or warning letters, product recalls or market withdrawals, product seizures, total or partial suspension of production or distribution, injunctions, fines, refusals of government contracts, restitution, disgorgement and civil or criminal penalties. Any agency or judicial enforcement action could have a material adverse effect on us.

Any future product candidates must be approved by the FDA through either a BLA or NDA process before they may be legally marketed in the United States. The process generally involves the following:

- Completion of extensive preclinical studies in accordance with applicable regulations, including studies conducted in accordance with good laboratory practice (“GLP”), requirements;
- Submission to the FDA of an IND, which must become effective before human clinical trials may begin;
- Approval by an independent institutional review board (“IRB”), or ethics committee at each clinical trial site before each trial may be initiated;
- Performance of adequate and well-controlled human clinical trials in accordance with applicable IND regulations, good clinical practice (“GCP”), requirements and other clinical trial-related regulations to establish the safety and efficacy of the investigational product for each proposed indication;

- Submission to the FDA of an NDA or BLA;
- A determination by the FDA within 60 days of its receipt of an NDA or BLA to accept the filing for review;
- Satisfactory completion of a FDA pre-approval inspection of the manufacturing facility or facilities where the drug or biologic will be produced to assess compliance with current good manufacturing practices ("cGMP"), requirements to assure that the facilities, methods and controls are adequate to preserve the drug or biologic's identity, strength, quality and purity;
- Potential FDA audit of the preclinical and/or clinical trial sites that generated the data in support of the NDA or BLA;
- FDA review and approval of the NDA or BLA, including consideration of the views of any FDA advisory committee, prior to any commercial marketing or sale of the drug or biologic in the United States; and
- Compliance with any post-approval requirements, including the potential requirement to implement a Risk Evaluation and Mitigation Strategy ("REMS"), and the potential requirement to conduct post-approval studies.

The data required to support an NDA or BLA are generated in two distinct developmental stages: preclinical and clinical. The preclinical and clinical testing and approval process requires substantial time, effort and financial resources, and we cannot be certain that any approvals for any future product candidates will be granted on a timely basis, or at all.

Preclinical Studies and IND

The preclinical developmental stage generally involves laboratory evaluations of drug chemistry, formulation and stability, as well as studies to evaluate toxicity in animals, which support subsequent clinical testing. The sponsor must submit the results of the preclinical studies, together with manufacturing information, analytical data, any available clinical data or literature and a proposed clinical protocol, to the FDA as part of the IND. An IND is a request for authorization from the FDA to administer an investigational product to humans, and must become effective before human clinical trials may begin.

Preclinical studies include laboratory evaluation of product chemistry and formulation, as well as *in vitro* and animal studies to assess the potential for adverse events and in some cases to establish a rationale for therapeutic use. The conduct of preclinical studies is subject to federal regulations and requirements, including GLP regulations for safety/toxicology studies. An IND sponsor must submit the results of the preclinical tests, together with manufacturing information, analytical data, any available clinical data or literature and plans for clinical studies, among other things, to the FDA as part of an IND. Some long-term preclinical testing, such as animal tests of reproductive adverse events and carcinogenicity, may continue after the IND is submitted. An IND automatically becomes effective 30 days after receipt by the FDA, unless before that time, the FDA raises concerns or questions related to one or more proposed clinical trials and places the trial on clinical hold. In such a case, the IND sponsor and the FDA must resolve any outstanding concerns before the clinical trial can begin. As a result, submission of an IND may not result in the FDA allowing clinical trials to commence.

Clinical Trials

The clinical stage of development involves the administration of the investigational product to healthy volunteers or patients under the supervision of qualified investigators, generally physicians not employed by or under the trial sponsor's control, in accordance with GCP requirements, which include

the requirement that all research subjects provide their informed consent for their participation in any clinical trial. Clinical trials are conducted under protocols detailing, among other things, the objectives of the clinical trial, dosing procedures, subject selection and exclusion criteria and the parameters to be used to monitor subject safety and assess efficacy. Each protocol, and any subsequent amendments to the protocol, must be submitted to the FDA as part of the IND. Furthermore, each clinical trial must be reviewed and approved by an IRB for each institution at which the clinical trial will be conducted to ensure that the risks to individuals participating in the clinical trials are minimized and are reasonable in relation to anticipated benefits. The IRB also approves the informed consent form that must be provided to each clinical trial subject or his or her legal representative, and must monitor the clinical trial until completed. There also are requirements governing the reporting of ongoing clinical trials and completed clinical trial results to public registries.

A sponsor who wishes to conduct a clinical trial outside of the United States may, but need not, obtain FDA authorization to conduct the clinical trial under an IND. If a foreign clinical trial is not conducted under an IND, the sponsor may submit data from the clinical trial to the FDA in support of an NDA or BLA. The FDA will accept a well-designed and well-conducted foreign clinical trial not conducted under an IND if the trial was conducted in accordance with GCP requirements and the FDA is able to validate the data through an onsite inspection if deemed necessary.

Clinical trials in the United States generally are conducted in three sequential phases, known as Phase 1, Phase 2 and Phase 3, and may overlap.

- Phase 1 clinical trials generally involve a small number of healthy volunteers or disease-affected patients who are initially exposed to a single dose and then multiple doses of the product candidate. The primary purpose of these clinical trials is to assess the metabolism, pharmacologic action, tolerability and safety of the drug.
- Phase 2 clinical trials involve studies in disease-affected patients to determine the dose required to produce the desired benefits. At the same time, safety and further PK and PD information is collected, possible adverse effects and safety risks are identified and a preliminary evaluation of efficacy is conducted.
- Phase 3 clinical trials generally involve a large number of patients at multiple sites and are designed to provide the data necessary to demonstrate the effectiveness of the product for its intended use, its safety in use and to establish the overall benefit/risk relationship of the product and provide an adequate basis for product approval. These trials may include comparisons with placebo and/or other comparator treatments. The duration of treatment is often extended to mimic the actual use of a product during marketing.

Post-approval trials, sometimes referred to as Phase 4 clinical trials, may be conducted after initial marketing approval. These trials are used to gain additional experience from the treatment of patients in the intended therapeutic indication. In certain instances, the FDA may mandate the performance of Phase 4 clinical trials as a condition of approval of an NDA or BLA.

Progress reports detailing the results of the clinical trials, among other information, must be submitted at least annually to the FDA and written IND safety reports must be submitted to the FDA and the investigators for serious and unexpected suspected adverse events, findings from other studies suggesting a significant risk to humans exposed to the drug or biologic, findings from animal or *in vitro* testing that suggest a significant risk for human subjects and any clinically important increase in the rate of a serious suspected adverse reaction over that listed in the protocol or investigator brochure.

Phase 1, Phase 2 and Phase 3 clinical trials may not be completed successfully within any specified period, if at all. The FDA or the sponsor may suspend or terminate a clinical trial at any time

on various grounds, including a finding that the research subjects or patients are being exposed to an unacceptable health risk. Similarly, an IRB can suspend or terminate approval of a clinical trial at its institution if the clinical trial is not being conducted in accordance with the IRB's requirements or if the drug or biologic has been associated with unexpected serious harm to patients. Additionally, some clinical trials are overseen by an independent group of qualified experts organized by the clinical trial sponsor, known as a data safety monitoring board or committee. This group provides authorization for whether a trial may move forward at designated check points based on access to certain data from the trial. Concurrent with clinical trials, companies usually complete additional animal studies and also must develop additional information about the chemistry and physical characteristics of the drug or biologic as well as finalize a process for manufacturing the product in commercial quantities in accordance with cGMP requirements. The manufacturing process must be capable of consistently producing quality batches of the product and, among other things, companies must develop methods for testing the identity, strength, quality and purity of the final product. Additionally, appropriate packaging must be selected and tested and stability studies must be conducted to demonstrate that our product candidates do not undergo unacceptable deterioration over their shelf life.

NDA/BLA Review Process

Following completion of the clinical trials, data are analyzed to assess whether the investigational product is safe and effective for the proposed indicated use or uses. The results of preclinical studies and clinical trials are then submitted to the FDA as part of an NDA or BLA, along with proposed labeling, chemistry and manufacturing information to ensure product quality and other relevant data. In short, the NDA or BLA is a request for approval to market the drug or biologic for one or more specified indications and must contain proof of safety and efficacy for a drug or safety, purity and potency for a biologic. The application may include both negative and ambiguous results of preclinical studies and clinical trials, as well as positive findings. Data may come from company-sponsored clinical trials intended to test the safety and efficacy of a product's use or from a number of alternative sources, including studies initiated by investigators. To support marketing approval, the data submitted must be sufficient in quality and quantity to establish the safety and efficacy of the investigational product to the satisfaction of FDA. FDA approval of an NDA or BLA must be obtained before a drug or biologic may be marketed in the United States.

Under the Prescription Drug User Fee Act ("PDUFA"), as amended, each NDA or BLA must be accompanied by a user fee. FDA adjusts the PDUFA user fees on an annual basis. According to the FDA's fee schedule, effective through September 30, 2016, the user fee for an application requiring clinical data, such as an NDA or BLA, is $2.3 million. PDUFA also imposes an annual product fee for human drugs and biologics (approximately $97,750) and an annual establishment fee (approximately $580,000) on facilities used to manufacture prescription drugs and biologics. Fee waivers or reductions are available in certain circumstances, including a waiver of the application fee for the first application filed by a small business. Additionally, no user fees are assessed on NDAs or BLAs for products designated as orphan drugs, unless the product also includes a non-orphan indication.

The FDA reviews all submitted NDAs and BLAs before it accepts them for filing, and may request additional information rather than accepting the NDA or BLA for filing. The FDA must make a decision on accepting an NDA or BLA for filing within 60 days of receipt. Once the submission is accepted for filing, the FDA begins an in-depth review of the NDA or BLA. Under the goals and policies agreed to by the FDA under PDUFA, the FDA has ten months, from the filing date, in which to complete its initial review of a new molecular-entity NDA or original BLA and respond to the applicant, and six months from the filing date of a new molecular-entity NDA or original BLA designated for priority review. The FDA does not always meet its PDUFA goal dates for standard and priority NDAs or BLAs, and the review process is often extended by FDA requests for additional information or clarification.

Before approving an NDA or BLA, the FDA will conduct a pre-approval inspection of the manufacturing facilities for the new product to determine whether they comply with cGMP requirements. The FDA will not approve the product unless it determines that the manufacturing processes and facilities are in compliance with cGMP requirements and adequate to assure consistent production of the product within required specifications. The FDA also may audit data from clinical trials to ensure compliance with GCP requirements. Additionally, the FDA may refer applications for novel drug products or drug products which present difficult questions of safety or efficacy to an advisory committee, typically a panel that includes clinicians and other experts, for review, evaluation and a recommendation as to whether the application should be approved and under what conditions, if any. The FDA is not bound by recommendations of an advisory committee, but it considers such recommendations when making decisions on approval. The FDA likely will reanalyze the clinical trial data, which could result in extensive discussions between the FDA and the applicant during the review process. After the FDA evaluates an NDA or BLA, it will issue an approval letter or a Complete Response Letter. An approval letter authorizes commercial marketing of the drug with specific prescribing information for specific indications. A Complete Response Letter indicates that the review cycle of the application is complete and the application will not be approved in its present form. A Complete Response Letter usually describes all of the specific deficiencies in the NDA or BLA identified by the FDA. The Complete Response Letter may require additional clinical data, additional pivotal Phase 3 clinical trial(s) and/or other significant and time-consuming requirements related to clinical trials, preclinical studies or manufacturing. If a Complete Response Letter is issued, the applicant may either resubmit the NDA or BLA, addressing all of the deficiencies identified in the letter, or withdraw the application. Even if such data and information are submitted, the FDA may decide that the NDA or BLA does not satisfy the criteria for approval. Data obtained from clinical trials are not always conclusive and the FDA may interpret data differently than we interpret the same data.

Orphan Drugs

Under the Orphan Drug Act, the FDA may grant orphan designation to a drug or biological product intended to treat a rare disease or condition, which is generally a disease or condition that affects fewer than 200,000 individuals in the United States, or more than 200,000 individuals in the United States and for which there is no reasonable expectation that the cost of developing and making the product available in the United States for this type of disease or condition will be recovered from sales of the product.

Orphan drug designation must be requested before submitting an NDA or BLA. After the FDA grants orphan drug designation, the identity of the therapeutic agent and its potential orphan use are disclosed publicly by the FDA. Orphan drug designation does not convey any advantage in or shorten the duration of the regulatory review and approval process.

If a product that has orphan designation subsequently receives the first FDA approval for the disease or condition for which it has such designation, the product is entitled to orphan drug exclusivity, which means that the FDA may not approve any other applications to market the same drug for the same indication for seven years from the date of such approval, except in limited circumstances, such as a showing of clinical superiority to the product with orphan exclusivity by means of greater effectiveness, greater safety or providing a major contribution to patient care or in instances of drug supply issues. Competitors, however, may receive approval of either a different product for the same indication or the same product for a different indication but that could be used off-label in the orphan indication. Orphan drug exclusivity also could block the approval of one of our products for seven years if a competitor obtains approval before we do for the same product, as defined by the FDA, for the same indication we are seeking approval, or if a product candidate is determined to be contained within the scope of the competitor’s product for the same indication or disease. If one of our products designated as an orphan drug receives marketing approval for an indication broader than that which is

designated, it may not be entitled to orphan drug exclusivity. Orphan drug status in the European Union has similar, but not identical, requirements and benefits.

Expedited Development and Review Programs

The FDA has a fast track program that is intended to expedite or facilitate the process for reviewing new drugs and biologics that meet certain criteria. Specifically, new drugs and biologics are eligible for fast track designation if they are intended to treat a serious or life threatening condition and preclinical or clinical data demonstrate the potential to address unmet medical needs for the condition. Fast track designation applies to both the product and the specific indication for which it is being studied. The sponsor can request the FDA to designate the product for fast track status any time before receiving NDA or BLA approval, but ideally no later than the pre-NDA or pre-BLA meeting.

Any product submitted to the FDA for marketing, including under a fast track program, may be eligible for other types of FDA programs intended to expedite development and review, such as priority review and accelerated approval. Any product is eligible for priority review if it treats a serious or life-threatening condition and, if approved, would provide a significant improvement in safety and effectiveness compared to available therapies.

A product may also be eligible for accelerated approval, if it treats a serious or life-threatening condition and generally provides a meaningful advantage over available therapies. In addition, it must demonstrate an effect on a surrogate endpoint that is reasonably likely to predict clinical benefit or on a clinical endpoint that can be measured earlier than irreversible morbidity or mortality (“IMM”), which is reasonably likely to predict an effect on IMM or other clinical benefit. As a condition of approval, the FDA may require that a sponsor of a drug or biologic receiving accelerated approval perform adequate and well-controlled post-marketing clinical trials. If the FDA concludes that a drug or biologic shown to be effective can be safely used only if distribution or use is restricted, it may require such post-marketing restrictions, as it deems necessary to assure safe use of the product.

Additionally, a drug or biologic may be eligible for designation as a breakthrough therapy if the product is intended, alone or in combination with one or more other drugs or biologics, to treat a serious or life-threatening condition and preliminary clinical evidence indicates that the product may demonstrate substantial improvement over currently approved therapies on one or more clinically significant endpoints. The benefits of breakthrough therapy designation include the same benefits as fast track designation, plus intensive guidance from the FDA to ensure an efficient drug development program. Fast track designation, priority review, accelerated approval and breakthrough therapy designation do not change the standards for approval, but may expedite the development or approval process.

Abbreviated Licensure Pathway of Biological Products as Biosimilar or Interchangeable

The Patient Protection and Affordable Care Act (“PPACA”), or Affordable Care Act (“ACA”), signed into law in 2010, includes a subtitle called the Biologics Price Competition and Innovation Act of 2009 (“BPCIA”), created an abbreviated approval pathway for biological products shown to be highly similar to an FDA-licensed reference biological product. The BPCIA attempts to minimize duplicative testing, and thereby lower development costs and increase patient access to affordable treatments. An application for licensure of a biosimilar product must include information demonstrating biosimilarity based upon the following, unless the FDA determines otherwise:

- analytical studies demonstrating that the proposed biosimilar product is highly similar to the approved product notwithstanding minor differences in clinically inactive components;
- animal studies (including the assessment of toxicity); and

- a clinical trial or trials (including the assessment of immunogenicity and PK or PD) sufficient to demonstrate safety, purity and potency in one or more conditions for which the reference product is licensed and intended to be used.

In addition, an application must include information demonstrating that:

- the proposed biosimilar product and reference product utilize the same mechanism of action for the condition(s) of use prescribed, recommended or suggested in the proposed labeling, but only to the extent the mechanism(s) of action are known for the reference product;
- the condition or conditions of use prescribed, recommended or suggested in the labeling for the proposed biosimilar product have been previously approved for the reference product;
- the route of administration, the dosage form and the strength of the proposed biosimilar product are the same as those for the reference product; and
- the facility in which the biological product is manufactured, processed, packed or held meets standards designed to assure that the biological product continues to be safe, pure and potent.

Biosimilarity means that the biological product is highly similar to the reference product notwithstanding minor differences in clinically inactive components; and that there are no clinically meaningful differences between the biological product and the reference product in terms of the safety, purity and potency of the product. In addition, the law provides for a designation of “interchangeability” between the reference and biosimilar products, whereby the biosimilar may be substituted for the reference product without the intervention of the health care provider who prescribed the reference product. The higher standard of interchangeability must be demonstrated by information sufficient to show that:

- the proposed product is biosimilar to the reference product;
- the proposed product is expected to produce the same clinical result as the reference product in any given patient; and
- for a product that is administered more than once to an individual, the risk to the patient in terms of safety or diminished efficacy of alternating or switching between the biosimilar and the reference product is no greater than the risk of using the reference product without such alternation or switch.

FDA approval is required before a biosimilar may be marketed in the United States. However, complexities associated with the large and intricate structures of biological products and the process by which such products are manufactured pose significant hurdles to the FDA’s implementation of the law that are still being worked out by the FDA. For example, the FDA has discretion over the kind and amount of scientific evidence—laboratory, preclinical and/or clinical—required to demonstrate biosimilarity to a licensed biological product.

The FDA intends to consider the totality of the evidence, provided by a sponsor to support a demonstration of biosimilarity, and recommends that sponsors use a stepwise approach in the development of their biosimilar products. Biosimilar product applications thus may not be required to duplicate the entirety of preclinical and clinical testing used to establish the underlying safety and effectiveness of the reference product. However, the FDA may refuse to approve a biosimilar application if there is insufficient information to show that the active ingredients are the same or to demonstrate that any impurities or differences in active ingredients do not affect the safety, purity or potency of the biosimilar product. In addition, as with BLAs, biosimilar product applications will not be approved unless the product is manufactured in facilities designed to assure and preserve the biological product’s safety, purity and potency.

The submission of a biosimilar application does not guarantee that the FDA will accept the application for filing and review, as the FDA may refuse to accept applications that it finds are insufficiently complete. The FDA will treat a biosimilar application or supplement as incomplete if, among other reasons, any applicable user fees assessed under the Biosimilar User Fee Act of 2012 have not been paid. In addition, the FDA may accept an application for filing but deny approval on the basis that the sponsor has not demonstrated biosimilarity, in which case the sponsor may choose to conduct further analytical, preclinical or clinical studies and submit a BLA for licensure as a new biological product.

The timing of final FDA approval of a biosimilar for commercial distribution depends on a variety of factors, including whether the manufacturer of the branded product is entitled to one or more statutory exclusivity periods, during which time the FDA is prohibited from approving any products that are biosimilar to the branded product. The FDA cannot approve a biosimilar application for twelve years from the date of first licensure of the reference product. Additionally, a biosimilar product sponsor may not submit an application for four years from the date of first licensure of the reference product. A reference product may also be entitled to exclusivity under other statutory provisions. For example, a reference product designated for a rare disease or condition (an “orphan drug”) may be entitled to seven years of exclusivity, in which case no product that is biosimilar to the reference product may be approved until either the end of the twelve-year period provided under the biosimilarity statute or the end of the seven-year orphan drug exclusivity period, whichever occurs later. In certain circumstances, a regulatory exclusivity period can extend beyond the life of a patent, and thus block biosimilarity applications from being approved on or after the patent expiration date. In addition, the FDA may under certain circumstances extend the exclusivity period for the reference product by an additional six months if the FDA requests, and the manufacturer undertakes, studies on the effect of its product in children, a so-called pediatric extension.

The first biological product determined to be interchangeable with a branded product for any condition of use is also entitled to a period of exclusivity, during which time the FDA may not determine that another product is interchangeable with the reference product for any condition of use. This exclusivity period extends until the earlier of: (1) one year after the first commercial marketing of the first interchangeable product; (2) 18 months after resolution of a patent infringement against the applicant that submitted the application for the first interchangeable product, based on a final court decision regarding all of the patents in the litigation or dismissal of the litigation with or without prejudice; (3) 42 months after approval of the first interchangeable product, if a patent infringement suit against the applicant that submitted the application for the first interchangeable product is still ongoing or (4) 18 months after approval of the first interchangeable product if the applicant that submitted the application for the first interchangeable product has not been sued.

Post-Approval Requirements

Following approval of a new product, the manufacturer and the approved product are subject to continuing regulation by the FDA, including, among other things, monitoring and record-keeping requirements, requirements to report adverse experiences and comply with promotion and advertising requirements, which include restrictions on promoting drugs for unapproved uses or patient populations (known as “off-label use”) and limitations on industry-sponsored scientific and educational activities. Although physicians may prescribe legally available drugs for off-label uses, manufacturers may not market or promote such uses. Prescription drug promotional materials must be submitted to the FDA in conjunction with their first use. Further, if there are any modifications to the drug or biologic, including changes in indications, labeling or manufacturing processes or facilities, the applicant may be required to submit and obtain FDA approval of a new NDA/BLA or NDA/BLA supplement, which may require the development of additional data or preclinical studies and clinical trials.

The FDA may also place other conditions on approvals including the requirement for a Risk Evaluation and Mitigation Strategy ("REMS"), to assure the safe use of the product. A REMS could include medication guides, physician communication plans or elements to assure safe use, such as restricted distribution methods, patient registries and other risk minimization tools. Any of these limitations on approval or marketing could restrict the commercial promotion, distribution, prescription or dispensing of products. Product approvals may be withdrawn for non-compliance with regulatory standards or if problems occur following initial marketing.

The FDA may withdraw approval if compliance with regulatory requirements and standards is not maintained or if problems occur after the product reaches the market. Later discovery of previously unknown problems with a product, including adverse events of unanticipated severity or frequency, or with manufacturing processes, or failure to comply with regulatory requirements, may result in revisions to the approved labeling to add new safety information; imposition of post-market studies or clinical studies to assess new safety risks or imposition of distribution restrictions or other restrictions under a REMS program. Other potential consequences include, among other things:

- restrictions on the marketing or manufacturing of the product, complete withdrawal of the product from the market or product recalls;
- fines, warning letters or holds on post-approval clinical studies;
- refusal of the FDA to approve pending applications or supplements to approved applications;
- applications, or suspension or revocation of product license approvals;
- product seizure or detention, or refusal to permit the import or export of products; or
- injunctions or the imposition of civil or criminal penalties.

The FDA strictly regulates marketing, labeling, advertising and promotion of products that are placed on the market. Drugs and biologics may be promoted only for the approved indications and in accordance with the provisions of the approved label. The FDA and other agencies actively enforce the laws and regulations prohibiting the promotion of off-label uses, and a company that is found to have improperly promoted off-label uses may be subject to significant liability.

Other U.S. Regulatory Matters

Manufacturing, sales, promotion and other activities following product approval are also subject to regulation by numerous regulatory authorities in the United States in addition to the FDA, including the Centers for Medicare & Medicaid Services, other divisions of the Department of Health and Human Services, the Department of Justice, the Drug Enforcement Administration, the Consumer Product Safety Commission, the Federal Trade Commission, the Occupational Safety & Health Administration, the Environmental Protection Agency and state and local governments.

For example, in the United States, sales, marketing and scientific and educational programs also must comply with state and federal fraud and abuse laws. These laws include the federal Anti-Kickback Statute, which makes it illegal for any person, including a prescription drug manufacturer (or a party acting on its behalf), to knowingly and willfully solicit, receive, offer or pay any remuneration that is intended to induce or reward referrals, including the purchase, recommendation, order or prescription of a particular drug, for which payment may be made under a federal healthcare program, such as Medicare or Medicaid. Violations of this law are punishable by up to five years in prison, criminal fines, administrative civil money penalties and exclusion from participation in federal healthcare programs. Moreover, the ACA provides that the government may assert that a claim including items or services resulting from a violation of the federal Anti-Kickback Statute constitutes a false or fraudulent claim for purposes of the False Claims Act.

Pricing and rebate programs must comply with the Medicaid rebate requirements of the U.S. Omnibus Budget Reconciliation Act of 1990 and more recent requirements in the ACA. If products are made available to authorized users of the Federal Supply Schedule of the General Services Administration, additional laws and requirements apply. Products must meet applicable child-resistant packaging requirements under the U.S. Poison Prevention Packaging Act. Manufacturing, sales, promotion and other activities also are potentially subject to federal and state consumer protection and unfair competition laws.

The distribution of biologic and pharmaceutical products is subject to additional requirements and regulations, including extensive record-keeping, licensing, storage and security requirements intended to prevent the unauthorized sale of pharmaceutical products.

The failure to comply with any of these laws or regulatory requirements subjects firms to possible legal or regulatory action. Depending on the circumstances, failure to meet applicable regulatory requirements can result in criminal prosecution, fines or other penalties, injunctions, requests for recall, seizure of products, total or partial suspension of production, denial or withdrawal of product approvals or refusal to allow a firm to enter into supply contracts, including government contracts. Any action against us for violation of these laws, even if we successfully defend against it, could cause us to incur significant legal expenses and divert our management's attention from the operation of our business. Prohibitions or restrictions on sales or withdrawal of future products marketed by us could materially affect our business in an adverse way.

Changes in regulations, statutes or the interpretation of existing regulations could impact our business in the future by requiring, for example: (i) changes to our manufacturing arrangements; (ii) additions or modifications to product labeling; (iii) the recall or discontinuation of our products; or (iv) additional record-keeping requirements. If any such changes were to be imposed, they could adversely affect the operation of our business.

U.S. Patent-Term Restoration and Marketing Exclusivity

Depending upon the timing, duration and specifics of FDA approval of any future product candidates, some of our U.S. patents may be eligible for limited patent term extension under the Drug Price Competition and Patent Term Restoration Act of 1984 (the "Hatch-Waxman Act"). The Hatch-Waxman Act permits restoration of the patent term of up to five years as compensation for patent term lost during product development and FDA regulatory review process. Patent-term restoration, however, cannot extend the remaining term of a patent beyond a total of 14 years from the product's approval date. The patent-term restoration period is generally one-half the time between the effective date of an IND and the submission date of an NDA or BLA plus the time between the submission date of an NDA or BLA and the approval of that application, except that the review period is reduced by any time during which the applicant failed to exercise due diligence. Only one patent applicable to an approved drug is eligible for the extension and the application for the extension must be submitted prior to the expiration of the patent. The U.S. PTO, in consultation with the FDA, reviews and approves the application for any patent term extension or restoration. In the future, we may apply for restoration of patent term for our currently owned or licensed patents to add patent life beyond its current expiration date, depending on the expected length of the clinical trials and other factors involved in the filing of the relevant NDA or BLA.

Market exclusivity provisions under the FDCA also can delay the submission or the approval of certain applications. The FDCA provides a five-year period of non-patent marketing exclusivity within the United States to the first applicant to gain approval of a NDA for a new chemical entity. A drug is a new chemical entity if the FDA has not previously approved any other new drug containing the same active moiety, which is the molecule or ion responsible for the action of the drug substance. During the

exclusivity period, the FDA may not accept for review an abbreviated new drug application ("ANDA"), or a 505(b)(2) NDA submitted by another company for another version of such drug where the applicant does not own or have a legal right of reference to all the data required for approval. However, an application may be submitted after four years if it contains a certification of patent invalidity or non-infringement. The FDCA also provides three years of marketing exclusivity for a NDA, 505(b)(2) NDA or supplement to an existing NDA if new clinical investigations, other than bioavailability studies, that were conducted or sponsored by the applicant are deemed by the FDA to be essential to the approval of the application, for example, new indications, dosages or strengths of an existing drug. This three-year exclusivity covers only the conditions of use associated with the new clinical investigations and does not prohibit the FDA from approving ANDAs for drugs containing the original active agent. Five-year and three-year exclusivity will not delay the submission or approval of a full NDA. However, an applicant submitting a full NDA would be required to conduct or obtain a right of reference to all of the preclinical studies and adequate and well-controlled clinical trials necessary to demonstrate safety and effectiveness.

A reference biological product is granted twelve years of data exclusivity from the time of first licensure of the product, and the FDA will not accept an application for a biosimilar or interchangeable product based on the reference biological product until four years after the date of first licensure of the reference product. "First licensure" typically means the initial date the particular product at issue was licensed in the United States. Date of first licensure does not include the date of licensure of (and a new period of exclusivity is not available for) a biological product if the licensure is for a supplement for the biological product or for a subsequent application by the same sponsor or manufacturer of the biological product (or licensor, predecessor in interest or other related entity) for a change (not including a modification to the structure of the biological product) that results in a new indication, route of administration, dosing schedule, dosage form, delivery system, delivery device or strength or for a modification to the structure of the biological product that does not result in a change in safety, purity or potency. Therefore, one must determine whether a new product includes a modification to the structure of a previously licensed product that results in a change in safety, purity or potency to assess whether the licensure of the new product is a first licensure that triggers its own period of exclusivity. Whether a subsequent application, if approved, warrants exclusivity as the "first licensure" of a biological product is determined on a case-by-case basis with data submitted by the sponsor.

European Union Drug Development

As in the United States, medicinal products can be marketed only if a marketing authorization from the competent regulatory agencies has been obtained.

Similar to the United States, the various phases of preclinical and clinical research in the European Union are subject to significant regulatory controls. Although the EU Clinical Trials Directive 2001/20/EC has sought to harmonize the EU clinical trials regulatory framework, setting out common rules for the control and authorization of clinical trials in the EU, the EU Member States have transposed and applied the provisions of the Directive differently. This has led to significant variations in the member state regimes. Under the current regime, before a clinical trial can be initiated it must be approved in each of the EU countries where the trial is to be conducted by two distinct bodies: the National Competent Authority ("NCA"), and one or more Ethics Committees ("ECs"). Under the current regime all suspected unexpected serious adverse reactions to the investigated drug that occur during the clinical trial have to be reported to the NCA and ECs of the Member State where they occurred.

The EU clinical trials legislation currently is undergoing a transition process mainly aimed at harmonizing and streamlining clinical-trial authorization, simplifying adverse-event reporting procedures, improving the supervision of clinical trials and increasing their transparency. Recently enacted Clinical Trials Regulation EU No 536/2014 ensures that the rules for conducting clinical trials

in the EU will be identical. In the meantime, Clinical Trials Directive 2001/20/EC continues to govern all clinical trials performed in the EU.

European Union Drug Review and Approval

In the European Economic Area ("EEA"), which is comprised of the 27 Member States of the European Union (including Norway and excluding Croatia), Iceland and Liechtenstein, medicinal products can only be commercialized after obtaining a Marketing Authorization ("MA"). There are two types of marketing authorizations.

- The Community MA is issued by the European Commission through the Centralized Procedure, based on the opinion of the Committee for Medicinal Products for Human Use ("CHMP"), of the European Medicines Agency ("EMA"), and is valid throughout the entire territory of the EEA. The Centralized Procedure is mandatory for certain types of products, such as biotechnology medicinal products, orphan medicinal products, advanced-therapy medicines such as gene-therapy, somatic cell-therapy or tissue-engineered medicines and medicinal products containing a new active substance indicated for the treatment of HIV, AIDS, cancer, neurodegenerative disorders, diabetes, auto-immune and other immune dysfunctions and viral diseases. The Centralized Procedure is optional for products containing a new active substance not yet authorized in the EEA, or for products that constitute a significant therapeutic, scientific or technical innovation or which are in the interest of public health in the EU.
- National MAs, which are issued by the competent authorities of the Member States of the EEA and only cover their respective territory, are available for products not falling within the mandatory scope of the Centralized Procedure. Where a product has already been authorized for marketing in a Member State of the EEA, this National MA can be recognized in another Member States through the Mutual Recognition Procedure. If the product has not received a National MA in any Member State at the time of application, it can be approved simultaneously in various Member States through the Decentralized Procedure. Under the Decentralized Procedure an identical dossier is submitted to the competent authorities of each of the Member States in which the MA is sought, one of which is selected by the applicant as the Reference Member State ("RMS"). The competent authority of the RMS prepares a draft assessment report, a draft summary of the product characteristics ("SPC"), and a draft of the labeling and package leaflet, which are sent to the other Member States (referred to as the Member States Concerned) for their approval. If the Member States Concerned raise no objections, based on a potential serious risk to public health, to the assessment, SPC, labeling or packaging proposed by the RMS, the product is subsequently granted a national MA in all the Member States (i.e., in the RMS and the Member States Concerned).

Under the above described procedures, before granting the MA, the EMA or the competent authorities of the Member States of the EEA make an assessment of the risk-benefit balance of the product on the basis of scientific criteria concerning its quality, safety and efficacy.

Coverage and Reimbursement

Sales of our products will depend, in part, on the extent to which our products will be covered by third-party payors, such as government health programs, commercial insurance and managed healthcare organizations. In the United States no uniform policy of coverage and reimbursement for drug or biological products exists. Accordingly, decisions regarding the extent of coverage and amount of reimbursement to be provided for any of our products will be made on a payor-by-payor basis. As a result, the coverage determination process is often a time-consuming and costly process that will

require us to provide scientific and clinical support for the use of our products to each payor separately, with no assurance that coverage and adequate reimbursement will be obtained.

The United States government, state legislatures and foreign governments have shown significant interest in implementing cost containment programs to limit the growth of government-paid health care costs, including price-controls, restrictions on reimbursement and requirements for substitution of generic products for branded prescription drugs. For example, the ACA contains provisions that may reduce the profitability of drug products through increased rebates for drugs reimbursed by Medicaid programs, extension of Medicaid rebates to Medicaid managed care plans, mandatory discounts for certain Medicare Part D beneficiaries and annual fees based on pharmaceutical companies' share of sales to federal health care programs. Adoption of general controls and measures, coupled with the tightening of restrictive policies in jurisdictions with existing controls and measures, could limit payments for pharmaceutical drugs.

The Medicaid Drug Rebate Program requires pharmaceutical manufacturers to enter into and have in effect a national rebate agreement with the Secretary of the Department of Health and Human Services as a condition for states to receive federal matching funds for the manufacturer's outpatient drugs furnished to Medicaid patients. The ACA made several changes to the Medicaid Drug Rebate Program, including increasing pharmaceutical manufacturers' rebate liability by raising the minimum basic Medicaid rebate on most branded prescription drugs from 15.1% of average manufacturer price ("AMP"), to 23.1% of AMP and adding a new rebate calculation for "line extensions" (i.e., new formulations, such as extended release formulations) of solid oral dosage forms of branded products, as well as potentially impacting their rebate liability by modifying the statutory definition of AMP. The ACA also expanded the universe of Medicaid utilization subject to drug rebates by requiring pharmaceutical manufacturers to pay rebates on Medicaid managed care utilization and by enlarging the population potentially eligible for Medicaid drug benefits. The Centers for Medicare & Medicaid Services ("CMS"), have proposed to expand Medicaid rebate liability to the territories of the United States as well.

The Medicare Prescription Drug, Improvement, and Modernization Act of 2003 ("MMA"), established the Medicare Part D program to provide a voluntary prescription drug benefit to Medicare beneficiaries. Under Part D, Medicare beneficiaries may enroll in prescription drug plans offered by private entities that provide coverage of outpatient prescription drugs. Unlike Medicare Part A and B, Part D coverage is not standardized. While all Medicare drug plans must give at least a standard level of coverage set by Medicare, Part D prescription drug plan sponsors are not required to pay for all covered Part D drugs, and each drug plan can develop its own drug formulary that identifies which drugs it will cover and at what tier or level. However, Part D prescription drug formularies must include drugs within each therapeutic category and class of covered Part D drugs, though not necessarily all the drugs in each category or class. Any formulary used by a Part D prescription drug plan must be developed and reviewed by a pharmacy and therapeutic committee. Government payment for some of the costs of prescription drugs may increase demand for products for which we receive marketing approval. However, any negotiated prices for our products covered by a Part D prescription drug plan likely will be lower than the prices we might otherwise obtain. Moreover, while the MMA applies only to drug benefits for Medicare beneficiaries, private payors often follow Medicare coverage policy and payment limitations in setting their own payment rates. Any reduction in payment that results from the MMA may result in a similar reduction in payments from non-governmental payors.

For a drug product to receive federal reimbursement under the Medicaid or Medicare Part B programs or to be sold directly to U.S. government agencies, the manufacturer must extend discounts to entities eligible to participate in the 340B drug pricing program. The required 340B discount on a given product is calculated based on the AMP and Medicaid rebate amounts reported by the manufacturer. As of 2010, the ACA expanded the types of entities eligible to receive discounted 340B

pricing, although, under the current state of the law, with the exception of children's hospitals, these newly eligible entities will not be eligible to receive discounted 340B pricing on orphan drugs. In addition, as 340B drug prices are determined based on AMP and Medicaid rebate data, the revisions to the Medicaid rebate formula and AMP definition described above could cause the required 340B discount to increase.

As noted above, the marketability of any products for which we receive regulatory approval for commercial sale may suffer if the government and third-party payors fail to provide adequate coverage and reimbursement. An increasing emphasis on cost containment measures in the United States has increased and we expect will continue to increase the pressure on pharmaceutical pricing. Coverage policies and third-party reimbursement rates may change at any time. Even if favorable coverage and reimbursement status is attained for one or more products for which we receive regulatory approval, less favorable coverage policies and reimbursement rates may be implemented in the future.

In addition, in most foreign countries, the proposed pricing for a drug must be approved before it may be lawfully marketed. The requirements governing drug pricing and reimbursement vary widely from country to country. For example, the European Union provides options for its member states to restrict the range of medicinal products for which their national health insurance systems provide reimbursement and to control the prices of medicinal products for human use. A member state may approve a specific price for the medicinal product or it may instead adopt a system of direct or indirect controls on the profitability of the company placing the medicinal product on the market. There can be no assurance that any country that has price controls or reimbursement limitations for pharmaceutical products will allow favorable reimbursement and pricing arrangements for any of our products. Historically, products launched in the European Union do not follow price structures of the United States and generally prices tend to be significantly lower.

Employees

As of June 30, 2018, we had 44 full-time employees, 32 of whom were engaged in research and development activities. None of our employees are represented by a labor union or covered under a collective bargaining agreement.

Facilities

Our corporate headquarters are currently located in San Carlos, California, where we lease 10,142 square feet of office, research and development and laboratory space pursuant to a lease agreement that expires on June 30, 2019. In order to accommodate our anticipated growth in connection with our future development and commercialization efforts, we recently entered into a second lease for an additional 25,136 square feet of office, light storage and laboratory space in Redwood City, California. The term of this new lease agreement expires ten years and nine months from the date of substantial completion and delivery of the premises, with an option to extend the term for an additional period of five years. The new lease agreement also provides us a right of first offer to expand into available space on the first floor of the building. We will be responsible for payment of our proportionate share of taxes and operating expenses for the building, in addition to monthly base rent in the initial amount of $0.1 million, with 3% annual increases, which monthly base rent is abated for the first nine months of the lease term. We are required to provide a security deposit under the lease in the form of cash or a letter of credit in the initial amount of $0.8 million, subject to a reduction to $0.4 million following the 45th month of the term and the satisfaction of certain conditions. We currently anticipate that we will begin occupying this new space beginning in September 2018. We believe that these existing facilities will be adequate for our near-term needs. If required, we believe that suitable additional or alternative space would be available in the future on commercially reasonable terms.

Legal Proceedings

From time to time, we may become involved in litigation or other legal proceedings. We are not currently a party to any litigation or legal proceedings that, in the opinion of our management, are likely to have a material adverse effect on our business. Regardless of outcome, litigation can have an adverse impact on us because of defense and settlement costs, diversion of management resources and other factors.

Intellectual Property

Our success depends in part on our ability to obtain and maintain proprietary protection for our product candidates, technology and know-how, to operate without infringing the proprietary rights of others and to prevent others from infringing our proprietary rights. Our policy is to seek to protect our proprietary position by, among other methods, pursuing and obtaining patent protection in the United States and in jurisdictions outside of the United States related to our proprietary technology, inventions, improvements and product candidates that are important to the development and implementation of our business. Our patent portfolio is intended to cover our product candidates and components thereof, their methods of use and processes for their manufacture, our proprietary reagents and assays and any other inventions that are commercially important to our business. We also rely on trade secret protection of our confidential information and know-how relating to our proprietary technology, platforms and product candidates.

We believe that we have substantial know-how and trade secrets relating to our technology and product candidates. Our patent portfolio as of June 30, 2018 contains six issued and unexpired U.S. patents and eight pending U.S. patent applications that are solely owned or exclusively licensed by us and numerous foreign counterparts of these patents and patent applications.

We have exclusively licensed from The Johns Hopkins University (“JHU”) five issued and unexpired U.S. patents and also foreign counterparts, with claims granted in Europe and Japan. The JHU licensed patent rights include issued U.S. patents with claims that recite anti-Siglec-8 antibodies comprising the CDRs of a particular antibody and methods of use a class of antibodies that bind to Siglec-8 for treating particular diseases. We own a granted U.S. patent that claims the active component of AK002 (an anti-Siglec-8 antibody) and pharmaceutical compositions comprising AK002 with a projected expiration date in 2035 in the absence of patent extensions. Similar patent applications are pending in Europe, Japan and elsewhere with a projected expiration date in 2034. We have eight further pending families of patent applications that include U.S. and foreign applications relating to methods of treatment for treating particular diseases using antibodies to Siglec-8. We have also filed patent applications with claims pending relating to antibodies in preclinical development and methods for treating cancer with these antibodies. We also have a non-exclusive license to intellectual property from BioWa and Lonza regarding the expression and manufacturing of monoclonal antibodies in particular mammalian host cell lines.

The term of individual patents depends upon the legal term for patents in the countries in which they are granted. In most countries, including the United States, the patent term is generally 20 years from the earliest claimed filing date of a non-provisional patent application in the applicable country. In the United States, a patent’s term may, in certain cases, be lengthened by patent term adjustment, which compensates a patentee for administrative delays by the U.S. Patent and Trademark Office in examining and granting a patent, or may be shortened if a patent is terminally disclaimed over a commonly owned patent or a patent naming a common inventor and having an earlier expiration date. The Hatch-Waxman Act permits a patent term extension of up to five years beyond the expiration date of a U.S. patent as partial compensation for the length of time the drug is under regulatory review while the patent is in force. A patent term extension cannot extend the remaining term of a patent beyond a

total of 14 years from the date of product approval, only one patent applicable to each regulatory review period may be extended and only those claims covering the approved drug, a method for using it or a method for manufacturing it may be extended.

Similar provisions are available in the European Union and certain other foreign jurisdictions to extend the term of a patent that covers an approved drug. In the future, if and when our product candidates, including AK002, receive approval by the FDA or foreign regulatory authorities, we expect to apply for patent term extensions on issued patents covering those products, depending upon the length of the clinical trials for each drug and other factors. Expiration dates referred to above are without regard to potential patent term extension or other market exclusivity that may be available to us.

We also rely, in some circumstances, on trade secrets to protect our technology. However, trade secrets can be difficult to protect. We seek to protect our proprietary technology and processes, in part, by confidentiality agreements with our employees, consultants, scientific advisors and contractors. We also seek to preserve the integrity and confidentiality of our data and trade secrets by maintaining physical security of our premises and physical and electronic security of our information technology systems.

MANAGEMENT

Executive Officers and Directors

The following table sets forth the names, ages and positions of our executive officers and directors as of June 30, 2018:

Name	Age	Position
Executive Officers:		
Robert Alexander, Ph.D.	48	President, Chief Executive Officer and Director
Adam Tomasi, Ph.D.	48	Chief Operating Officer, Chief Financial Officer and Secretary
Henrik Rasmussen, M.D., Ph.D.	59	Chief Medical Officer
Non-Employee Directors:		
Daniel Janney(2)(3)	52	Chair of the Board
Robert E. Andreatta(1)	56	Director
Steven P. James(1)(3)	60	Director
John McKearn, Ph.D.(2)(3)	64	Director
Paul Walker(1)(2)	43	Director

(1) Member of the audit committee
(2) Member of the compensation committee
(3) Member of the corporate governance and nominating committee

Executive Officers

Robert Alexander, Ph.D. has served as a member of our Board of Directors since May 2017, as our Chief Executive Officer since April 2017 and as our President since November 29, 2017. He previously served as a member of our Board of Directors from December 2012 until June 2013. From December 2013 to April 2017, Dr. Alexander served as Chief Executive Officer of ZS Pharma (acquired by AstraZeneca in December 2015), where he also served as a member of the board of directors, including as Chairman from March 2013 to March 2014. From November 2005 to March 2013, Dr. Alexander served as a Director at Alta Partners, a venture capital firm in life sciences. In addition, he acted as Executive Chairman and interim Chief Executive Officer of SARcode Biosciences (acquired by Shire plc in April 2013), a biopharmaceutical company. During his time at Alta, he led investments in SARcode Biosciences, Lumena Pharmaceuticals, ZS Pharma and Allakos. Previously, Dr. Alexander was a Principal in MPM Capital's BioEquities fund where he sourced opportunities and led due diligence efforts for both public and private investments. Dr. Alexander also previously worked in the Business Development group at Genentech (now a member of the Roche Group), a biotechnology company, where he was responsible for sourcing and screening product opportunities based on scientific merit and strategic fit, leading diligence teams and negotiating terms and definitive agreements. He is currently a director at Allena Pharmaceuticals. Dr. Alexander joined Genentech after completing his post-doctoral fellowship at Stanford University in the Pathology department. He also holds a Ph.D. with a focus in immunology from the University of North Carolina and a B.A. in zoology from Miami University of Ohio.

We believe Dr. Alexander is qualified to serve on our board of directors because of the perspective and experience he provides as our President and CEO, as well as his broad experience within the pharmaceutical industry, particularly in the area of immunology.

Adam Tomasi, Ph.D. has served as our Chief Operating Officer and Chief Financial Officer since April 2017 and as Secretary since November 2017. From August 2013 to January 2015, Dr. Tomasi

served as Senior Vice President, Corporate Development of ZS Pharma, and from February 2015 to March 2017, he served as Chief Scientific Officer and Head of Corporate Development of ZS Pharma. Previously, Dr. Tomasi was a Principal at Alta Partners, where he was involved in the funding and development of notable medical technology and life science companies including Chemgenex, Excaliard, Lumena Pharmaceuticals, Achaogen, Immune Design, Allakos and ZS Pharma. Prior to joining Alta Partners, Dr. Tomasi was in the Harvard-MIT Biomedical Enterprise Program where he completed internships as an equity analyst at Lehman Brothers and at MPM Capital. Dr. Tomasi also previously worked as a medicinal chemist with Gilead Sciences and Cytokinetics, where he helped create the cardiovascular drug CK-1827452, which was licensed to Amgen. Dr. Tomasi holds a B.S. in Chemistry from the University of California, Berkeley, an MBA from the Massachusetts Institute of Technology Sloan School of Management and a Ph.D. in Chemistry from the University of California, Irvine.

Henrik Rasmussen, *M.D., Ph.D.* has served as our Chief Medical Officer since June 2017. From October 2012 through June 2016, Dr. Rasmussen served as Chief Medical Officer at ZS Pharma, a biotechnology company. From August 2009 to October 2012 and from June 2015 to June 2017, Dr. Rasmussen served as President and Chief Executive Officer of Rasmussen Biotech and Pharma Consulting. Dr. Rasmussen also previously held the positions of Corporate Vice President and Head of Clinical Development and Medical and Regulatory Affairs at Novo Nordisk. He also previously served as Chief Medical Officer for Nabi Biopharmaceuticals and Genvec. He was also previously Vice President for Clinical Research and Senior Vice President for Clinical Research and Regulatory Affairs at British Biotech and International Clinical Project Manager and Global Study Director for cardiovascular drug development at Pfizer Central Research. Dr. Rasmussen has led numerous global development programs and regulatory filings worldwide, including NDAs. Dr. Rasmussen received his M.D. and Ph.D. from the University of Copenhagen in Denmark and is trained in internal medicine and cardiology.

Non-Employee Directors

Daniel Janney has served as a member of our board of directors since March 2017 and as Chair of our board of directors since June 2017. Mr. Janney is a managing director at Alta Partners, a life sciences venture capital firm, which he joined in 1996. Prior to joining Alta, from 1993 to 1996, Mr. Janney was a Vice President in Montgomery Securities' healthcare and biotechnology investment banking group, focusing on life sciences companies. Mr. Janney is a director of a number of companies including Esperion Therapeutics, Evolve Biosystems, Krystal Biotech, Prolacta Bioscience, Sutro Biopharma and Viveve Medical. Mr. Janney is currently a member of the California Academy of Sciences Board of Trustees. He holds a Bachelor of Arts in history from Georgetown University and an M.B.A. from the Anderson School at the University of California, Los Angeles.

We believe Mr. Janney is qualified to serve on our board of directors because of his experience working with and serving on the boards of directors of life sciences companies and his experience working in the venture capital industry.

Robert E. Andreatta has served as a member of our board of directors since June 2018. Mr. Andreatta has served as Vice President, Controller at Google LLC since March 2016. Previously, at Genentech, he served as Director of Collaboration Finance from June 2003 to September 2004, Director of Corporate Accounting and Reporting from September 2004 to May 2005, Assistant Controller and Senior Director, Corporate Finance from May 2005 to June 2006, Controller from June 2006 to November 2008, Chief Accounting Officer from April 2007 to November 2008 and Vice President, Controller and Chief Accounting Officer from November 2008 to March 2016. Prior to joining Genentech, he held various officer positions at HopeLink Corporation, a healthcare information technology company, from 2000 to 2003 and was a member of the Board of Directors of HopeLink

from 2002 to 2003. Mr. Andreatta worked for KPMG from 1983 to 2000, including service as an audit partner from 1995 to 2000. He earned a Bachelor of Science degree in accounting from Santa Clara University.

We believe Mr. Andreatta is qualified to serve on our board of directors because of his extensive financial and accounting expertise, his industry experience and his experience as a public company executive.

Steven P. James has served as a member of our board of directors since April 2016. From July 2014 to present, Mr. James has been an independent director at several biotechnology companies and served as acting or interim Chief Executive Officer at Antiva Biosciences (previously Hera Therapeutics) and Pionyr Immunotherapeutics (previously Precision Immune). Mr. James served as President and Chief Executive Officer of Labrys Biologics, from December 2012 until its acquisition by Teva Pharmaceuticals in July 2014. He was President and Chief Executive Officer of KAI Pharmaceuticals, from October 2004 until its acquisition by Amgen in July 2012. He was Senior Vice President, Commercial Operations, at Exelixis, from 2003 until 2004. Previously he held senior business roles at Sunesis Pharmaceuticals and Isis Pharmaceuticals. He began his career in new product planning at Eli Lilly and Company. Mr. James was also a member of the board of directors of Cascadian Therapeutics and Ocera Therapeutics, and is currently a director of Antiva Biosciences, Chrono Therapeutics and Pionyr Immunotherapeutics, where he has been President and Chief Executive Officer since January 2016. Mr. James earned a Bachelor of Arts degree in biology from Brown University and a Masters in Management degree from the Kellogg Graduate School of Management at Northwestern University.

We believe Mr. James is qualified to serve on our board of directors because of his experience as an executive of pharmaceutical companies, as well as his experience serving on the board of directors for several biotechnology companies.

John McKearn, Ph.D. has served as a member of our board of directors since December 2012. Dr. McKearn joined RiverVest Venture Partners, a venture capital firm, in April 2008 as a Venture Partner and has been a Managing Director since April 2011. Prior to joining RiverVest, Dr. McKearn was the Chief Executive Officer of Kalypsys, a biopharmaceutical company, from 2005 to December 2006, its President from 2004 to December 2006 and its Chief Scientific Officer from 2003 to 2005. From 2000 to June 2009, Dr. McKearn served on the board of IDM Pharma (acquired by Takeda), a biotechnology company. He also previously served on the board of directors of Epimmune, Keel Pharmaceuticals, ZS Pharma, Otonomy and Lumena Pharmaceuticals. From 1987 to 2003, Dr. McKearn worked as a scientist with G.D. Searle & Company, which merged into Pharmacia Corporation in 2000, serving as the head of discovery research from 1997 to 2003. Before that, he was a senior scientist at E.I. DuPont de Nemours and Company, a member of the Basel Institute for Immunology in Basel, Switzerland and a research associate in the Department of Microbiology and Immunology at Washington University in St. Louis. Dr. McKearn holds a Bachelor’s degree in biology from Northern Illinois University and a Ph.D. in immunology from the University of Chicago.

We believe Dr. McKearn is qualified to serve on our board of directors because of his experience as a venture capital investor, his industry expertise and his leadership experience with biotechnology and pharmaceutical companies.

Paul Walker has served as a member of our board of directors since November 2017. Mr. Walker has been a partner of New Enterprise Associates, an investment firm focused on venture capital and growth equity investments, since April 2008, where Mr. Walker focuses on later-stage biotechnology and life sciences investments. From January 2001 to March 2008, Mr. Walker worked at MPM Capital, a life sciences venture capital firm, where he specialized in public, private-investment-in-public-equity

and mezzanine-stage life sciences investing as a general partner with the MPM BioEquities Fund. From July 1996 to December 2000, Mr. Walker served as a portfolio manager at Franklin Resources, a global investment management organization known as Franklin Templeton Investments. Mr. Walker previously served as a member of the board of directors of TESARO, currently serves as a member of the board of directors of TRACON Pharmaceuticals, is a board observer of Sunesis Pharmaceuticals and manages a number of NEA's other late-stage and public investments. Mr. Walker received a B.S. in biochemistry and cell biology from the University of California at San Diego and holds the designation of Chartered Financial Analyst.

We believe Mr. Walker is qualified to serve on our board of directors because of his experience in the life sciences and venture capital industries, his educational background and his experience as a public company director.

Board Composition

Our board of directors currently consists of six members. After the completion of this offering, the number of directors will be fixed by our board of directors, subject to the terms of our amended and restated certificate of incorporation and amended and restated bylaws. Each of our current directors will continue to serve as a director until the election and qualification of his or her successor, or until his or her earlier death, resignation or removal.

Our amended and restated certificate of incorporation will provide that our board of directors will be divided into three classes with staggered three-year terms. Only one class of directors will be elected at each annual meeting of stockholders, with the other classes continuing for the remainder of their respective three-year terms. Our current directors will be divided among the three classes as follows:

- the Class I directors will be Dr. Alexander and Mr. James, and their terms will expire at the annual meeting of stockholders to be held in 2019;
- the Class II directors will be Dr. McKearn and Mr. Walker, and their terms will expire at the annual meeting of stockholders to be held in 2020; and
- the Class III directors will be Messrs. Andreatta and Janney, and their terms will expire at the annual meeting of stockholders to be held in 2021.

At each annual meeting of stockholders, upon the expiration of the term of a class of directors, the successor to each such director in the class will be elected to serve from the time of election and qualification until the third annual meeting following his or her election and until his or her successor is duly elected and qualified, in accordance with our certificate of incorporation. Any additional directorships resulting from an increase in the number of directors will be distributed among the three classes so that, as nearly as possible, each class will consist of one-third of our directors.

This classification of our board of directors may have the effect of delaying or preventing changes in control of our company.

Director Independence

Upon the completion of this offering, we anticipate that our common stock will be listed on the NASDAQ Global Select Market ("NASDAQ"). Under the rules of NASDAQ, independent directors must comprise a majority of a listed company's board of directors within one year of the completion of this offering. In addition, the rules of NASDAQ require that, subject to specified exceptions, each member of a listed company's audit, compensation and corporate governance and nominating committees be

independent. Audit committee members and compensation committee members must also satisfy the independence criteria set forth in Rule 10A-3 and Rule 10C-1, respectively, under the Securities Exchange Act of 1934, as amended (the "Exchange Act"). Under the rules of NASDAQ, a director will only qualify as an "independent director" if, in the opinion of that company's board of directors, that person does not have a relationship that would interfere with the exercise of independent judgment in carrying out the responsibilities of a director.

To be considered to be independent for purposes of Rule 10A-3 and under the rules of NASDAQ, a member of an audit committee of a listed company may not, other than in his or her capacity as a member of the audit committee, the board of directors or any other board committee: (1) accept, directly or indirectly, any consulting, advisory or other compensatory fee from the listed company or any of its subsidiaries or (2) be an affiliated person of the listed company or any of its subsidiaries.

To be considered independent for purposes of Rule 10C-1 and under the rules of NASDAQ, the board of directors must affirmatively determine that each member of the compensation committee is independent, including a consideration of all factors specifically relevant to determining whether the director has a relationship to the company which is material to that director's ability to be independent from management in connection with the duties of a compensation committee member, including, but not limited to: (i) the source of compensation of such director, including any consulting, advisory or other compensatory fee paid by the company to such director and (ii) whether such director is affiliated with the company, a subsidiary of the company or an affiliate of a subsidiary of the company.

Our board of directors undertook a review of its composition, the composition of its committees and the independence of our directors and considered whether any director has a material relationship with us that could compromise his or her ability to exercise independent judgment in carrying out his or her responsibilities. Based upon information requested from and provided by each director concerning his background, employment and affiliations, including family relationships, our board of directors has determined that Dr. McKearn and Messrs. Andreatta, James, Janney and Walker, representing five of our six directors, do not have a relationship that would interfere with the exercise of independent judgment in carrying out the responsibilities of a director and that each of these directors is "independent" as that term is defined under the rules of NASDAQ.

In making these determinations, our board of directors considered the current and prior relationships that each non-employee director has with our company and all other facts and circumstances our board of directors deemed relevant in determining their independence, including the beneficial ownership of our capital stock by each non-employee director, and the transactions involving them described in the section titled "Certain Relationships and Related Party Transactions." There are no family relationships among any of our directors or executive officers.

Board Leadership Structure

Our board of directors is currently chaired by Mr. Janney. As a general policy, our board of directors believes that separation of the positions of Chair of our board of directors and Chief Executive Officer reinforces the independence of our board of directors from management, creates an environment that encourages objective oversight of management's performance and enhances the effectiveness of our board of directors as a whole. As such, Dr. Alexander serves as our President and Chief Executive Officer while Mr. Janney serves as the Chair of our board of directors but is not an officer. We currently expect and intend the positions of Chair of our board of directors and Chief Executive Officer to continue to be held by two individuals in the future.

Role of the Board in Risk Oversight

Our board of directors has an active role, as a whole and also at the committee level, in overseeing the management of our risks. Our board of directors is responsible for general oversight of

risks and regular review of information regarding our risks, including credit risks, liquidity risks and operational risks. The compensation committee is responsible for overseeing the management of risks relating to our executive compensation plans and arrangements. The audit committee is responsible for overseeing the management of risks relating to accounting matters and financial reporting. The corporate governance and nominating committee is responsible for overseeing the management of risks associated with the independence of our board of directors and potential conflicts of interest. Although each committee is responsible for evaluating certain risks and overseeing the management of such risks, our entire board of directors is regularly informed through discussions from committee members about such risks. Our board of directors believes its administration of its risk oversight function has not negatively affected the board of directors' leadership structure.

Board Committees

Our board of directors has an audit committee, a compensation committee and a corporate governance and nominating committee, each of which has the composition and the responsibilities described below.

Audit Committee

The members of our audit committee are Messrs. Andreatta, James and Walker. Mr. Andreatta is the chair of our audit committee and is our audit committee financial expert, as that term is defined under the SEC rules implementing Section 407 of the Sarbanes-Oxley Act of 2002, and possesses financial sophistication, as defined under the rules of NASDAQ. Our audit committee oversees our corporate accounting and financial reporting process and assists our board of directors in monitoring our financial systems. Our audit committee will also:

- select and hire the independent registered public accounting firm to audit our financial statements;
- help to ensure the independence and performance of the independent registered public accounting firm;
- approve audit and non-audit services and fees;
- review financial statements and discuss with management and the independent registered public accounting firm our annual audited and quarterly financial statements, the results of the independent audit and the quarterly reviews and the reports and certifications regarding internal controls over financial reporting and disclosure controls;
- prepare the audit committee report that the SEC requires to be included in our annual proxy statement;
- review reports and communications from the independent registered public accounting firm;
- review the adequacy and effectiveness of our internal controls and disclosure controls and procedure;
- review our policies on risk assessment and risk management;
- review related party transactions; and
- establish and oversee procedures for the receipt, retention and treatment of accounting related complaints and the confidential submission by our employees of concerns regarding questionable accounting or auditing matters.

Our audit committee operates under a written charter which satisfies the applicable rules of the SEC and the listing standards of NASDAQ.

Compensation Committee

The members of our compensation committee are Dr. McKearn and Messrs. Janney and Walker. Mr. Janney is the chair of our compensation committee. Our compensation committee oversees our compensation policies, plans and benefits programs. The compensation committee will also:

- oversee our overall compensation philosophy and compensation policies, plans and benefit programs;
- review and approve or recommend to the board for approval compensation for our executive officers and directors;
- prepare the compensation committee report that the SEC will require to be included in our annual proxy statement; and
- administer our equity compensation plans.

Our compensation committee operates under a written charter which satisfies the applicable rules of the SEC and the listing standards of NASDAQ.

Corporate Governance and Nominating Committee

The members of our corporate governance and nominating committee are Dr. McKearn and Messrs. James and Janney. Dr. McKearn is the chairman of our corporate governance and nominating committee. Our corporate governance and nominating committee oversees and assists our board of directors in reviewing and recommending nominees for election as directors. Specifically, the corporate governance and nominating committee will:

- identify, evaluate and make recommendations to our board of directors regarding nominees for election to our board of directors and its committees;
- consider and make recommendations to our board of directors regarding the composition of our board of directors and its committees;
- review developments in corporate governance practices;
- evaluate the adequacy of our corporate governance practices and reporting; and
- evaluate the performance of our board of directors and of individual directors.

Our corporate governance and nominating committee operates under a written charter which satisfies the applicable rules of the SEC and the listing standards of NASDAQ.

Director Compensation

To date, none of our non-employee directors has received any cash or equity compensation for serving on our board of directors, other than Mr. James. We do reimburse our directors for expenses associated with attending meetings of our board of directors and committees of our board of directors.

In June 2018, our board of directors adopted an outside director compensation policy for our non-employee directors. Such policy will be effective as of the business day immediately before the date of the effectiveness of the registration statement of which this prospectus forms a part. The policy was developed with input from our independent compensation consultant firm, Radford, regarding practices and compensation level at comparable companies. The policy is designed to attract, retain, and reward our non-employee directors.

Under the policy, each non-employee director will be to receive the cash and equity compensation for board services described below. We also expect to continue to reimburse our non-employee

directors for reasonable, customary and documented travel expenses to attend meetings of our board of directors and committees of our board of directors. Our board of directors may revise outside director compensation as it deems necessary or appropriate.

Cash Compensation

Under the outside director compensation policy, our non-employee directors will be entitled to receive the following cash compensation for their services following the completion of this offering:

- $40,000 per year for service as a board member;
- $30,000 per year for service as chair of the board of directors;
- $15,000 per year for service as chair of the audit committee;
- $7,500 per year for service as a member of the audit committee;
- $10,000 per year for service as chair of the compensation committee;
- $5,000 per year for service as a member of the compensation committee;
- $8,000 per year for service as chair of the nominating and governance committee; and
- $4,000 per year for service as a member of the nominating and governance committee.

All cash payments to non-employee directors will be paid quarterly in arrears on a prorated basis.

Equity Compensation

Initial Option. Subject to the limits in our 2018 Equity Incentive Plan (“2018 Plan”), each person who first becomes a non-employee director (other than a person that ceases to be an employee of ours but remains a director of ours) on or following the effective date of the outside director compensation policy will be granted an option covering 32,000 shares of our common stock (“initial option”), which grant will be made no later than the date of our first board of directors or compensation committee meeting occurring on or after the date on which such individual first becomes a non-employee director, whether through election by our stockholders or appointment by our board of directors. Each initial option will vest as to 1/36th of the shares subject to the initial option each month following the commencement of the applicable non-employee director’s service as a non-employee director, in each case, subject to continued service through each applicable vesting date.

Annual Option. Subject to the limits in the 2018 Plan, each non-employee director will be automatically granted, on the date of each annual meeting of our stockholders, an option covering 16,000 shares of our common stock (“annual option”). Each annual option will fully vest on the earlier of (i) the one-year anniversary of the date of grant of the annual option or (ii) the date of the next annual meeting of our stockholders that occurs following the grant of such annual option, in each case, subject to continued service through the applicable vesting date.

In the event of a change in control, as defined in the 2018 Plan, all of a non-employee director’s outstanding company awards (including his or her initial option and his or her annual options, as applicable) will become fully vested and exercisable (if applicable) immediately before such change in control.

The following table presents the total compensation each of our non-employee directors received during the year ended December 31, 2017. Other than as set forth in the table, we did not pay any

compensation, make any equity awards or non-equity awards to or pay any other compensation to any of our non-employee directors in 2017.

	Fees Earned or Paid in Cash ($)	Option Awards ($)	Total ($)
Daniel Janney	—	—	—
Robert E. Andreatta	—	—	—
Steven P. James(1)	25,000	—	25,000
John McKearn, Ph.D.	—	—	—
Paul Walker	—	—	—

(1) As of December 31, 2017, Mr. James held an option to purchase 62,880 shares of our common stock. One forty-eighth of the shares subject to the option vest monthly with a vesting commencement date of April 28, 2016, subject to continued service through each such vesting date.

Directors who are also our employees receive no additional compensation for their service as directors. Drs. Alexander and Bebbington were our only employee directors during 2017. Dr. Bebbington resigned as a director in March 2017. See the section titled “Executive Compensation” for additional information about Dr. Alexander’s compensation.

In July 2018, each of our non-employee directors (other than Mr. James) was granted an option to purchase 37,600 shares of our common stock and Mr. James was granted an option to purchase 18,800 shares of our common stock, in each case, at a per share exercise price equal to $16.00. Each of these options vests as to 1/36th of the shares subject to the option each month following the vesting start date, in each case, subject to continued service through each applicable vesting date.

For further information regarding the equity compensation of our non-employee directors, see the sections of this prospectus titled “Executive Compensation—Employee Benefit and Stock Plans—2018 Equity Incentive Plan” and “Executive Compensation—Employee Benefit and Stock Plans—2012 Equity Incentive Plan, as amended.”

Compensation Committee Interlocks and Inside Participation

None of the members of our compensation committee is or has been an officer or employee of our company. None of our executive officers currently serves, or in the past fiscal year has served, as a member of the board of directors or compensation committee (or other board committee performing equivalent functions or, in the absence of any such committee, the entire board of directors) of any entity that has one or more executive officers serving on our board of directors or compensation committee.

Code of Business Conduct and Ethics

Prior to the closing of this offering, we intend to adopt a written code of business conduct and ethics that will apply to our directors, officers and employees, including our principal executive officer, principal financial officer, principal accounting officer or controller or persons performing similar functions. Following this offering, the code of business conduct and ethics will be available on our website at www.allakos.com. We intend to disclose future amendments to such code, or any waivers of its requirements, applicable to any principal executive officer, principal financial officer, principal accounting officer or controller or persons performing similar functions or our directors on our website identified above. Information contained on the website is not incorporated by reference into this prospectus and should not be considered to be part of this prospectus.

EXECUTIVE COMPENSATION

Our named executive officers for 2017, which consist of our current and former principal executive officer and the next two most highly compensated executive officers, are:

- Robert Alexander, Ph.D., our President and Chief Executive Officer;
- Adam Tomasi, Ph.D., our Chief Financial Officer and Chief Operating Officer;
- Henrik Rasmussen, M.D., Ph.D., our Chief Medical Officer; and
- Christopher Bebbington, D.Phil., our former President, Chief Executive Officer and Chief Scientific Officer.

Summary Compensation Table

The following table sets forth information regarding the compensation of our named executive officers for the year ended December 31, 2017.

Name and Principal Position	Year	Salary ($)[1]	Bonus ($)[2]	Option Awards ($)[3]	All Other Compensation ($)	Total ($)
Robert Alexander, Ph.D. *President and Chief Executive Officer*	2017	300,000	120,000	671,080	5,477	1,096,557
Adam Tomasi, Ph.D. *Chief Financial Officer and Chief Operating Officer*	2017	243,750	73,125	335,540	5,477	657,892
Henrik Rasmussen, M.D., Ph.D. *Chief Medical Officer*	2017	182,681	54,804	303,800	4,742	546,027
Christopher Bebbington, D.Phil. *Former President, Chief Executive Officer and Chief Scientific Officer*	2017	360,163	108,049	—	5,502	473,714

(1) The salary amounts shown for Drs. Alexander, Tomasi, Rasmussen and Bebbington represent the amounts they each earned during their employment by us in 2017. Dr. Alexander joined as President and Chief Executive Officer in April 2017 and had an annualized salary of $400,000. Dr. Tomasi joined as Chief Financial Officer and Chief Operating Officer in April 2017 and had an annualized salary of $325,000. Dr. Rasmussen joined as Chief Medical Officer in June 2017 and had an annualized salary of $317,000. Dr. Bebbington served as our President and Chief Executive Officer through March 2017 and as our Chief Scientific Officer through June 2018.

(2) All bonus payments were made at the discretion of the board of directors based on our achievement of key metrics under our corporate bonus plan for 2017 at maximum levels.

(3) The amounts disclosed represent the aggregate grant date fair value of the award as calculated in accordance with ASC 718. The assumptions used in calculating the grant date fair value of the award disclosed in this column are set forth in the notes to our audited financial statements included elsewhere in this prospectus. These amounts do not correspond to the actual value that may be recognized by the named executive officers upon vesting of the applicable awards.

Outstanding Equity Awards at Fiscal Year-End

The following table sets forth information concerning outstanding equity awards held by each of our named executive officers as of December 31, 2017:

		Option Awards				
Name	Grant Date[1]	Number of Securities Underlying Unexercised Options (#) Exercisable	Number of Securities Underlying Unexercised Options (#) Unexercisable	Equity incentive awards: number of securities underlying unexercised unearned options (#)	Option Exercise Price ($)[2]	Option Expiration Date
Robert Alexander, Ph.D.	05/17/2017	1,412,800[3]	—	—	$ 0.69	05/17/2027
Adam Tomasi, Ph.D.	05/17/2017	706,400[4]	—	—	$ 0.69	05/17/2027
Henrik Rasmussen, M.D., Ph.D.	10/02/2017	—	392,000[5]	—	$ 1.16	10/02/2027
Christopher Bebbington, D.Phil.	09/05/2014	97,484[6]	70,497	—	$ 0.39	09/05/2024
	04/24/2015	46,072[7]	20,943	—	$ 0.43	04/24/2025
	01/20/2016	215,229[8]	233,947	—	$ 0.53	01/20/2026

(1) Each of the outstanding options to purchase shares of our common stock was granted pursuant to our 2012 Plan.
(2) This column represents the fair market value of a share of our common stock on the date of grant, as determined by our board of directors.
(3) This option award is subject to an early exercise provision and is immediately exercisable. On May 10, 2018, Dr. Alexander partially exercised this option with respect to 353,200 shares. The shares underlying this option award vested as to 1/4th of the total shares on April 3, 2018 and vested and continue to vest, subject to Dr. Alexander's continued role as a service provider to us, as to an additional 1/48th of the total shares on the same day of each month thereafter. This option award is subject to vesting acceleration under certain circumstances as described under "—Employment Arrangements with Our Named Executive Officers".
(4) This option award is subject to an early exercise provision and is immediately exercisable. The shares underlying this option award vested as to 1/4th of the total shares on April 3, 2018 and vested and continue to vest, subject to Dr. Tomasi's continued role as a service provider to us, as to an additional 1/48th of the total shares on the same day of each month thereafter. This option award is subject to vesting acceleration under certain circumstances as described under "—Employment Arrangements with Our Named Executive Officers."
(5) The shares underlying this option award vested as to 1/4th of the total shares on June 5, 2018 and continue to vest, subject to Dr. Rasmussen's continued role as a service provider to us, as to an additional 1/48th of the total shares on the same day of each month thereafter. This option award is subject to vesting acceleration under certain circumstances as described under "—Potential Payments upon Termination or Change of Control" below.
(6) The shares underlying this option award vested as to 1/48th of the total shares on October 5, 2014 and vested as to an additional 1/48th of the total shares on the last day of each month thereafter until June 2018. Dr. Bebbington's employment terminated in June 2018, and all unvested shares subject to this option award were forfeited to us.
(7) The shares underlying this option award vested as to 1/48th of the total shares on April 13, 2015 and vested as to an additional 1/48th of the total shares on the last day of each month thereafter until June 2018. Dr. Bebbington's employment terminated in June 2018, and all unvested shares subject to this option award were forfeited to us.
(8) The shares underlying this option award vested as to 1/48th of the total shares on February 6, 2016 and vested as to an additional 1/48th of the total shares on the last day of each month thereafter until June 2018. Dr. Bebbington's employment terminated in June 2018, and all unvested shares subject to this option award were forfeited to us.

Employment Arrangements with Our Named Executive Officers

We have entered into an employment letter or agreement with each of our named executive officers in connection with their employment with us. These letters or agreements provide for “at will” employment.

Robert Alexander, Ph.D.

In 2017, we entered into an offer letter with Dr. Alexander, our President and Chief Executive Officer, and amended the offer letter in July 2018. The amended offer letter has no specific term and provides for at will employment. Dr. Alexander’s current annual base salary is $500,000 and Dr. Alexander is considered annually for a target bonus of 50% of his annual base salary, subject to the terms and conditions of a bonus plan approved by our board of directors.

In addition, Dr. Alexander’s initial offer letter provided and his amended offer letter continues to provide that his existing company stock options and any future company stock options granted to him by us will continue to be exercisable for a period of 24 months (or such longer period as provided in the company equity plan under which the applicable option was granted) after the earlier of: his termination of employment due to his death or “disability”, as defined in the applicable company equity plan, or his termination of employment by us other than for “cause”, death or “disability” or by him for “good reason”, each such term as defined in Dr. Alexander’s amended offer letter, subject to earlier termination under the terms of the applicable company equity plan, except no company option of his will be exercisable after its expiration date.

Dr. Alexander’s initial offer letter with us provided and the amended offer letter continues to provide that in the event that:

- a “change in control,” as defined in Dr. Alexander’s amended offer letter, occurs, 100% of the total number of shares subject to Dr. Alexander’s company options or other stock awards will immediately vest as of the date immediately preceding the change in control, subject to his continued employment through such date;
- during the period commencing 3 months before a change in control and ending upon a change in control, such period referred to as the pre-change in control period, Dr. Alexander’s employment is terminated (i) by us without cause, (ii) due to his death or disability, or (iii) by him for good reason, then 100% of the total number of shares subject to his company options or other stock awards that have not vested will immediately vest and become exercisable; and
- Dr. Alexander’s employment is terminated by us without cause (and other than due to his death or disability) or by him for good reason, in either case, outside the pre-change in control period, then the total number of shares subject to his company options or other stock awards that have not vested but would have vested if he had remained employed on the first anniversary of the date of his termination will immediately vest and become exercisable.

To receive the vesting acceleration benefits above that require a qualifying termination of Dr. Alexander’s employment, Dr. Alexander must timely sign and not revoke a separation agreement and release of claims in our favor.

Under Dr. Alexander’s amended offer letter, if we terminate Dr. Alexander’s employment other than for cause, death or disability or he resigns for good reason, in each case, during the period beginning upon a change in control and ending 24 months after the change in control, such period referred to as the post-change in control period, he will be eligible to receive the following severance benefits (less applicable tax withholdings): (i) a lump sum cash amount equal to 24 months of his then-current annual base salary, (ii) a lump sum cash amount equal to 200% of his then-current target

annual bonus opportunity, and (iii) reimbursement of continued health coverage for him and his eligible dependents under the Consolidated Omnibus Budget Reconciliation Act of 1985, as amended, or COBRA, for a period of up to 24 months, or a taxable lump sum payment in lieu of such reimbursement.

Further, under Dr. Alexander's amended offer letter, if Dr. Alexander's employment is terminated by us other than for cause, death or disability or by him for good reason outside the post-change in control period, he will be eligible to receive the following severance benefits (less applicable tax withholding): (i) continuation of his then-current annual base salary for 12 months following his termination date; (ii) a lump sum cash amount equal to a pro rata portion of his then-current target annual bonus opportunity and (iii) reimbursement of continued health coverage for him and his eligible dependents for a period of up to 12 months, or a taxable lump sum payment in lieu of such reimbursement.

To receive any of the severance benefits described above, Dr. Alexander must timely sign and not revoke a separation agreement and release of claims in our favor.

Dr. Alexander's initial offer letter with us provided and his amended offer letter continues to provide that:

- if any severance or other benefits payable to Dr. Alexander constitute "parachute payments" within the meaning of Section 280G of the Internal Revenue Code and could be subject to the related excise tax under Section 4999 of the Internal Revenue Code, Dr. Alexander would be entitled to receive either full payment of benefits or such lesser amount (except such reduction will not exceed $50,000 of the full amount), whichever would result in his receipt in the greater amount of after-tax benefits; and
- if any portion of the severance or other benefits provided will be subject to the excise tax imposed by Section 4999 of the Internal Revenue Code after applying the process in the paragraph above, Dr. Alexander will receive a payment from us equal to the sum of (i) the amount sufficient to pay such excise tax, and (ii) the amount sufficient to pay the excise tax, employment tax, and federal and state income taxes arising from the payment described in this sentence.

Adam Tomasi, Ph.D.

In 2017, we entered into an offer letter with Dr. Tomasi, our Chief Operating Officer, Chief Financial Officer and Secretary, and amended the offer letter in July 2018. The amended offer letter has no specific term and provides for at will employment. Dr. Tomasi's current annual base salary is $400,000 and Dr. Tomasi is considered annually for a target bonus of 40% of his annual base salary, subject to the terms and conditions of a bonus plan approved by our board of directors.

In addition, Dr. Tomasi's initial offer letter provided and his amended offer letter continues to provide that his existing company stock options and any future company stock options granted to him by us will continue to be exercisable for a period of 24 months (or such longer period as provided in the company equity plan under which the applicable option was granted) after the earlier of: his termination of employment due to his death or "disability", as defined in the applicable company equity plan, or his termination of employment by us other than for "cause", death or "disability" or by him for "good reason", each such term as defined in Dr. Tomasi's amended offer letter, subject to earlier termination under the terms of the applicable company equity plan, except no company option of his will be exercisable after its expiration date.

Dr. Tomasi's initial offer letter with us provided and the amended offer letter continues to provide that in the event that:

- a "change in control," as defined in Dr. Tomasi's amended offer letter, occurs, 100% of the total number of shares subject to Dr. Tomasi's company options or other stock awards will immediately vest as of the date immediately preceding the change in control, subject to his continued employment through such date;
- during the period commencing 3 months before a change in control or change of control and ending upon a change in control, such period referred to as the pre-change in control period, Dr. Tomasi's employment is terminated (i) by us without cause, (ii) due to his death or disability, or (iii) by him for good reason, then 100% of the total number of shares subject to his company options or other stock awards that have not vested will immediately vest and become exercisable; and
- Dr. Tomasi's employment is terminated by us without cause (and other than due to his death or disability) or by him for good reason, in either case, outside the pre-change in control period, then the total number of shares subject to his company options or other stock awards that have not vested but would have vested if he had remained employed on the first anniversary of the date of his termination will immediately vest and become exercisable.

To receive the vesting acceleration benefits above that require a qualifying termination of Dr. Tomasi's employment, Dr. Tomasi must timely sign and not revoke a separation agreement and release of claims in our favor.

Under Dr. Tomasi's amended offer letter, if we terminate Dr. Tomasi's employment other than for cause, death or disability or he resigns for good reason, in each case, during the period beginning upon a change in control and ending 24 months after the change in control, such period referred to as the post-change in control period, he will be eligible to receive the following severance benefits (less applicable tax withholdings): (i) a lump sum cash amount equal to 24 months of his then-current annual base salary, (ii) a lump sum cash amount equal to 200% of his then-current target annual bonus opportunity, and (iii) reimbursement of continued health coverage for him and his eligible dependents under COBRA for a period of up to 24 months, or a taxable lump sum payment in lieu of such reimbursement.

Further, under Dr. Tomasi's amended offer letter, if Dr. Tomasi's employment is terminated by us other than for cause, death or disability or by him for good reason, outside the post-change in control period, he will be eligible to receive the following severance benefits (less applicable tax withholding): (i) continuation of his then-current annual base salary for 12 months following his termination date, (ii) a lump sum cash amount equal to a pro rata portion of his then-current target annual bonus opportunity and (iii) reimbursement of continued health coverage for him and his eligible dependents for a period of up to 12 months, or a taxable lump sum payment in lieu of such reimbursement.

To receive any of the severance benefits described above, Dr. Tomasi must timely sign and not revoke a separation agreement and release of claims in our favor.

Dr. Tomasi's initial offer letter with us provided and his amended offer letter continues to provide that:

- if any severance or other benefits payable to Dr. Tomasi constitute "parachute payments" within the meaning of Section 280G of the Internal Revenue Code and could be subject to the related excise tax under Section 4999 of the Internal Revenue Code, Dr. Tomasi would be entitled to receive either full payment of benefits or such lesser amount (except such reduction will not exceed $50,000 of the full amount), whichever would result in his receipt in the greater amount of after-tax benefits; and

- if any portion of the severance or other benefits provided will be subject to the excise tax imposed by Section 4999 of the Internal Revenue Code after applying the process in the paragraph above, Dr. Tomasi will receive a payment from us equal to the sum of (i) the amount sufficient to pay such excise tax, and (ii) the amount sufficient to pay the excise tax, employment tax, and federal and state income taxes arising from the payment described in this sentence.

Henrik Rasmussen, M.D., Ph.D.

In July 2018, we entered into an offer letter with Dr. Rasmussen, our Chief Medical Officer. The confirmatory employment letter has no specific term and provides for at will employment. Dr. Rasmussen's current annual base salary is $326,510 and Dr. Rasmussen is considered annually for a target bonus of 30% of his annual base salary, subject to the terms and conditions of a bonus plan approved by our board of directors. Dr. Rasmussen is also eligible for severance benefits, as more fully described in "—Potential Payments upon Termination or Change of Control."

Christopher Bebbington, D.Phil.

In December 2012, we entered into an employment agreement with Dr. Bebbington, our former President, Chief Executive Officer and Chief Scientific Officer. The employment agreement provides that if Dr. Bebbington's employment is terminated either by us without "cause" or by him for "good reason," each such term as defined in Dr. Bebbington's employment agreement, within 12 months after a change of control, as defined in Dr. Bebbington's employment agreement, such period referred to as the change of control period, he will receive the following severance benefits (less applicable tax withholdings): (i) the equivalent of 9 months of his then-current base salary (not taking into account any reduction in his base salary that would allow him to resign for good reason) and (ii) premium payments to maintain group health insurance continuation benefits pursuant to COBRA for him and his respective eligible dependents for up to 9 months.

Further, the employment agreement provides that if Dr. Bebbington's employment is terminated either by us without cause or by him for good reason outside the change of control period, he will be eligible to receive the following severance benefits (less applicable tax withholdings): (i) the equivalent of 6 months of his then-current base salary (not taking into account any reduction in his base salary that would allow him to resign for good reason) and (ii) premium payments to maintain group health insurance continuation benefits pursuant to COBRA for him and his respective dependents for up to 6 months. Dr. Bebbington's employment terminated in June 2018 and he is entitled to receive the severance benefits described in this paragraph if he does not revoke a release of claims in our favor.

If any of the payments provided for under Dr. Bebbington's employment agreement would constitute "parachute payments" within the meaning of Section 280G of the Internal Revenue Code and would be subject to the related excise tax under Section 4999 of the Internal Revenue Code, then he will be entitled to receive either full payment of benefits or such lesser amount which would result in no portion of the benefits being subject to the excise tax, whichever results in the greater amount of after-tax benefits to him. Dr. Bebbington's employment agreement does not require us to provide any tax gross-up payments to Dr. Bebbington.

Potential Payments upon Termination or Change of Control

We adopted a Change in Control and Severance Policy (the "severance policy") for Dr. Rasmussen and certain other of our key employees (other than Dr. Alexander and Dr. Tomasi).

Under the severance policy, if we terminate Dr. Rasmussen other than for "cause," death or "disability" or he resigns for "good reason", in each case, during the period beginning upon a "change

in control", such terms as defined in the severance policy, and ending 24 months following the change in control, such period referred to as the change in control period, he will be eligible to receive the following severance benefits (less applicable tax withholdings): (i) a lump sum cash amount equal to 12 months of his then-current annual base salary (or if he resigns for good reason based on a material reduction in base salary, then his annual base salary in effect immediately prior to such reduction) or if greater, at the level in effect immediately before the change in control, (ii) a lump sum cash amount equal to 100% of his then-current target annual bonus opportunity, (iii) 100% of his then outstanding and unvested equity awards will become fully vested and exercisable, if applicable, and any applicable performance goals will be deemed achieved at 100% of target levels, and (iv) payment or reimbursement of continued health coverage for him and his dependents under COBRA for a period of up to 12 months, or a taxable lump sum payment in lieu of such payment or reimbursement, as applicable.

Further, under the severance policy, if Dr. Rasmussen is terminated other than for cause, death or disability outside the change in control period, he will be eligible to receive the following severance benefits (less applicable tax withholding): (i) a lump sum cash amount equal to 9 months of his then-current annual base salary, (ii) a lump sum cash amount equal to a pro rata portion of his then-current target annual bonus opportunity and (iii) payment or reimbursement of continued health coverage for him and his dependents for a period of up to 9 months, or a taxable lump sum payment in lieu of such payment or reimbursement, as applicable.

To receive any severance benefits under the severance policy, Dr. Rasmussen must sign and not revoke our standard separation agreement and release of claims within the timeframe set forth in the severance policy.

If any of the payments provided for under the severance policy or otherwise payable to Dr. Rasmussen would constitute "parachute payments" within the meaning of Section 280G of the Internal Revenue Code and would be subject to the related excise tax under Section 4999 of the Internal Revenue Code, then he will be entitled to receive either full payment of benefits or such lesser amount which would result in no portion of the benefits being subject to the excise tax, whichever results in the greater amount of after-tax benefits to him. The severance policy does not require us to provide any tax gross-up payments to Dr. Rasmussen or any other participant in the severance policy.

Dr. Alexander and Dr. Tomasi are not eligible to participate in the severance policy and are only eligible to receive potential termination or change of control payments pursuant to their employment letters, as described in "—Employment Arrangements with our Named Executive Officers."

Employee Benefit and Stock Plans

2018 Equity Incentive Plan

Our board of directors has adopted, and our stockholders approved, our 2018 Equity Incentive Plan ("2018 Plan"). Our 2018 Plan will be effective on the business day immediately prior to the effective date of the registration statement of which this prospectus forms a part but will not be used until after the completion of this offering. Our 2018 Plan provides for the grant of incentive stock options, within the meaning of Section 422 of the Internal Revenue Code ("Code"), to our employees and any of our subsidiary corporations' employees, and for the grant of nonstatutory stock options, restricted stock, restricted stock units, stock appreciation rights, performance units and performance shares to our employees, directors and consultants and our subsidiary corporations' employees and consultants.

Authorized Shares. A total of 4,000,000 shares of our common stock are reserved for issuance pursuant to our 2018 Plan. In addition, the shares reserved for issuance under our 2018 Plan also

includes any shares subject to awards granted under our 2012 Plan that, on or after the termination of the 2012 Plan, expire or terminate and shares previously issued pursuant to awards granted under our 2012 Plan that, on or after the termination of the 2012 Plan, are forfeited or repurchased by us (except the maximum number of shares that may be added to our 2018 Plan pursuant to the preceding clause is 6,606,142 shares). The number of shares available for issuance under our 2018 Plan also includes an annual increase on the first day of each fiscal year beginning with our 2019 fiscal year, equal to the least of:

- 5,000,000 shares;
- five percent (5%) of the outstanding shares of our common stock as of the last day of the immediately preceding fiscal year; or
- such other amount as our board of directors may determine.

If an award expires or becomes unexercisable without having been exercised in full, is surrendered pursuant to an exchange program, or, with respect to restricted stock, restricted stock units, performance units or performance shares, is forfeited to or repurchased due to failure to vest, the unpurchased shares (or for awards other than stock options or stock appreciation rights, the forfeited or repurchased shares) will become available for future grant or sale under the 2018 Plan (unless the 2018 Plan has terminated). With respect to stock appreciation rights, only the net shares actually issued will cease to be available under the 2018 Plan and all remaining shares under stock appreciation rights will remain available for future grant or sale under the 2018 Plan (unless the 2018 Plan has terminated). Shares that have actually been issued under the 2018 Plan under any award will not be returned to the 2018 Plan; except if shares issued pursuant to awards of restricted stock, restricted stock units, performance shares or performance units are repurchased by us or forfeited to us, such shares will become available for future grant under the 2018 Plan. Shares used to pay the exercise price of an award or satisfy the tax withholding obligations related to an award will become available for future grant or sale under the 2018 Plan. To the extent an award is paid out in cash rather than shares, such cash payment will not result in a reduction in the number of shares available for issuance under the 2018 Plan.

Plan Administration. Our board of directors or one or more committees appointed by our board of directors have authority to administer our 2018 Plan. The compensation committee of our board of directors will initially administer our 2018 Plan. In addition, if we determine it is desirable to qualify transactions under our 2018 Plan as exempt under Rule 16b-3 of the Exchange Act, such transactions will be structured to satisfy the requirements for exemption under Rule 16b-3. Subject to the provisions of our 2018 Plan, the administrator has the power to administer our 2018 Plan and make all determinations deemed necessary or advisable for administering the 2018 Plan, including but not limited to, the power to determine the fair market value of our common stock, select the service providers to whom awards may be granted, determine the number of shares covered by each award, approve forms of award agreements for use under the 2018 Plan, determine the terms and conditions of awards (including, but not limited to, the exercise price, the time or times at which awards may be exercised, any vesting acceleration or waiver or forfeiture restrictions and any restriction or limitation regarding any award or the shares relating thereto), construe and interpret the terms of our 2018 Plan and awards granted under it, prescribe, amend and rescind rules relating to our 2018 Plan, including creating sub-plans, modify or amend each award, including but not limited to the discretionary authority to extend the post-termination exercisability period of awards (except no option or stock appreciation right will be extended past its original maximum term) and allow a participant to defer the receipt of payment of cash or the delivery of shares that would otherwise be due to such participant under an award). The administrator also has the authority to allow participants the opportunity to transfer outstanding awards to a financial institution or other person or entity selected by the administrator and to institute an exchange program by which outstanding awards may be surrendered or cancelled in

exchange for awards of the same type, which may have a higher or lower exercise price and/or different terms, awards of a different type and/or cash or by which the exercise price of an outstanding award is increased or reduced. The administrator's decisions, interpretations and other actions are final and binding on all participants.

Stock Options. Stock options may be granted under our 2018 Plan. The exercise price of options granted under our 2018 Plan must at least be equal to the fair market value of our common stock on the date of grant. The term of an option may not exceed ten years. With respect to any participant who owns more than 10% of the voting power of all classes of our (or any subsidiary of ours) outstanding stock, the term of an incentive stock option granted to such participant must not exceed five years and the exercise price must equal at least 110% of the fair market value on the grant date. The administrator will determine the methods of payment of the exercise price of an option, which may include cash, shares or other property acceptable to the administrator, as well as other types of consideration permitted by applicable law. After the termination of service of an employee, director or consultant, he or she may exercise his or her option for the period of time stated in his or her option agreement. In the absence of a specified time in an award agreement, if termination is due to death or disability, the option will remain exercisable for 12 months following the termination of service. In all other cases, in the absence of a specified time in an award agreement, the option will remain exercisable for three months following the termination of service. An option, however, may not be exercised later than the expiration of its term. Subject to the provisions of our 2018 Plan, the administrator determines the other terms of options.

Stock Appreciation Rights. Stock appreciation rights may be granted under our 2018 Plan. Stock appreciation rights allow the recipient to receive the appreciation in the fair market value of our common stock between the exercise date and the date of grant. Stock appreciation rights may not have a term exceeding ten years. After the termination of service of an employee, director or consultant, he or she may exercise his or her stock appreciation right for the period of time stated in his or her stock appreciation rights agreement. In the absence of a specified time in an award agreement, if termination is due to death or disability, the stock appreciation rights will remain exercisable for 12 months following the termination of service. In all other cases, in the absence of a specified time in an award agreement, the stock appreciation rights will remain exercisable for three months following the termination of service. However, in no event may a stock appreciation right be exercised later than the expiration of its term. Subject to the provisions of our 2018 Plan, the administrator determines the other terms of stock appreciation rights, including when such rights become exercisable and whether to pay any increased appreciation in cash or with shares of our common stock, or a combination thereof, except that the per share exercise price for the shares to be issued pursuant to the exercise of a stock appreciation right will be no less than 100% of the fair market value per share on the date of grant.

Restricted Stock. Restricted stock may be granted under our 2018 Plan. Restricted stock awards are grants of shares of our common stock that vest in accordance with terms and conditions established by the administrator. The administrator will determine the number of shares of restricted stock granted to any employee, director or consultant and, subject to the provisions of our 2018 Plan, will determine the terms and conditions of such awards. The administrator may impose whatever vesting conditions it determines to be appropriate (for example, the administrator may set restrictions based on the achievement of specific performance goals or continued service to us), except the administrator, in its sole discretion, may accelerate the time at which any restrictions will lapse or be removed. Recipients of restricted stock awards generally will have voting and dividend rights with respect to such shares upon grant without regard to vesting, unless the administrator provides otherwise. Shares of restricted stock that do not vest are subject to our right of repurchase or forfeiture.

Restricted Stock Units. Restricted stock units may be granted under our 2018 Plan. RSUs are bookkeeping entries representing an amount equal to the fair market value of one share of our

common stock. Subject to the provisions of our 2018 Plan, the administrator determines the terms and conditions of RSUs, including the vesting criteria and the form and timing of payment. The administrator may set vesting criteria based upon the achievement of company-wide, divisional, business unit or individual goals (including, but not limited to, continued employment or service), applicable federal or state securities laws or any other basis determined by the administrator in its discretion. The administrator, in its sole discretion, may pay earned restricted stock units in the form of cash, in shares or in some combination thereof. In addition, the administrator, in its sole discretion, may accelerate the time at which any restrictions will lapse or be removed.

Performance Units and Performance Shares. Performance units and performance shares may be granted under our 2018 Plan. Performance units and performance shares are awards that will result in a payment to a participant only if performance objectives established by the administrator are achieved or the awards otherwise vest. The administrator will establish performance objectives or other vesting criteria in its discretion, which, depending on the extent to which they are met, will determine the number and/or the value of performance units and performance shares to be paid out to participants. The administrator may set performance objectives based on the achievement of company-wide, divisional, business unit or individual goals (including, but not limited to, continued employment or service), applicable federal or state securities laws or any other basis determined by the administrator in its discretion. After the grant of a performance unit or performance share, the administrator, in its sole discretion, may reduce or waive any performance objectives or other vesting provisions for such performance units or performance shares. Performance units will have an initial value established by the administrator on or prior to the grant date. Performance shares will have an initial value equal to the fair market value of our common stock on the grant date. The administrator, in its sole discretion, may pay out earned performance units or performance shares in cash, shares or in some combination thereof.

Outside Directors. All outside (non-employee) directors will be eligible to receive all types of awards (except for incentive stock options) under our 2018 Plan. To provide a maximum limit on the cash compensation and equity awards that can be made to our outside directors, our 2018 Plan provides that in any given fiscal year, an outside director will not be granted cash compensation and equity awards with an aggregate value greater than $1,000,000 (with the value of each equity award based on its grant date fair value as determined according to U.S. GAAP). Any cash compensation paid or awards granted to an individual for his or her services as an employee or consultant (other than as an outside director) will not count toward this limit. The maximum limit in this paragraph does not reflect the intended size of any potential grants or a commitment to make grants to our outside directors under our 2018 Plan in the future.

Non-Transferability of Awards. Unless the administrator provides otherwise, our 2018 Plan generally does not allow for the transfer of awards and only the recipient of an award may exercise an award during his or her lifetime. If the administrator makes an award transferrable, such award will contain such additional terms and conditions as the administrator deems appropriate.

Certain Adjustments. In the event of any dividend or other distribution, recapitalization, stock split, reverse stock split, reorganization, merger, consolidation, split-up, spin-off, combination, repurchase, or exchange of our shares or other securities, or other change in our corporate structure affecting our shares, the administrator will adjust the number and class of shares that may be delivered under our 2018 Plan and/or the number, class and price of shares covered by each outstanding award and the numerical share limits set forth in our 2018 Plan.

Dissolution or Liquidation. In the event of our proposed liquidation or dissolution, the administrator will notify participants as soon as practicable and all awards will terminate immediately prior to the consummation of such proposed transaction.

Merger or Change in Control. Our 2018 Plan provides that in the event of a merger or change in control, as defined under our 2018 Plan, each outstanding award will be treated as the administrator determines, without a participant's consent. The administrator is not required to treat all awards, all awards held by a participant or all awards of the same type, similarly.

If a successor corporation does not assume or substitute for any outstanding award, then the participant will fully vest in and have the right to exercise all of his or her outstanding options and stock appreciation rights, all restrictions on restricted stock and restricted stock units will lapse, and for awards with performance-based vesting, all performance goals or other vesting criteria will be deemed achieved at 100% of target levels and all other terms and conditions met. If an option or stock appreciation right is not assumed or substituted in the event of a change in control, the administrator will notify the participant in writing or electronically that such option or stock appreciation right will be exercisable for a period of time determined by the administrator in its sole discretion and the option or stock appreciation right will terminate upon the expiration of such period.

For awards granted to an outside director, in the event of a change in control, the outside director will fully vest in and have the right to exercise all of his or her outstanding options and stock appreciation rights, all restrictions on restricted stock and restricted stock units will lapse and, for awards with performance-based vesting, all performance goals or other vesting criteria will be deemed achieved at 100% of target levels and all other terms and conditions met.

Clawback. Awards will be subject to any clawback policy of ours, and the administrator also may specify in an award agreement that the participant's rights, payments, and/or benefits with respect to an award will be subject to reduction, cancellation, forfeiture, and/or recoupment upon the occurrence of certain specified events. Our board of directors may require a participant to forfeit, return, or reimburse us all or a portion of the award and/or shares issued under the award, any amounts paid under the award, and any payments or proceeds paid or provided upon disposition of the shares issued under the award in order to comply with such clawback policy or applicable laws.

Amendment; Termination. The administrator has the authority to amend, suspend or terminate our 2018 Plan, provided such action does not impair the existing rights of any participant. Our 2018 Plan automatically will terminate in 2028, unless we terminate it sooner.

2012 Equity Incentive Plan, as amended

In 2012, our board of directors adopted, and our stockholders approved, our 2012 Plan. The 2012 Plan has been amended from time to time to increase the aggregate number of shares of our common stock reserved for issuance under the 2012 Plan, and was most recently amended on November 29, 2017, which amendment was approved by our stockholders on November 30, 2017. Our 2012 Plan permits the grant of incentive stock options, within the meaning of Section 422 of the Code, to our employees and our parent and subsidiary corporations' employees, and the grant of nonstatutory stock options, stock appreciation rights, restricted stock and restricted stock units to our employees, directors and consultants and our parent and subsidiary corporations' employees and consultants.

Authorized Shares. Our 2012 Plan will be terminated in connection with this offering, and accordingly, no shares will be available for issuance under the 2012 Plan following the completion of this offering. Our 2012 Plan will continue to govern outstanding awards granted thereunder. As of March 31, 2018, options to purchase 6,224,533 shares of our common stock and 90,117 shares of restricted stock remained outstanding under our 2012 Plan.

Plan Administration. Our board of directors or one or more committees appointed by our board of directors administers our 2012 Plan. Subject to the provisions of our 2012 Plan, our administrator has the

power to administer the plan, including but not limited to, the power to interpret the terms of our 2012 Plan and awards granted under it, prescribe, amend and rescind rules relating to our 2012 Plan, including creating sub-plans, and determine the terms of the awards, including the exercise price, the number of shares of our common stock subject to each such award, the exercisability of the awards and the form of consideration, if any, payable upon exercise. Our administrator also has the authority to amend existing awards, including the power to extend the post-termination exercisability period of awards, extend the maximum term of an option and allow participants to defer the receipt of the payment of cash or the delivery of shares that otherwise would be due to such participant under an award. The administrator also has the authority to amend existing awards to reduce or increase their exercise prices, allow participants the opportunity to transfer outstanding awards to a financial institution or other person or entity selected by the administrator, institute an exchange program by which outstanding awards may be surrendered or cancelled in exchange for awards of the same type, which may have a higher or lower exercise price or different terms, awards of a different type and/or cash and make all other determinations our administrator deems necessary or advisable for administering the 2012 Plan.

Options. Stock options may be granted under our 2012 Plan. The exercise price of options granted under our 2012 Plan must at least be equal to the fair market value of our common stock on the date of grant. The term of an incentive stock option may not exceed 10 years, except that with respect to any employee who owns more than 10% of the voting power of all classes of our (or any subsidiary of ours) outstanding stock, the term must not exceed five years and the exercise price must equal at least 110% of the fair market value on the grant date. The administrator will determine the methods of payment of the exercise price of an option, which may include cash, shares or other property acceptable to the administrator, as well as other types of consideration permitted by applicable law. After termination of an employee, director or consultant, he or she may exercise his or her option for the period of time specified in the applicable option agreement. If termination is due to death or disability, the option generally will remain exercisable for at least six months. In all other cases, the option will generally remain exercisable for at least 30 days. However, in no event may an option be exercised later than the expiration of its term. Subject to the provisions of our 2012 Plan, the administrator determines the other terms of options.

Stock Appreciation Rights. Stock appreciation rights may be granted under our 2012 Plan. Stock appreciation rights allow the recipient to receive the appreciation in the fair market value of our common stock between the exercise date and the date of grant. Stock appreciation rights may not have a term exceeding 10 years. After termination of an employee, director or consultant, he or she may exercise his or her stock appreciation rights for the period of time specified in the applicable award agreement. If termination is due to death or disability, the stock appreciations rights generally will remain exercisable for at least six months. In all other cases, the stock appreciation rights will generally remain exercisable for at least 30 days. However, in no event may stock appreciation rights be exercised later than the expiration of their term. Subject to the provisions of our 2012 Plan, the administrator determines the other terms of stock appreciation rights, including when such rights become exercisable and whether to pay any increased appreciation in cash or with shares of our common stock, or a combination thereof, except that the per share exercise price for the shares of our common stock to be issued pursuant to the exercise of a stock appreciation right will be no less than 100% of the fair market value per share on the date of grant.

Restricted Stock. Restricted stock may be granted under our 2012 Plan. Restricted stock awards are grants of shares of our common stock that vest in accordance with terms and conditions established by the administrator. The administrator will determine the number of shares of restricted stock granted to any employee, director or consultant and, subject to the provisions of our 2012 Plan, will determine the terms and conditions of such awards. The administrator may impose whatever conditions for lapse of the restriction on the shares it determines to be appropriate (for example, the administrator may set restrictions based on the achievement of specific performance goals or

continued service to us), except the administrator, in its sole discretion, may accelerate the time at which any restrictions will lapse or be removed. Recipients of restricted stock awards generally will have voting and dividend rights with respect to such shares upon grant without regard to the restriction, unless the administrator provides otherwise. Shares of restricted stock as to which the restrictions have not lapsed are subject to our right of repurchase or forfeiture.

Restricted Stock Units. Restricted stock units may be granted under our 2012 Plan. Restricted stock units are bookkeeping entries representing an amount equal to the fair market value of one share of our common stock. Subject to the provisions of our 2012 Plan, the administrator will determine the terms and conditions of restricted stock units, including the vesting criteria (which may include accomplishing specified performance criteria or continued service to us) and the form and timing of payment. Notwithstanding the foregoing, the administrator, in its sole discretion, may accelerate the time at which any restricted stock units will vest.

Non-Transferability of Awards. Unless the administrator provides otherwise, our 2012 Plan generally does not allow for the transfer of awards and only the recipient of an award may exercise an award during his or her lifetime.

Certain Adjustments. In the event of certain changes in our capitalization, to prevent diminution or enlargement of the benefits or potential benefits available under our 2012 Plan, the administrator will adjust the number and class of shares that may be delivered under our 2012 Plan and/or the number, class and price of shares covered by each outstanding award.

Dissolution or Liquidation. In the event of our proposed liquidation or dissolution, the administrator will notify participants as soon as practicable and all awards will terminate immediately prior to the consummation of such proposed transaction.

Merger or Change in Control. Our 2012 Plan provides that in the event of a merger or change in control, as defined under the 2012 Plan, each outstanding award will be treated as the administrator determines. If a successor corporation or its parent or subsidiary does not assume or substitute an equivalent award for any outstanding award, then such award will fully vest, all restrictions on the shares subject to such award will lapse, all performance goals or other vesting criteria applicable to the shares subject to such award will be deemed achieved at 100% of target levels and all of the shares subject to such award will become fully exercisable, if applicable, for a specified period prior to the transaction. The award will then terminate upon the expiration of the specified period of time. If an option or stock appreciation right is not assumed or substituted in the event of a merger or change in control, the administrator will notify the applicable participant in writing or electronically that the award will be exercisable for a period of time determined by the administrator, and the option or stock appreciation right will terminate upon the expiration of such period.

Amendment; Termination. Our board of directors has the authority to amend, alter, suspend or terminate the 2012 Plan, provided such action will not impair the existing rights of any participant, unless mutually agreed to in writing between the participant and the administrator. As noted above, upon completion of this offering, our 2012 Plan will be terminated and no further awards will be granted thereunder. All outstanding awards will continue to be governed by their existing terms.

2018 Employee Stock Purchase Plan

Our board of directors has adopted, and our stockholders approved, our 2018 Employee Stock Purchase Plan (“ESPP”). Our ESPP will be effective on the business day immediately prior to the effective date of the registration statement of which this prospectus forms a part. We believe that allowing our employees to participate in our ESPP will provide them with a further incentive towards promoting our success and accomplishing our corporate goals.

Authorized Shares. A total of 500,000 shares of our common stock are available for sale under our ESPP. The number of shares of our common stock that are available for sale under our ESPP also includes an annual increase on the first day of each fiscal year beginning with our 2019 fiscal year, equal to the least of:

- 1,000,000 shares;
- one percent (1%) of the outstanding shares of our common stock as of the last day of the immediately preceding fiscal year; or
- such other amount as the administrator may determine.

ESPP Administration. The compensation committee of our board of directors administers our ESPP and has full and exclusive discretionary authority to construe, interpret and apply the terms of the ESPP, delegate ministerial duties to any of our employees, designate separate offerings under the ESPP, designate our subsidiaries and affiliates as participating in the ESPP, determine eligibility, adjudicate all disputed claims filed under the ESPP and establish procedures that it deems necessary for the administration of the ESPP, including, but not limited to, adopting such procedures and sub-plans as are necessary or appropriate to permit participation in the ESPP by employees who are foreign nationals or employed outside the United States. The administrator's findings, decisions and determinations are final and binding on all participants to the full extent permitted by law.

Eligibility. Generally, all of our employees will be eligible to participate if they are customarily employed by us, or any participating subsidiary or affiliate, for at least 20 hours per week and more than five months in any calendar year. The administrator, in its discretion, may, prior to an enrollment date, for all options granted on such enrollment date in an offering, determine that an employee who (i) has not completed at least two years of service since his or her last hire date (or a lesser period of time determined by the administrator) since his or her last hire date, (ii) customarily works not more than 20 hours per week (or a lesser period of time determined by the administrator), (iii) customarily works not more than five months per calendar year (or a lesser period of time determined by the administrator), (iv) is a highly compensated employee within the meaning of Section 414(q) of the Code or (v) is a highly compensated employee within the meaning of Section 414(q) of the Code with compensation above a certain level or is an officer or subject to disclosure requirements under Section 16(a) of the Exchange Act, is or is not eligible to participate in such offering period.

However, an employee may not be granted rights to purchase shares of our common stock under our ESPP if such employee:

- immediately after the grant would own capital stock and/or hold outstanding options to purchase such stock possessing 5% or more of the total combined voting power or value of all classes of capital stock of ours or of any parent or subsidiary of ours; or
- holds rights to purchase shares of our common stock under all employee stock purchase plans of ours or any parent or subsidiary of ours that accrue at a rate that exceeds $25,000 worth of shares of our common stock for each calendar year in which such rights are outstanding at any time.

Offering Periods. Our ESPP includes a component that allows us to make offerings intended to qualify under Section 423 of the Code and a component that allows us to make offerings not intended to qualify under Section 423 of the Code to designated companies, as described in our ESPP. Our ESPP provides for consecutive, overlapping 24-month offering periods. The offering periods will be scheduled to start on the first trading day on or after February 15 and August 15 of each year, except the first offering period will commence on the first trading day on or after the effective date of the registration statement of which this prospectus forms a part and will end on the first trading day on or

before August 15, 2020, and the second offering period will commence on the first trading day on or after February 15, 2019. Each offering period will include purchase periods, which, unless the administrator provides otherwise, will (i) commence on the first trading day on or after February 15 and August 15 and (ii) terminate on the last trading day on or before August 15 of the same year and February 15 of the following year, respectively, except that the first purchase period under our ESPP will commence on the first trading day on or after the effective date of the registration statement of which this prospectus forms a part and will end on the last trading day on or before February 15.

Contributions. Our ESPP will permit participants to purchase shares of our common stock through contributions (in the form of payroll deductions or otherwise to the extent permitted by the administrator) of up to 15% of their eligible compensation, which includes a participant's base straight time gross earnings but excludes payments for incentive compensation, bonuses, payments for overtime and shift premium, equity compensation income and other similar compensation. Unless otherwise determined by the administrator, a participant may make a one-time decrease (but not increase) to the rate of his or her contributions to 0% during a purchase period.

Exercise of Purchase Right. Amounts contributed and accumulated by the participant will be used to purchase shares of our common stock at the end of each six-month purchase period. A participant may purchase a maximum of 2,400 shares of our common stock during a purchase period (subject to any applicable adjustments under our ESPP). The purchase price of the shares will be 85% of the lower of the fair market value of our common stock on the first trading day of the offering period or on the exercise date. If the fair market value of our common stock on the exercise date is less than the fair market value on the first trading day of the offering period, participants will be automatically withdrawn from such offering period immediately following their purchase of shares of our common stock on the exercise date and will be automatically re-enrolled in the next offering period. Participants may end their participation at any time during an offering period and will be paid their accrued contributions that have not yet been used to purchase shares of our common stock. Participation ends automatically upon termination of employment with us.

Non-Transferability. A participant may not transfer contributions credited to his or her account nor any rights granted under our ESPP (other than by will, the laws of descent and distribution or as otherwise provided under our ESPP).

Merger or Change in Control. Our ESPP provides that in the event of a merger or change in control, as defined under our ESPP, a successor corporation (or a parent or subsidiary of the successor corporation) will assume or substitute each outstanding purchase right. If the successor corporation refuses to assume or substitute for the outstanding purchase right, the offering period then in progress will be shortened, and a new exercise date will be set that will be before the date of the proposed merger or change in control. The administrator will notify each participant that the exercise date has been changed and that the participant's option will be exercised automatically on the new exercise date unless prior to such date the participant has withdrawn from the offering period.

Amendment; Termination. The administrator has the authority to amend, suspend or terminate our ESPP, except that, subject to certain exceptions described in our ESPP, no such action may adversely affect any outstanding rights to purchase shares of our common stock under our ESPP. Our ESPP automatically will terminate in 2038, unless we terminate it sooner.

Executive Incentive Compensation Plan

In June 2018, our board of directors adopted our Executive Incentive Compensation Plan ("Incentive Compensation Plan"). Our Incentive Compensation Plan allows our compensation committee to grant incentive awards, generally payable in cash, to employees selected by our

compensation committee, including our named executive officers, based upon performance goals established by our compensation committee.

Under our Incentive Compensation Plan, our compensation committee determines the performance goals applicable to any award, which goals may include, without limitation, goals related to research and development, regulatory milestones or regulatory-related goals, gross margin, financial milestones, new product or business development, operating margin, product release timelines or other product release milestones, publications, cash flow, procurement, savings, internal structure, leadership development, project, function or portfolio-specific milestones, license or research collaboration agreements, capital raising, initial public offering preparations, patentability and individual objectives such as peer reviews or other subjective or objective criteria. The performance goals may differ from participant to participant and from award to award.

Our compensation committee administers our Incentive Compensation Plan. The administrator of our Incentive Compensation Plan may, in its sole discretion and at any time, increase, reduce or eliminate a participant's actual award, and/or increase, reduce or eliminate the amount allocated to the bonus pool for a particular performance period. The actual award may be below, at or above a participant's target award, in the discretion of the administrator. The administrator may determine the amount of any increase, reduction or elimination on the basis of such factors as it deems relevant, and it is not required to establish any allocation or weighting with respect to the factors it considers.

Actual awards generally will be paid in cash (or its equivalent) only after they are earned, and, unless otherwise determined by the administrator, to earn an actual award a participant must be employed by us through the date the actual award is paid. The compensation committee reserves the right to settle an actual award with a grant of an equity award under our then-current equity compensation plan, which equity award may have such terms and conditions, including vesting, as the compensation committee determines. Payment of awards occurs as soon as practicable after they are earned, but no later than the dates set forth in our Incentive Compensation Plan.

Our board of directors and our compensation committee have the authority to amend, suspend or terminate our Incentive Compensation Plan, provided such action does not impair the existing rights of any participant with respect to any earned awards.

401(k) Plan

We maintain a 401(k) retirement savings plan for the benefit of our employees, including our named executive officers, who satisfy certain eligibility requirements. Under the 401(k) plan, eligible employees may elect to defer a portion of their compensation, within the limits prescribed by the Code, on a pre-tax or after-tax (Roth) basis, through contributions to the 401(k) plan. The 401(k) plan authorizes employer safe harbor contributions. The 401(k) plan is intended to qualify under Sections 401(a) and 501(a) of the Code. As a tax-qualified retirement plan, pre-tax contributions to the 401(k) plan and earnings on those pre-tax contributions are not taxable to the employees until distributed from the 401(k) plan, and earnings on Roth contributions are not taxable when distributed from the 401(k) plan. We match 100% of the contributions that eligible participants make to the 401(k) plan up to 3.00% of the participant's eligible compensation. Contributions from 3.01% to 5.00% are matched at 50%.

Limitation of Liability and Indemnification

Our amended and restated certificate of incorporation and amended and restated bylaws, each to be effective upon the completion of this offering, will provide that we will indemnify our directors and officers, and may indemnify our employees and other agents, to the fullest extent permitted by

Delaware law. Delaware law prohibits our amended and restated certificate of incorporation from limiting the liability of our directors for the following:

- any breach of the director's duty of loyalty to us or to our stockholders;
- acts or omissions not in good faith or that involve intentional misconduct or a knowing violation of law;
- unlawful payment of dividends or unlawful stock repurchases or redemptions; and
- any transaction from which the director derived an improper personal benefit.

If Delaware law is amended to authorize corporate action further eliminating or limiting the personal liability of a director, then the liability of our directors will be eliminated or limited to the fullest extent permitted by Delaware law, as so amended. Our amended and restated certificate of incorporation does not eliminate a director's duty of care and, in appropriate circumstances, equitable remedies, such as injunctive or other forms of non-monetary relief, remain available under Delaware law. This provision also does not affect a director's responsibilities under any other laws, such as the federal securities laws or other state or federal laws. Under our amended and restated bylaws, we will also be empowered to purchase insurance on behalf of any person whom we are required or permitted to indemnify.

In addition to the indemnification required in our amended and restated certificate of incorporation and amended and restated bylaws, we have entered into an indemnification agreement with each member of our board of directors and each of our officers. These agreements provide for the indemnification of our directors and officers for certain expenses and liabilities incurred in connection with any action, suit, proceeding or alternative dispute resolution mechanism or hearing, inquiry or investigation that may lead to the foregoing, to which they are a party, or are threatened to be made a party, by reason of the fact that they are or were a director, officer, employee, agent or fiduciary of our company, or any of our subsidiaries, by reason of any action or inaction by them while serving as an officer, director, agent or fiduciary, or by reason of the fact that they were serving at our request as a director, officer, employee, agent or fiduciary of another entity. In the case of an action or proceeding by or in the right of our company or any of our subsidiaries, no indemnification will be provided for any claim where a court determines that the indemnified party is prohibited from receiving indemnification. We believe that these charter and bylaw provisions and indemnification agreements are necessary to attract and retain qualified persons as directors and officers.

The limitation of liability and indemnification provisions in our amended and restated certificate of incorporation and amended and restated bylaws may discourage stockholders from bringing a lawsuit against directors for breach of their fiduciary duties. They may also reduce the likelihood of derivative litigation against directors and officers, even though an action, if successful, might benefit us and our stockholders. Moreover, a stockholder's investment may be harmed to the extent we pay the costs of settlement and damage awards against directors and officers pursuant to these indemnification provisions. Insofar as indemnification for liabilities arising under the Securities Act may be permitted to our directors, officers and controlling persons pursuant to the foregoing provisions, or otherwise, we have been advised that, in the opinion of the SEC, such indemnification is against public policy as expressed in the Securities Act, and is, therefore, unenforceable. There is no pending litigation or proceeding naming any of our directors or officers as to which indemnification is being sought, nor are we aware of any pending or threatened litigation that may result in claims for indemnification by any director or officer.

CERTAIN RELATIONSHIPS AND RELATED PARTY TRANSACTIONS

Other than compensation arrangements, including employment, termination of employment and change in control arrangements, with our directors and executive officers, including those discussed in the sections titled “Management” and “Executive Compensation,” and the registration rights described in the section titled “Description of Capital Stock—Registration Rights,” the following is a description of each transaction since January 1, 2015 and each currently proposed transaction in which:

- we have been or are to be a participant;
- the amount involved exceeded or exceeds $120,000; and
- any of our directors, executive officers or holders of more than 5% of our outstanding capital stock, or any immediate family member of, or person sharing the household with, any of these individuals or entities, had or will have a direct or indirect material interest.

Sales of Securities

The following table sets forth a summary of the sale and issuance of our securities to related persons since January 1, 2015, other than compensation arrangements which are described under the sections of this prospectus titled “Management—Director Compensation” and “Executive Compensation.” See the section titled “Principal Stockholders” for additional information regarding beneficial ownership of our capital stock.

Purchaser	Affiliated Director	Shares of Common Stock	Shares of Series A Convertible Preferred Stock	Shares of Series B Convertible Preferred Stock
5% Stockholders:				
Entities affiliated with Alta Partners VIII, LP(1)	Daniel Janney	—	3,302,117	1,239,007
Roche Finance Ltd		—	1,500,962	502,632
Entities affiliated with RiverVest Venture Fund III, L.P.(2)	John McKearn, Ph.D.	—	1,500,961	777,417
Entities affiliated with New Enterprise Associates 16, L.P.(3)	Paul Walker	—	—	2,018,188
Entities affiliated with Capital Research and Management Company		—	—	2,018,188
Directors and Executive Officers:				
Robert Alexander, Ph.D.(4)		353,200	—	—
Christopher Bebbington, D.Phil.(5)		448,000	—	176

(1) The entity associated with Alta Partners VIII, LP holding our securities whose shares are aggregated for purposes of reporting share ownership information is Alta Partners NextGen Fund I, L.P.

(2) Entities associated with RiverVest Venture Fund III, L.P. holding our securities whose shares are aggregated for purposes of reporting share ownership information are (i) 3x5 RiverVest Fund II, L.P., (ii) RiverVest Venture Fund II, L.P., (iii) RiverVest Venture Fund II (Ohio), L.P., (iv) RiverVest Venture Fund III (Ohio), L.P. and (v) 3x5 RiverVest Fund II-B, L.P.

(3) The entity associated with New Enterprise Associates 16, L.P. holding our securities whose shares are aggregated for purposes of reporting share ownership information is NEA Ventures 2017, Limited Partnership.

(4) Consists of 353,200 shares of common stock held by Dr. Alexander and Stacey Lee Alexander as Trustees of the Alexander 2018 Irrevocable Descendants’ Trust, which were acquired through the exercise of employee stock options.

(5) Consists of (i) 254,960 shares of common stock held by Dr. Bebbington and (ii) 193,040 shares of common stock and 176 shares of Series B convertible preferred stock held by the Bebbington Family Trust Dated May 7th 2003, for which Dr. Bebbington serves as trustee. All of the shares of common stock held by Dr. Bebbington or the trust in the table above were acquired through the exercise of employee stock options.

Series A Convertible Preferred Stock

In March 2015 and January 2016, we issued and sold an aggregate of 9,755,346 shares of our Series A convertible preferred stock at a purchase price of $2.25 per share, for aggregate gross proceeds of $21.9 million, to a total of 10 accredited investors, including Alta Partners VIII, LP, Roche Finance Ltd, RiverVest Venture Fund III, L.P., RiverVest Venture Fund II, L.P., RiverVest Venture Fund II (Ohio), L.P. and RiverVest Venture Fund III (Ohio), L.P.

Series B Convertible Preferred Stock

In November 2017, we issued and sold an aggregate of 10,105,181 shares of our Series B convertible preferred stock at a purchase price of approximately $9.91 per share, for aggregate gross proceeds of $100.1 million, including the conversion of the principal amount and accrued interest of outstanding notes, to a total of 40 accredited investors, including the Bebbington Family Trust Dated May 7th, 2003, Alta Partners VIII, LP, Alta Partners NextGen Fund I, L.P., Roche Finance Ltd, RiverVest Venture Fund III, L.P., 3x5 RiverVest Fund II, L.P., RiverVest Venture Fund II, L.P., RiverVest Venture Fund II (Ohio), L.P., RiverVest Venture Fund III (Ohio), L.P., 3x5 RiverVest Fund II-B, L.P., New Enterprise Associates 16, L.P., NEA Ventures 2017, Limited Partnership and SMALLCAP World Fund, Inc.

Investors' Rights Agreement

We are party to an investors' rights agreement, as amended, with certain holders of our capital stock, including Dr. Bebbington, the Bebbington Family Trust Dated May 7th, 2003, Alta Partners VIII, LP, Alta Partners NextGen Fund I, L.P., Roche Finance Ltd, RiverVest Venture Fund III, L.P., 3x5 RiverVest Fund II, L.P., RiverVest Venture Fund II, L.P., RiverVest Venture Fund II (Ohio), L.P., RiverVest Venture Fund III (Ohio), L.P., 3x5 RiverVest Fund II-B, L.P., New Enterprise Associates 16, L.P., NEA Ventures 2017, Limited Partnership and SMALLCAP World Fund, Inc. Under our investors' rights agreement, certain holders of our capital stock have the right to demand that we file a registration statement or request that their shares of our capital stock be covered by a registration statement that we are otherwise filing. See the section titled "Description of Capital Stock—Registration Rights" for additional information regarding these registration rights.

Right of First Refusal and Co-Sale Agreement

Pursuant to our equity compensation plans and certain agreements with certain holders of our capital stock, including Dr. Bebbington, the Bebbington Family Trust Dated May 7th, 2003, Alta Partners VIII, LP, Alta Partners NextGen Fund I, L.P., Roche Finance Ltd, RiverVest Venture Fund III, L.P., 3x5 RiverVest Fund II, L.P., RiverVest Venture Fund II, L.P., RiverVest Venture Fund II (Ohio), L.P., RiverVest Venture Fund III (Ohio), L.P., 3x5 RiverVest Fund II-B, L.P., New Enterprise Associates 16, L.P., NEA Ventures 2017, Limited Partnership and SMALLCAP World Fund, Inc., including a right of first refusal and co-sale agreement, as amended, we or our assignees have a right to purchase shares of our common stock which certain stockholders propose to sell to other parties. This right will terminate upon the completion of this offering. See the section titled "Principal Stockholders" for additional information regarding beneficial ownership of our capital stock.

Voting Agreement

We are party to a voting agreement, as amended, under which certain holders of our capital stock, including Dr. Bebbington, the Bebbington Family Trust Dated May 7th, 2003, Alta Partners VIII, LP, Alta Partners NextGen Fund I, L.P., Roche Finance Ltd, RiverVest Venture Fund III, L.P., 3x5 RiverVest Fund II, L.P., RiverVest Venture Fund II, L.P., RiverVest Venture Fund II (Ohio), L.P., RiverVest Venture Fund III (Ohio), L.P., 3x5 RiverVest Fund II-B, L.P., New Enterprise Associates 16, L.P., NEA Ventures 2017, Limited Partnership and SMALLCAP World Fund, Inc., have agreed as to the manner in which they will vote their shares of our capital stock on certain matters, including to elect the following individuals as directors: (1) the person serving as our chief executive officer, currently Dr. Alexander; (2) one nominee designated by Alta Partners VIII, LP, currently Daniel Janney; (3) one nominee designated by RiverVest Venture Fund II, L.P., currently John McKearn, Ph.D.; and (4) one nominee designated by New Enterprise Associates 16, L.P., currently Paul Walker. In addition, the parties to the voting agreement have agreed to vote their shares to elect two independent directors who are not officers or employees of ours, who are not affiliates of any of our investors and who are mutually acceptable to the other members of our board of directors, one such director currently being Steven P. James and the other such director currently being Robert E. Andreatta. This agreement will terminate upon the completion of this offering, and thereafter none of our stockholders will have any special rights regarding the election or designation of members of our board of directors.

Indemnification Agreements

We have entered, and intend to continue to enter, into separate indemnification agreements with each of our directors and executive officers, in addition to the indemnification provided for in our amended and restated certificate of incorporation and amended and restated bylaws. The indemnification agreements and our amended restated certificate of incorporation and amended and restated bylaws that will be in effect upon the completion of this offering require us to indemnify our directors, executive officers and certain controlling persons to the fullest extent permitted by Delaware law. See the section titled “Executive Compensation—Limitation of Liability and Indemnification” for additional information.

Transactions with Certain Employees

Our current Director of Clinical Project Management, Jacob Rasmussen and our current Clinical Program Manager, Camilla Shaw, are the son and daughter of Dr. Henrik Rasmussen, our Chief Medical Officer. Mr. Jacob Rasmussen and Ms. Shaw receive an annual salary of $140,000 and $150,000, respectively, and certain benefits that are also provided to our other similarly situated employees, which benefits have an approximate annual value of $23,000 to each of Mr. Jacob Rasmussen and Ms. Shaw. During the fiscal year ended December 31, 2017, Mr. Jacob Rasmussen and Ms. Shaw were also awarded discretionary cash bonuses in the amount of approximately $15,000 and $6,000, respectively, and stock options to purchase up to 48,000 and 16,800, respectively, shares of our common stock, subject to vesting. On May 15, 2018, Mr. Jacob Rasmussen and Ms. Shaw were awarded additional stock options to purchase up to 11,120 and 13,040, respectively, shares of common stock, subject to vesting. Prior to her employment as Clinical Program Manager, Ms. Shaw provided services to us as a consultant from July 2017 to September 2017, during which time she received approximately $36,000 in cash compensation for services provided.

Participation in this Offering

Certain of our existing stockholders, including certain stockholders affiliated with our directors and that beneficially own more than 5% of our outstanding common stock, have indicated an interest in purchasing approximately $35.0 million in shares of our common stock in this offering at the initial

public offering price. However, because indications of interest are not binding agreements or commitments to purchase, the underwriters may determine to sell more, less or no shares in this offering to any of these stockholders, or any of these stockholders may determine to purchase more, less or no shares in this offering.

Concurrent Private Placement

New Enterprise Associates 16, L.P. ("NEA") has indicated an interest in purchasing approximately $10.0 million in shares of our common stock at the initial public offering price (or 625,000 shares based on the assumed initial public offering price of $16.00 per share) in a proposed private placement that would close concurrently with this offering. This indication of interest is not a binding agreement or commitment to purchase, and we could determine to sell more, fewer or no shares to this potential purchaser and this potential purchaser could determine to purchase more, fewer or no shares in the proposed concurrent private placement. The shares that may be sold in the proposed concurrent private placement will not be registered in the offering, will constitute restricted securities under the Securities Act of 1933, as amended, and will be subject to a market standoff agreement with us and lock-up agreement with the underwriters for a period of 180 days after the date of this prospectus. We will receive the full proceeds from and will not pay any underwriting discounts or commissions with respect to the shares that are sold in the proposed concurrent private placement. The closing of this offering is not conditioned upon the closing of such concurrent private placement.

Related Party Transaction Policy

Our audit committee has the primary responsibility for reviewing and approving or disapproving "related party transactions," which are transactions between us and related persons in which the aggregate amount involved exceeds or may be expected to exceed $120,000 and in which a related person has or will have a direct or indirect material interest. The charter of our audit committee provides that our audit committee shall review and approve in advance any related party transaction.

We have adopted a formal written policy providing that we are not permitted to enter into any transaction that exceeds $120,000 and in which any related person has a direct or indirect material interest without the consent of our audit committee. In approving or rejecting any such transaction, our audit committee is to consider the relevant facts and circumstances available and deemed relevant to our audit committee, including whether the transaction is on terms no less favorable than terms generally available to an unaffiliated third party under the same or similar circumstances and the extent of the related person's interest in the transaction.

PRINCIPAL STOCKHOLDERS

The following table sets forth the beneficial ownership of our common stock as of June 30, 2018 by:

- each person, or group of affiliated persons, who is known by us to beneficially own more than 5% of our common stock;
- each of the named executive officers;
- each of our directors; and
- all of our current executive officers and directors as a group.

We have determined beneficial ownership in accordance with the rules of the SEC, and thus it represents sole or shared voting or investment power with respect to our securities. Unless otherwise indicated below, to our knowledge, the persons and entities named in the table have sole voting and sole investment power with respect to all shares that they beneficially owned, subject to community property laws where applicable. The information does not necessarily indicate beneficial ownership for any other purpose, including for purposes of Sections 13(d) and 13(g) of the Exchange Act.

Certain of our existing stockholders, including certain stockholders affiliated with our directors and that beneficially own more than 5% of our outstanding common stock, have indicated an interest in purchasing approximately $35.0 million in shares of our common stock in this offering at the initial public offering price. The information set forth in the table below does not reflect the potential purchase of any shares in this offering by these stockholders.

The column entitled “Shares Beneficially Owned Prior to this Offering and Concurrent Private Placement” is based on a total of 33,501,353 shares of our common stock outstanding as of June 30, 2018, which includes 30,971,627 shares of our common stock resulting from the automatic conversion of all outstanding shares of our convertible preferred stock into our common stock immediately prior to the completion of this offering, as if this conversion had occurred as of June 30, 2018. The column entitled “Shares Beneficially Owned After this Offering and Concurrent Private Placement” is based on 39,710,859 shares of our common stock to be outstanding after this offering, including the shares of our common stock that we are selling in this offering and 625,000 shares of our common stock that we expect to sell to New Enterprise Associates 16, L.P. (“NEA”), in the proposed concurrent private placement based on the assumed initial public offering price of $16.00 per share, but not including any exercise by the underwriters of their option to purchase additional shares. While we have assumed the issuance and sale to NEA of 625,000 shares of our common stock for the purposes described above, we have not entered into any definitive agreement with NEA related to the concurrent private placement, and there can be no assurance that the concurrent private placement will take place or that more or fewer shares will not be issued in the concurrent private placement. We have deemed shares of our common stock subject to stock options that were outstanding and exercisable on or within 60 days of June 30, 2018, to be outstanding and to be beneficially owned by the person holding the stock option for the purpose of computing the percentage ownership of that person. We did not deem these shares outstanding, however, for the purpose of computing the percentage ownership of any other person.

Unless otherwise indicated, the address of each beneficial owner listed in the table below is c/o Allakos Inc., 75 Shoreway Road, Suite A, San Carlos, CA 94070.

Name of Beneficial Owner	Shares Beneficially Owned Prior to this Offering and Concurrent Private Placement		Shares Beneficially Owned After this Offering and Concurrent Private Placement	
	Shares	Percentage	Shares	Percentage
5% Stockholders:				
Entities affiliated with Alta Partners VIII, LP(1)	11,269,200	33.64%	11,269,200	28.38%
Entities affiliated with RiverVest Venture Fund III, L.P.(2)	7,260,141	21.67%	7,260,141	18.28%
Roche Finance Ltd(3)	4,610,723	13.76%	4,610,723	11.61%
Entities affiliated with New Enterprise Associates 16, L.P.(4)	2,018,188	6.02%	2,643,188	6.66%
Entities affiliated with Capital Research and Management Company(5)	2,018,188	6.02%	2,018,188	5.08%
Named Executive Officers and Directors:				
Robert Alexander, Ph.D.(6)	1,509,473	4.36%	1,509,473	3.69%
Adam Tomasi, Ph.D.(7)	754,736	2.20%	754,736	1.87%
Henrik Rasmussen, M.D., Ph.D.(8)	114,332	*	114,332	*
Daniel Janney(9)	11,269,200	33.64%	11,269,200	28.38%
Robert E. Andreatta	—	—	—	—
Steven P. James(10)	36,680	*	36,680	*
John McKearn, Ph.D.(11)	7,260,141	21.67%	7,260,141	18.28%
Paul Walker(12)	2,018,188	6.02%	2,643,188	6.66%
Christopher Bebbington, D.Phil.(13)	1,163,283	3.42%	1,163,283	2.90%
All executive officers and directors as a group (9 persons)(14)	24,126,033	66.95%	24,751,033	58.59%

* Represents beneficial ownership of less than one percent (1%) of the outstanding shares of our common stock.

(1) Consists of (a) 7,822,935 shares held of record by Alta Partners VIII, LP (“Alta VIII”) and (b) 3,446,265 shares held of record by Alta Partners NextGen Fund I, L.P. (“Alta I”). The shares directly held by Alta VIII are indirectly held by Alta Partners Management VIII, LLC (“Alta Management VIII”), which is the general partner of Alta VIII. The individual managing directors of Alta Management VIII are Farah Champsi, Guy Nohra and Daniel Janney, one of our directors. The managing directors of Alta Management VIII exercise sole voting and investment control with respect to the shares held by Alta VIII. The shares directly held by Alta I are indirectly held by Alta Partners NextGen Fund I Management, LLC (“Alta Management I”), which is the general partner of Alta I. The individual managing directors of Alta Management I are Robert More, Peter Hudson and Daniel Janney, one of our directors. The managing directors of Alta Management I exercise sole voting and investment control with respect to the shares held by Alta I. The individual managing directors of Alta Management VIII and Alta Management I disclaim beneficial ownership of all shares held by Alta VIII and Alta I, except to the extent of their pecuniary interests therein. The address of the above referenced entities is One Embarcadero Center, Suite 3700, San Francisco, CA 94111.

(2) Consists of (a) 980,693 shares held of record by RiverVest Venture Fund II, L.P. (“RiverVest II”), (b) 266,374 shares held of record by RiverVest Venture Fund II (Ohio), L.P. (“RiverVest (Ohio) II”), (c) 3,518,819 shares held of record by RiverVest Venture Fund III, L.P. (“RiverVest III”), (d) 186,759 shares held of record by RiverVest Venture Fund III (Ohio), L.P. (“RiverVest (Ohio) III”), (e) 2,223,505 shares held of record by 3x5 RiverVest Fund II, L.P. (“3x5 II”) and (f) 83,991 shares held of record by 3x5 RiverVest Fund II-B, L.P. (“3x5 II-B”). The shares directly held by RiverVest II are indirectly held by RiverVest Venture Partners II, L.P. (“RiverVest Partners II”), which is the general partner of RiverVest II. The shares directly held by RiverVest (Ohio) II are indirectly held by RiverVest Venture Partners II (Ohio), LLC (“RiverVest Partners (Ohio) II”), which

is the general partner of RiverVest (Ohio) II. RiverVest Partners II is the sole member of RiverVest Partners (Ohio) II. RiverVest Venture Partners II, LLC is the general partner of RiverVest Partners II. John P. McKearn, Ph.D., one of our directors, is an Authorized Person of RiverVest Venture Partners II, LLC and may be deemed to share dispositive voting and investment power with respect to the shares held by RiverVest II and RiverVest (Ohio) II. The shares directly held by RiverVest III are indirectly held by RiverVest Venture Partners III, L.P. ("RiverVest Partners III"), which is the general partner of RiverVest III. The shares directly held by RiverVest (Ohio) III are indirectly held by RiverVest Venture Partners III (Ohio), LLC ("RiverVest Partners (Ohio) III"), which is the general partner of RiverVest (Ohio) III. RiverVest Partners III is the sole member of RiverVest Partners (Ohio) III. RiverVest Venture Partners III, LLC is the general partner of RiverVest Partners III. John P. McKearn, Ph.D., one of our directors, is a Manager of RiverVest Venture Partners III, LLC and may be deemed to share dispositive voting and investment power with respect to the shares held by RiverVest III and RiverVest (Ohio) III. The shares directly held by 3x5 II and 3x5 II-B are indirectly held by 3x5 RiverVest Partners II, LLC ("3x5 Partners II"), which is the general partner of 3x5 II and 3x5 II-B. RiverVest 3x5 Managers II, L.P. ("3x5 Managers II"), is a Member of 3x5 Partners II. RiverVest 3x5 Managers II, LLC is the general partner of 3x5 Managers II. John P. McKearn, Ph.D., one of our directors, is a Member of RiverVest 3x5 Managers II, LLC and may be deemed to share dispositive voting and investment power with respect to the shares held by 3x5 II and 3x5 II-B. Dr. McKearn disclaims beneficial ownership of all shares held by RiverVest II, RiverVest (Ohio) II, RiverVest III, RiverVest (Ohio) III, 3x5 II and 3x5 II-B except to the extent of his pecuniary interests therein. The address of the above referenced entities is 101 S. Hanley Road, Suite 1850, St. Louis, MO 63105.

(3) Consists of 4,610,723 shares held of record by Roche Finance Ltd ("Roche Finance"). Roche Finance is a wholly owned subsidiary of Roche Holding Ltd. ("Roche Holding"), a publicly-held corporation. The address of Roche Finance is Grenzacherstrasse 122, Basel, 4070 Switzerland and the address of Roche Holding is Grenzacherstrasse 124, Basel, 4070 Switzerland.

(4) Consists of (a) 2,016,675 shares held of record by New Enterprise Associates 16, L.P. ("NEA 16") and (b) 1,513 shares held of record by NEA Ventures 2017, L.P. ("Ven 2017"). Shares beneficially owned after the offering and the concurrent private placement includes 625,000 shares of our common stock (assuming the assumed initial public offering price of $16.00 per share) NEA has indicated an interest in purchasing in the concurrent private placement. The shares directly held by NEA 16 are indirectly held by NEA Partners 16, L.P. ("NEA Partners 16"), the sole general partner of NEA 16, NEA 16 GP, LLC ("NEA 16 LLC"), the sole general partner of NEA Partners 16, and each of the individual Managers of NEA 16 LLC. The individual Managers of NEA 16 LLC, (collectively, the "Managers"), are Peter J. Barris, Forest Baskett, Anthony A. Florence, David M. Mott, Mohamad Makhzoumi, Chetan Puttagunta, Jon Sakoda, Joshua Makower, Peter Sonsini, Ravi Viswanathan and Scott D. Sandell. NEA Partners 16, NEA 16 LLC and the Managers share voting and dispositive power with regard to the Company's securities directly held by NEA 16. The shares held directly by Ven 2017 are indirectly held by Karen P. Welsh, the general partner of Ven 2017. Karen P. Welsh has voting and dispositive power with regard to the shares of the Company's securities directly held by Ven 2017. Paul Walker, a member of the Company's board of directors and an affiliate of NEA 16 and Ven 2017, has no voting or investment control over any of the shares held by NEA 16 and Ven 2017 and disclaims beneficial ownership of all shares owned by NEA 16 and Ven 2017, except to the extent of any pecuniary interest therein. All indirect holders of the above referenced securities disclaim beneficial ownership of the above referenced securities except to the extent of their pecuniary interests therein. The address of the above referenced entities is 1954 Greenspring Drive, Suite 600, Timonium MD, 21093.

(5) Consists of 2,018,188 shares held of record by Clipperbay and Co. (HG22) ("Clipperbay") for the benefit of SMALLCAP World Fund, Inc. ("SMALLCAP"). Capital Research and Management Company ("CRMC") is the investment adviser of SMALLCAP. CRMC provides investment services to SMALLCAP through its division, Capital Research Global Investors ("CRGI"). In that capacity, CRGI may be deemed to be the beneficial owner of the shares held by SMALLCAP. CRGI,

however, disclaims such beneficial ownership, except to the extent of any pecuniary interest therein. On behalf of CRMC, CRGI has primary responsibility for the management of SMALLCAP's portfolio, which includes the shares held by Clipperbay for the benefit of SMALLCAP, and as such, the applicable portfolio managers of CRGI have dispositive authority over the shares held by Clipperbay for the benefit of SMALLCAP. The address of the above referenced entities is 333 South Hope Street, 33rd Floor, Los Angeles, CA 90071.

(6) Consists of (a) 353,200 shares held of record by Dr. Alexander and Stacey Lee Alexander as Trustees of the Alexander 2018 Irrevocable Descendants' Trust and (b) 1,664,822 shares subject to options held by Dr. Alexander, of which 1,156,273 shares are exercisable within 60 days of June 30, 2018 and 567,605 shares are vested as of such date.

(7) Consists of 1,009,011 shares subject to options held by Dr. Tomasi, of which 754,736 shares are exercisable within 60 days of June 30, 2018 and 283,802 shares are vested as of such date.

(8) Consists of 472,000 shares subject to options held by Dr. Rasmussen, of which 114,332 shares are vested and exercisable within 60 days of June 30, 2018.

(9) Consists of the shares described in footnote (1) above. Mr. Janney is a managing director of Alta Management VIII and Alta Management I and shares voting and investment control with respect to these shares. Mr. Janney disclaims beneficial ownership of all shares held by Alta VIII and Alta I, except to the extent of any pecuniary interest therein.

(10) Consists of 62,880 shares subject to an option held by Mr. James, of which 36,680 shares are vested and exercisable within 60 days of June 30, 2018.

(11) Consists of the shares described in footnote (2) above. Dr. McKearn is an Authorized Person of RiverVest Venture Partners II, LLC, a Manager of RiverVest Venture Partners III, LLC and a Member of RiverVest 3x5 Managers II, LLC and shares voting and investment control with respect to these shares. Dr. McKearn disclaims beneficial ownership of all shares held by RiverVest II, RiverVest (Ohio) II, RiverVest III, RiverVest (Ohio) III, 3x5 II and 3x5 II-B, except to the extent of any pecuniary interest therein.

(12) Paul Walker, a member of our board of directors and an affiliate of NEA 16 and Ven 2017, has no voting or investment control over and any of the shares held by NEA 16 and Ven 2017. Mr. Walker disclaims beneficial ownership of all shares owned by NEA 16 and Ven 2017, except to the extent of any pecuniary interest therein.

(13) Consists of (a) 499,760 shares held of record by Dr. Bebbington, of which no shares are subject to repurchase by us at the original purchase price as of June 30, 2018, (b) 193,216 shares held of record by Bebbington Family Trust Dated May 7th 2003, for which Dr. Bebbington serves as trustee, of which no shares are subject to repurchase by us at the original purchase price as of June 30, 2018 and (c) 470,307 shares subject to options held by Dr. Bebbington, all of which shares are vested and exercisable within 60 days of June 30, 2018. Dr. Bebbington served as our President and Chief Executive Officer through March 2017 and as our Chief Scientific Officer through June 2018.

(14) Consists of (a) 24,126,033 shares beneficially owned by our current executive officers and directors as of June 30, 2018, of which no shares may be repurchased by us at the original purchase price as of such date and (b) 2,532,328 shares subject to options exercisable within 60 days of June 30, 2018, of which 1,472,726 are vested as of such date.

DESCRIPTION OF CAPITAL STOCK

The following descriptions of our capital stock and certain provisions of our amended and restated certificate of incorporation and amended and restated bylaws are summaries and are qualified by reference to the amended and restated certificate of incorporation and the amended and restated bylaws that will be in effect upon completion of this offering. Copies of these documents will be filed with the SEC as exhibits to our registration statement, of which this prospectus forms a part. The descriptions of the common stock and preferred stock reflect changes to our capital structure that will occur upon the completion of this offering.

Upon the completion of this offering and the filing of our amended and restated certificate of incorporation to be effective upon completion of this offering, our authorized capital stock will consist of 200,000,000 shares of common stock, par value $0.001 per share, and 20,000,000 shares of convertible preferred stock, par value $0.001 per share.

Upon the closing of this offering, all the outstanding shares of our convertible preferred stock will automatically convert into an aggregate of 30,971,627 shares of our common stock.

Based on 2,114,232 shares of common stock outstanding as of March 31, 2018, and after giving effect to the automatic conversion of all of our outstanding convertible preferred stock into an aggregate of 30,971,627 shares of common stock upon the completion of this offering, the issuance of 6,000,000 shares of common stock in this offering and the completion of the proposed private placement of 625,000 shares of common stock, there will be 39,710,859 shares of common stock outstanding upon the closing of this offering. As of March 31, 2018, we had 58 stockholders of record. As of March 31, 2018, there were 6,224,533 shares of common stock subject to outstanding options. As of March 31, 2018, there were 47,616 shares of common stock subject to an outstanding warrant, with a weighted-average exercise price of $0.61 per share.

Common Stock

Voting Rights

Each holder of common stock is entitled to one vote for each share on all matters submitted to a vote of the stockholders, including the election of directors. Our certificate of incorporation and bylaws to be in effect upon the completion of this offering do not provide for cumulative voting rights. Because of this, the holders of a plurality of the shares of common stock entitled to vote in any election of directors can elect all of the directors standing for election, if they should so choose. With respect to matters other than the election of directors, at any meeting of the stockholders at which a quorum is present or represented, the affirmative vote of a majority of the voting power of the shares present in person or represented by proxy at such meeting and entitled to vote on the subject matter shall be the act of the stockholders, except as otherwise required by law. The holders of a majority of the stock issued and outstanding and entitled to vote, present in person or represented by proxy, shall constitute a quorum for the transaction of business at all meetings of the stockholders.

Dividends

Subject to preferences that may be applicable to any then-outstanding convertible preferred stock, holders of our common stock are entitled to receive dividends, if any, as may be declared from time to time by our board of directors out of legally available funds.

Liquidation

In the event of our liquidation, dissolution or winding up, holders of our common stock will be entitled to share ratably in the net assets legally available for distribution to stockholders after the

payment of all of our debts and other liabilities and the satisfaction of any liquidation preference granted to the holders of any then-outstanding shares of convertible preferred stock.

Rights and Preferences

Holders of our common stock have no preemptive, conversion, subscription or other rights, and there are no redemption or sinking fund provisions applicable to our common stock. The rights, preferences and privileges of the holders of our common stock are subject to and may be adversely affected by the rights of the holders of shares of any series of our convertible preferred stock that we may designate in the future.

Fully Paid and Nonassessable

All of our outstanding shares of common stock are, and the shares of common stock to be issued in this offering, upon payment and delivery in accordance with the underwriting agreement, will be fully paid and nonassessable.

Preferred Stock

Upon the closing of this offering, our board of directors will have the authority, without further action by the stockholders, to issue up to 20,000,000 shares of preferred stock in one or more series and to fix the rights, preferences, privileges and restrictions thereof. These rights, preferences and privileges could include dividend rights, conversion rights, voting rights, redemption rights, liquidation preferences, sinking fund terms and the number of shares constituting any series or the designation of such series, any or all of which may be greater than the rights of common stock. The issuance of preferred stock could adversely affect the voting power of holders of common stock and the likelihood that such holders will receive dividend payments and payments upon liquidation. In addition, the issuance of preferred stock could have the effect of delaying, deferring or preventing change in our control or other corporate action. Upon closing of this offering, no shares of preferred stock will be outstanding, and we have no present plan to issue any shares of preferred stock.

Common Stock Options

As of March 31, 2018, we had outstanding options to purchase an aggregate of 6,224,533 shares of our common stock, with a weighted-average exercise price of $1.39 per share, under our 2012 Plan. After March 31, 2018, we issued options to purchase an aggregate of 1,122,160 shares of our common stock, with a weighted-average exercise price of $6.27 per share, under our 2012 Plan.

Common Stock Warrants

As of March 31, 2018, we had warrants exercisable for an aggregate of 47,616 shares of our common stock at a weighted-average exercise price of $0.61 per share issued to one accredited investor in June 2016. The warrant was originally exercisable for 23,808 shares of our common stock, and in December 2016 the number of shares exercisable under the warrant was increased to 47,616 due to the occurrence of an event that triggered such increase under the terms of the warrant. The warrant expires on June 30, 2026, but would also expire earlier upon certain transactions involving the merger of our company with or into another organization or the sale or disposition of all or substantially all of our assets. The warrant contains provisions for adjustment of the exercise price and number of shares issuable upon the exercise of the warrant in the event of certain stock dividends, subdivisions and stock splits or combinations. The warrant has a net exercise provision under which its holder may, in lieu of payment of the exercise price in cash, surrender the warrant and receive a net amount of shares based on the fair market value of our stock at the time of exercise of the warrant after deduction of the aggregate exercise price.

Registration Rights

After the completion of this offering, under our investors' rights agreement, as amended, the holders of approximately 30,971,627 shares of common stock or their transferees, have the right to require us to register the offer and sale of their shares, or to include their shares in any registration statement we file, in each case as described below. In addition, if the proposed concurrent private placement to NEA is completed, the shares sold to NEA in the concurrent private placement will also be subject to such registration rights under our investors' rights agreement.

Demand Registration Rights

After the completion of this offering, the holders of up to 30,971,627 shares of our common stock (plus any shares sold in the proposed concurrent private placement) will be entitled to certain demand registration rights. At any time beginning 180 days after the effective date of this offering, the holders of at least 50% of the shares having registration rights then outstanding can request that we file a registration statement to register the offer and sale of their shares. We are only obligated to effect up to two such registrations. Each such request for registration must cover securities the anticipated aggregate public offering price of which, before deducting underwriting discounts and commissions, is at least $10 million. These demand registration rights are subject to specified conditions and limitations, including the right of the underwriters to limit the number of shares included in any such registration under certain circumstances. If we determine that it would be seriously detrimental to us and our stockholders to effect such a demand registration, we have the right to defer such registration, not more than twice in any twelve month period, for a period of up to 120 days.

Form S-3 Registration Rights

After the completion of this offering, the holders of up to 30,971,627 shares of our common stock (plus any shares sold in the proposed concurrent private placement) will be entitled to certain Form S-3 registration rights. At any time when we are eligible to file a registration statement on Form S-3, the holders of the shares having these rights then outstanding can request that we register the offer and sale of their shares of our common stock on a registration statement on Form S-3 so long as the request covers securities the anticipated aggregate public offering price of which is at least $1 million. These stockholders may make an unlimited number of requests for registration on a registration statement on Form S-3. However, we will not be required to effect a registration on Form S-3 if we have effected two such registrations within the twelve month period preceding the date of the request. Additionally, if we determine that it would be seriously detrimental to us and our stockholders to effect such a demand registration, we have the right to defer such registration, not more than twice in any twelve month period, for a period of up to 120 days.

Piggyback Registration Rights

After the completion of this offering, the holders of up to 30,971,627 shares of our common stock (plus any shares sold in the proposed concurrent private placement) will be entitled to certain "piggyback" registration rights. If we propose to register the offer and sale of shares of our common stock under the Securities Act, all holders of these shares then outstanding can request that we include their shares in such registration, subject to certain marketing and other limitations, including the right of the underwriters to limit the number of shares included in any such registration statement under certain circumstances. As a result, whenever we propose to file a registration statement under the Securities Act, other than with respect to (1) a registration related to any employee benefit plan or a corporate reorganization or other transaction covered by Rule 145 promulgated under the Securities Act, (2) a registration in which the only stock being registered is common stock issuable upon conversion of debt securities also being registered, (3) a registration on any registration form that does not permit secondary sales or (4) a registration on any form that does not include substantially the same information as would be required to be included in a registration

statement covering the sale of our common stock, the holders of these shares are entitled to notice of the registration and have the right, subject to certain limitations, to include their shares in the registration.

Expenses of Registration

We will pay all expenses relating to any demand registrations, Form S-3 registrations and piggyback registrations, subject to specified exceptions.

Termination

The registration rights terminate upon the earliest of (1) the date that is three years after the closing of this offering and (2) as to a given holder of registration rights, the date after the closing of this offering when such holder of registration rights can sell all of such holder's registrable securities during any ninety day period pursuant to Rule 144 promulgated under the Securities Act.

Anti-Takeover Effects of Certain Provisions of Delaware Law, Our Amended and Restated Certificate of Incorporation and Our Amended and Restated Bylaws

Certain provisions of Delaware law and certain provisions that will be included in our amended and restated certificate of incorporation and amended and restated bylaws summarized below may be deemed to have an anti-takeover effect and may delay, deter or prevent a tender offer or takeover attempt that a stockholder might consider to be in its best interests, including attempts that might result in a premium being paid over the market price for the shares held by stockholders.

Preferred Stock

Our amended and restated certificate of incorporation will contain provisions that permit our board of directors to issue, without any further vote or action by the stockholders, shares of preferred stock in one or more series and, with respect to each such series, to fix the number of shares constituting the series and the designation of the series, the voting rights (if any) of the shares of the series and the powers, preferences or relative, participation, optional and other special rights, if any, and any qualifications, limitations or restrictions, of the shares of such series.

Classified Board

Our amended and restated certificate of incorporation will provide that our board of directors is divided into three classes, designated Class I, Class II and Class III. Each class will be an equal number of directors, as nearly as possible, consisting of one-third of the total number of directors constituting the entire board of directors. The term of initial Class I directors shall terminate on the date of the 2019 annual meeting, the term of the initial Class II directors shall terminate on the date of the 2020 annual meeting, and the term of the initial Class III directors shall terminate on the date of the 2021 annual meeting. At each annual meeting of stockholders beginning in 2019, successors to the class of directors whose term expires at that annual meeting will be elected for a three-year term.

Removal of Directors

Our amended and restated certificate of incorporation will provide that stockholders may only remove a director for cause by a vote of no less than a majority of the shares present in person or by proxy at the meeting and entitled to vote.

Director Vacancies

Our amended and restated certificate of incorporation will authorize only our board of directors to fill vacant directorships.

No Cumulative Voting

Our amended and restated certificate of incorporation will provide that stockholders do not have the right to cumulate votes in the election of directors.

Special Meetings of Stockholders

Our amended and restated certificate of incorporation and amended and restated bylaws will provide that, except as otherwise required by law, special meetings of the stockholders may be called only by an officer at the request of a majority of our board of directors, by the Chair of our board of directors or by our Chief Executive Officer.

Advance Notice Procedures for Director Nominations

Our bylaws will provide that stockholders seeking to nominate candidates for election as directors at an annual or special meeting of stockholders must provide timely notice thereof in writing. To be timely, a stockholder's notice generally will have to be delivered to and received at our principal executive offices before notice of the meeting is issued by the secretary of the company, with such notice being served not less than 90 nor more than 120 days before the meeting. Although the amended and restated bylaws will not give the board of directors the power to approve or disapprove stockholder nominations of candidates to be elected at an annual meeting, the amended and restated bylaws may have the effect of precluding the conduct of certain business at a meeting if the proper procedures are not followed or may discourage or deter a potential acquirer from conducting a solicitation of proxies to elect its own slate of directors or otherwise attempting to obtain control of the company.

Action by Written Consent

Our amended and restated certificate of incorporation and amended and restated bylaws will provide that any action to be taken by the stockholders must be effected at a duly called annual or special meeting of stockholders and may not be effected by written consent.

Amending our Certificate of Incorporation and Bylaws

Our amended and restated certificate of incorporation may be amended or altered in any manner provided by the Delaware General Corporation Law ("DGCL"). Our amended and restated bylaws may be adopted, amended, altered or repealed by stockholders only upon approval of at least majority of the voting power of all the then outstanding shares of the common stock, except for any amendment of the above provisions, which would require the approval of a two-thirds majority of our then outstanding common stock. Additionally, our amended and restated certificate of incorporation will provide that our bylaws may be amended, altered or repealed by the board of directors.

Authorized but Unissued Shares

Our authorized but unissued shares of common stock and preferred stock will be available for future issuances without stockholder approval, except as required by the listing standards of NASDAQ, and could be utilized for a variety of corporate purposes, including future offerings to raise additional

capital, acquisitions and employee benefit plans. The existence of authorized but unissued and unreserved common stock and preferred stock could render more difficult or discourage an attempt to obtain control of the company by means of a proxy contest, tender offer, merger or otherwise.

Exclusive Jurisdiction

Our amended and restated certificate of incorporation will provide that, unless we consent to the selection of an alternative forum, the Court of Chancery of the State of Delaware shall be the sole and exclusive forum for any derivative action or proceeding brought on our behalf, any action asserting a claim of breach of fiduciary duty, any action asserting a claim arising pursuant to the DGCL, any action regarding our amended and restated certificate of incorporation or our amended and restated bylaws, or any action asserting a claim against us that is governed by the internal affairs doctrine. Our amended and restated certificate of incorporation will provide further that the federal district courts of the United States of America will be the exclusive forum for resolving any complaint asserting a cause of action arising under the Securities Act.

Business Combinations with Interested Stockholders

We are governed by Section 203 of the DGCL. Subject to certain exceptions, Section 203 of the DGCL prohibits a public Delaware corporation from engaging in a business combination (as defined in such section) with an “interested stockholder” (defined generally as any person who beneficially owns 15% or more of the outstanding voting stock of such corporation or any person affiliated with such person) for a period of three years following the time that such stockholder became an interested stockholder, unless (i) prior to such time the board of directors of such corporation approved either the business combination or the transaction that resulted in the stockholder becoming an interested stockholder; (ii) upon consummation of the transaction that resulted in the stockholder becoming an interested stockholder, the interested stockholder owned at least 85% of the voting stock of such corporation at the time the transaction commenced (excluding for purposes of determining the voting stock of such corporation outstanding (but not the outstanding voting stock owned by the interested stockholder) those shares owned (A) by persons who are directors and also officers of such corporation and (B) by employee stock plans in which employee participants do not have the right to determine confidentially whether shares held subject to the plan will be tendered in a tender or exchange offer); or (iii) at or subsequent to such time the business combination is approved by the board of directors of such corporation and authorized at a meeting of stockholders (and not by written consent) by the affirmative vote of at least 66 2/3% of the outstanding voting stock of such corporation not owned by the interested stockholder.

Our amended and restated certificate of incorporation and our amended and restated bylaws will provide that we must indemnify our directors and officers to the fullest extent authorized by the DGCL. We are expressly authorized to, and do, carry directors’ and officers’ insurance providing coverage for our directors, officers and certain employees for some liabilities. We believe that these indemnification provisions and insurance are useful to attract and retain qualified directors and executive directors.

The limitation on liability and indemnification provisions in our certificate of incorporation and bylaws may discourage stockholders from bringing a lawsuit against directors for breach of their fiduciary duty. These provisions may also have the effect of reducing the likelihood of derivative litigation against directors and officers, even though such an action, if successful, might otherwise benefit us and our stockholders. In addition, your investment may be adversely affected to the extent we pay the costs of settlement and damage awards against directors and officers pursuant to these indemnification provisions.

Listing

We have applied to list our common stock on the NASDAQ Global Select Market under the symbol “ALLK.”

Transfer Agent and Registrar

Upon completion of this offering, the transfer agent and registrar for our common stock will be American Stock Transfer & Trust Company, LLC. The transfer agent and registrar’s address is 6201 15th Avenue, Brooklyn, New York 11219.

SHARES ELIGIBLE FOR FUTURE SALE

Prior to this offering, there has been no public market for our common stock, and although we expect that our common stock will be approved for listing on NASDAQ, we cannot assure investors that there will be an active public market for our common stock following this offering. We cannot predict what effect, if any, sales of our shares in the public market or the availability of shares for sale will have on the market price of our common stock. Future sales of substantial amounts of common stock in the public market, including shares issued upon exercise of outstanding options, or the perception that such sales may occur, however, could adversely affect the market price of our common stock and also could adversely affect our future ability to raise capital through the sale of our common stock or other equity-related securities of ours at times and prices we believe appropriate.

Upon completion of this offering, based on our shares outstanding as of March 31, 2018 and after giving effect to the automatic conversion of all outstanding shares of our convertible preferred stock and assuming completion of the proposed concurrent private placement, 39,710,859 shares of our common stock will be outstanding, or 40,610,859 shares of common stock if the underwriters exercise their option to purchase additional shares in full. All of the shares of common stock expected to be sold in this offering will be freely tradable without restriction or further registration under the Securities Act unless held by our "affiliates," as that term is defined in Rule 144 under the Securities Act. The remaining outstanding shares of our common stock will be deemed "restricted securities" as that term is defined under Rule 144. Restricted securities may be sold in the public market only if their offer and sale is registered under the Securities Act or if the offer and sale of those securities qualify for an exemption from registration, including exemptions provided by Rules 144 and 701 under the Securities Act, which are summarized below.

As a result of the lock-up agreements and market stand-off provisions described below and the provisions of Rules 144 or 701 and no exercise of the underwriters' option to purchase additional shares, the shares of our common stock that will be deemed "restricted securities" will be available for sale in the public market following the completion of this offering as follows:

- 6,000,000 shares will be eligible for sale on the date of this prospectus; and
- 33,710,859 shares will be eligible for sale upon expiration of the lock-up agreements and market stand-off provisions described below, beginning more than 180 days after the date of this prospectus.

Lock-Up Agreements and Market Stand-off Agreements

Our officers, directors and the holders of substantially all of our capital stock, options and warrants (including NEA with respect to the equity securities it holds or acquires in the proposed concurrent private placement) have entered into market stand-off agreements with us and have entered into lock-up agreements with the underwriters, subject to certain exceptions, not to dispose of or hedge any of their common stock or securities convertible into or exchangeable for shares of common stock during the period from the date of this prospectus continuing through the date 180 days after the date of this prospectus, except with the prior consent of Goldman Sachs & Co. LLC and Jefferies LLC. See the section titled "Underwriting" for additional information.

Rule 144

Rule 144, as currently in effect, generally provides that, once we have been subject to the public company reporting requirements of Section 13 or Section 15(d) of the Exchange Act for at least 90 days, a stockholder who is not deemed to have been one of our affiliates at any time during the preceding 90 days

and who has beneficially owned the shares of our capital stock proposed to be sold for at least six months is entitled to sell such shares in reliance upon Rule 144 without complying with the volume limitation, manner of sale or notice conditions of Rule 144. If such stockholder has beneficially owned the shares of our capital stock proposed to be sold for at least one year, then such person is entitled to sell such shares in reliance upon Rule 144 without complying with any of the conditions of Rule 144.

Rule 144 also provides that a stockholder who is deemed to have been one of our affiliates at any time during the preceding 90 days and who has beneficially owned the shares of our common stock proposed to be sold for at least six months is entitled to sell such shares in reliance upon Rule 144 within any three month period beginning 90 days after the date of this prospectus a number of shares that does not exceed the greater of the following:

- 1% of the number of shares of our capital stock then outstanding, which will equal shares immediately after the completion of this offering, assuming no exercise by the underwriters of their option to purchase additional shares; or
- the average weekly trading volume of our common stock during the four calendar weeks preceding the filing of a notice on Form 144 with respect to such sale.

Sales of our capital stock made in reliance upon Rule 144 by a stockholder who is deemed to have been one of our affiliates at any time during the preceding 90 days are also subject to the current public information, manner of sale and notice conditions of Rule 144.

Rule 701

Rule 701 generally provides that, once we have been subject to the public company reporting requirements of Section 13 or Section 15(d) of the Exchange Act for at least 90 days, a stockholder who purchased shares of our common stock pursuant to a written compensatory benefit plan or contract and who is not deemed to have been one of our affiliates at any time during the preceding 90 days may sell such shares in reliance upon Rule 144 without complying with the current public information or holding period conditions of Rule 144. Rule 701 also provides that a stockholder who purchased shares of our common stock pursuant to a written compensatory benefit plan or contract and who is deemed to have been one of our affiliates during the preceding 90 days may sell such shares under Rule 144 without complying with the holding period condition of Rule 144. However, all stockholders who purchased shares of our common stock pursuant to a written compensatory benefit plan or contract are required to wait until 90 days after the date of this prospectus before selling such shares pursuant to Rule 701.

Registration Rights

After the completion of this offering, the holders of up to 30,971,627 shares of our common stock (plus any shares sold in the proposed concurrent private placement) will be entitled to certain rights with respect to the registration of such shares under the Securities Act. The registration of these shares of our common stock under the Securities Act would result in these shares becoming eligible for sale in the public market without restriction under the Securities Act immediately upon the effectiveness of such registration, subject to the Rule 144 limitations applicable to affiliates. See the section titled “Description of Capital Stock—Registration Rights” for a description of these registration rights.

Registration Statement

After the completion of this offering, we intend to file a registration statement on Form S-8 under the Securities Act to register all of the shares of our common stock subject to equity awards outstanding or reserved for issuance under our equity compensation plans. The shares of our common stock covered by such registration statement will be eligible for sale in the public market without restriction under the Securities Act immediately upon the effectiveness of such registration statement, subject to vesting restrictions, the conditions of Rule 144 applicable to affiliates, and any applicable market stand-off agreements and lock-up agreements. See the section titled “Executive Compensation—Employee Benefit and Stock Plans” for a description of our equity compensation plans.

MATERIAL U.S. FEDERAL INCOME AND ESTATE TAX CONSIDERATIONS FOR NON-U.S. HOLDERS OF OUR COMMON STOCK

The following is a summary of the material U.S. federal income tax consequences of the ownership and disposition of our common stock acquired in this offering by a "non-U.S. holder" (as defined below), but does not purport to be a complete analysis of all the potential tax considerations relating thereto. This summary is based upon the provisions of the United States Internal Revenue Code of 1986, as amended (the "Code"), Treasury Regulations promulgated thereunder, administrative rulings and judicial decisions, all as of the date hereof. These authorities may be changed, possibly retroactively, so as to result in U.S. federal income tax consequences different from those set forth below. We have not sought, and do not intend to seek, any ruling from the Internal Revenue Service ("IRS"), with respect to the statements made and the conclusions reached in the following summary, and there can be no assurance that the IRS or a court will agree with such statements and conclusions.

This summary also does not address the tax considerations arising under the laws of any non-U.S., state or local jurisdiction or under U.S. federal gift and estate tax rules, except to the limited extent set forth below. In addition, this discussion does not address tax considerations applicable to an investor's particular circumstances or to investors that may be subject to special tax rules, including, without limitation:

- banks, insurance companies, regulated investment companies, real estate investment trusts or other financial institutions;
- persons subject to the alternative minimum tax or the tax on net investment income;
- tax-exempt organizations;
- pension plans and tax-qualified retirement plans;
- controlled foreign corporations, passive foreign investment companies and corporations that accumulate earnings to avoid U.S. federal income tax;
- brokers or dealers in securities or currencies;
- traders in securities that elect to use a mark-to-market method of accounting for their securities holdings;
- persons that own, or are deemed to own, more than five percent of our capital stock (except to the extent specifically set forth below);
- certain former citizens or long-term residents of the United States;
- persons who hold our common stock as a position in a hedging transaction, "straddle," "conversion transaction" or other risk reduction transaction;
- persons who hold or receive our common stock pursuant to the exercise of any option or otherwise as compensation;
- persons who do not hold our common stock as a capital asset within the meaning of Section 1221 of the Code (generally, property held for investment); or
- persons deemed to sell our common stock under the constructive sale provisions of the Code.

In addition, if a partnership, entity or arrangement classified as a partnership or flow-through entity for U.S. federal income tax purposes holds our common stock, the tax treatment of a partner generally will depend on the status of the partner and upon the activities of the partnership or other entity. A partner in a partnership or other such entity that will hold our common stock should consult his, her or its own tax advisor regarding the tax consequences of the ownership and disposition of our common stock through a partnership or other such entity, as applicable.

You are urged to consult your tax advisor with respect to the application of the U.S. federal income tax laws to your particular situation, as well as any tax consequences of the purchase, ownership and disposition of our common stock arising under the U.S. federal gift or estate tax rules or under the laws of any state, local, non-U.S. or other taxing jurisdiction or under any applicable tax treaty.

Non-U.S. Holder Defined

For purposes of this discussion, you are a "non-U.S. holder" if you are a beneficial owner of our common stock that, for U.S. federal income tax purposes, is not a partnership or:

- an individual who is a citizen or resident of the United States;
- a corporation or other entity taxable as a corporation created or organized in the United States or under the laws of the United States or any political subdivision thereof, or otherwise treated as such for U.S. federal income tax purposes;
- an estate whose income is subject to U.S. federal income tax regardless of its source; or
- a trust (x) whose administration is subject to the primary supervision of a U.S. court and that has one or more U.S. persons who have the authority to control all substantial decisions of the trust or (y) that has made a valid election under applicable Treasury Regulations to be treated as a U.S. person.

Distributions

As described in the section titled "Dividend Policy," we have never declared or paid cash dividends on our common stock, and we do not anticipate paying any dividends on our common stock following the completion of this offering. However, if we do make distributions on our common stock, those payments will constitute dividends for U.S. federal income tax purposes to the extent paid from our current or accumulated earnings and profits, as determined under U.S. federal income tax principles. To the extent those distributions exceed both our current and our accumulated earnings and profits, the excess will constitute a return of capital and will first reduce your basis in our common stock, but not below zero, and then will be treated as gain from the sale of stock.

Subject to the discussions below on effectively connected income and Foreign Account Tax Compliance Act ("FATCA"), withholding, any dividend paid to you generally will be subject to U.S. federal withholding tax either at a rate of 30% of the gross amount of the dividend or such lower rate as may be specified by an applicable income tax treaty between the United States and your country of residence. In order to receive a reduced treaty rate, you must provide us with an IRS Form W-8BEN or W-8BEN-E or other appropriate version of IRS Form W-8 certifying qualification for the reduced rate. A non-U.S. holder of shares of our common stock eligible for a reduced rate of U.S. federal withholding tax pursuant to an income tax treaty may obtain a refund of any excess amounts withheld by filing an appropriate claim for refund with the IRS. If the non-U.S. holder holds our common stock through a financial institution or other agent acting on the non-U.S. holder's behalf, the non-U.S. holder will be required to provide appropriate documentation to the agent, which then will be required to provide certification to us or our paying agent, either directly or through other intermediaries.

Dividends received by you that are treated as effectively connected with your conduct of a U.S. trade or business (and, if required by an applicable income tax treaty, such dividends are attributable to a permanent establishment or fixed base maintained by you in the United States) are generally exempt from the 30% U.S. federal withholding tax, subject to the discussion below on backup withholding and FATCA withholding. In order to obtain this exemption, you must provide us with a properly executed IRS Form W-8ECI or other applicable IRS Form W-8 properly certifying such exemption. Such

effectively connected dividends, although not subject to U.S. federal withholding tax, are taxed at the same graduated rates applicable to U.S. persons, net of certain deductions and credits, subject to an applicable income tax treaty providing otherwise. In addition, if you are a corporate non-U.S. holder, dividends you receive that are effectively connected with your conduct of a U.S. trade or business may also be subject to a branch profits tax at a rate of 30% or such lower rate as may be specified by an applicable income tax treaty between the United States and your country of residence. You should consult your tax advisor regarding the tax consequences of the ownership and disposition of our common stock, including any applicable tax treaties that may provide for different rules.

Gain on Disposition of Common Stock

Subject to the discussion below regarding backup withholding and FATCA withholding, you generally will not be required to pay U.S. federal income tax on any gain realized upon the sale or other disposition of our common stock unless:

- the gain is effectively connected with your conduct of a U.S. trade or business (and, if an applicable income tax treaty so provides, the gain is attributable to a permanent establishment or fixed base maintained by you in the United States);
- you are an individual who is present in the United States for a period or periods aggregating 183 days or more during the calendar year in which the sale or disposition occurs and certain other conditions are met; or
- our common stock constitutes a United States real property interest by reason of our status as a “United States real property holding corporation,” or USRPHC, for U.S. federal income tax purposes at any time within the shorter of the five-year period preceding your disposition of, or your holding period for, our common stock.

We believe that we are not currently and will not become a USRPHC for U.S. federal income tax purposes, and the remainder of this discussion so assumes. However, because the determination of whether we are a USRPHC depends on the fair market value of our U.S. real property relative to the fair market value of our U.S. and worldwide real property plus our other business assets, there can be no assurance that we will not become a USRPHC in the future. Even if we become a USRPHC, however, as long as our common stock is regularly traded on an established securities market, your common stock will be treated as U.S. real property interests only if you actually (directly or indirectly) or constructively hold more than five percent of such regularly traded common stock at any time during the shorter of the five-year period preceding your disposition of, or your holding period for, our common stock.

If you are a non-U.S. holder described in the first bullet above, you will be required to pay tax on the gain derived from the sale (net of certain deductions and credits) under regular graduated U.S. federal income tax rates, and a corporate non-U.S. holder described in the first bullet above also may be subject to the branch profits tax at a 30% rate, or such lower rate as may be specified by an applicable income tax treaty. If you are an individual non-U.S. holder described in the second bullet above, you will be subject to tax at 30% (or such lower rate specified by an applicable income tax treaty) on the gain derived from the sale, which gain may be offset by U.S. source capital losses for the year, provided you have timely filed U.S. federal income tax returns with respect to such losses. You should consult your tax advisor regarding any applicable income tax or other treaties that may provide for different rules.

Federal Estate Tax

Our common stock beneficially owned by an individual who is not a citizen or resident of the United States (as defined for U.S. federal estate tax purposes) at the time of their death will generally

be includable in the decedent's gross estate for U.S. federal estate tax purposes. Such stock, therefore, may be subject to U.S. federal estate tax, unless an applicable estate tax treaty provides otherwise.

Backup Withholding and Information Reporting

Generally, we must report annually to the IRS the amount of dividends paid to you, your name and address and the amount of tax withheld, if any. A similar report will be sent to you. Pursuant to applicable income tax treaties or other agreements, the IRS may make these reports available to tax authorities in your country of residence.

Payments of dividends on or of proceeds from the disposition of our common stock made to you may be subject to information reporting and backup withholding at a current rate of 24% unless you establish an exemption, for example, by properly certifying your non-U.S. status on a properly completed IRS Form W-8BEN or W-8BEN-E or another appropriate version of IRS Form W-8. Notwithstanding the foregoing, backup withholding and information reporting may apply if either we or our paying agent has actual knowledge, or reason to know, that you are a U.S. person.

Backup withholding is not an additional tax; rather, the U.S. federal income tax liability of persons subject to backup withholding will be reduced by the amount of tax withheld. If withholding results in an overpayment of taxes, a refund or credit may generally be obtained from the IRS, provided that the required information is furnished to the IRS in a timely manner.

Foreign Account Tax Compliance Act (FATCA)

Provisions of the Code commonly referred to as FATCA, Treasury Regulations issued thereunder and official IRS guidance generally impose a U.S. federal withholding tax of 30% on dividends on, and the gross proceeds from a sale or other disposition of our common stock, paid to a "foreign financial institution" (as specially defined under these rules), unless such institution enters into an agreement with the U.S. government to, among other things, withhold on certain payments and to collect and provide to the U.S. tax authorities substantial information regarding the U.S. account holders of such institution (which includes certain equity and debt holders of such institution, as well as certain account holders that are foreign entities with U.S. owners) or otherwise establishes an exemption. FATCA also generally imposes a U.S. federal withholding tax of 30% on dividends on and the gross proceeds from a sale or other disposition of our common stock paid to a "non-financial foreign entity" (as specially defined under these rules) unless such entity provides the withholding agent with a certification identifying the substantial direct and indirect U.S. owners of the entity, certifies that it does not have any substantial U.S. owners, or otherwise establishes an exemption.

The withholding obligations under FATCA generally apply to dividends on our common stock and to the payment of gross proceeds of a sale or other disposition of our common stock made on or after January 1, 2019. The withholding tax will apply regardless of whether the payment otherwise would be exempt from U.S. nonresident and backup withholding tax, including under the other exemptions described above. Under certain circumstances, a non-U.S. holder might be eligible for refunds or credits of such taxes. An intergovernmental agreement between the United States and an applicable foreign country may modify the requirements described in this section. Prospective investors should consult with their own tax advisors regarding the application of FATCA withholding to their investment in, and ownership and disposition of, our common stock.

The preceding discussion of U.S. federal tax considerations is for general information only. It is not tax advice to investors in their particular circumstances. Each prospective investor should consult its own tax advisor regarding the particular U.S. federal, state and local and non-U.S. tax consequences of purchasing, holding and disposing of our common stock, including the consequences of any proposed change in applicable laws.

UNDERWRITING

Under the terms and subject to the conditions in an underwriting agreement to be dated the date of this prospectus, the underwriters named below, for whom Goldman Sachs & Co. LLC and Jefferies LLC are acting as representatives, have severally agreed to purchase, and we have agreed to sell to them, severally, the number of shares indicated below.

Name	Number of Shares
Goldman Sachs & Co. LLC	
Jefferies LLC	
William Blair & Company, L.L.C.	
Total	6,000,000

The underwriting agreement provides that the obligations of the underwriters to purchase the shares included in this offering are subject to approval of legal matters by counsel and to other conditions. The underwriters are obligated to purchase all the shares (other than those covered by the option to purchase additional shares described below) if they purchase any of the shares.

Certain of our existing stockholders, including certain stockholders affiliated with our directors and that beneficially own more than 5% of our outstanding common stock, have indicated an interest in purchasing approximately $35.0 million in shares of our common stock in this offering at the initial public offering price. However, because indications of interest are not binding agreements or commitments to purchase, the underwriters may determine to sell more, less or no shares in this offering to any of these stockholders, or any of these stockholders may determine to purchase more, less or no shares in this offering. The underwriters will receive the same underwriting discounts and commissions on any shares purchased by these stockholders as they will on any other shares sold to the public in this offering.

Shares sold by the underwriters to the public will initially be offered at the initial public offering price set forth on the cover page of this prospectus. Any shares sold by the underwriters to securities dealers may be sold at a discount from the initial public offering price not to exceed $ per share. If all the shares are not sold at the initial offering price, the underwriters may change the offering price and the other selling terms. The offering of the shares by the underwriters is subject to receipt and acceptance and subject to the underwriters' right to reject any order in whole or in part.

If the underwriters sell more shares than the total number set forth in the table above, we have granted to the underwriters an option, exercisable for 30 days from the date of this prospectus, to purchase up to 900,000 additional shares at the public offering price less the underwriting discount. To the extent the option is exercised, each underwriter must purchase a number of additional shares approximately proportionate to that underwriter's initial purchase commitment. Any shares issued or sold under the option will be issued and sold on the same terms and conditions as the other shares that are the subject of this offering.

We have agreed that, for a period of 180 days from the date of this prospectus, we will not, without the prior written consent of the representatives, offer, sell, contract to sell, pledge, grant any option to purchase, make any short sale or otherwise transfer or dispose of, directly or indirectly, or file with or confidentially submit to the Securities and Exchange Commission a registration statement relating to, shares of our common stock, including but not limited to any options or warrants to purchase shares of our common stock or any securities that are convertible into or exchangeable for, or that represent the right to receive, shares of our common stock (collectively, "lock-up securities"), or publicly disclose the

intention to make any such offer, sale, pledge, disposition or filing. We also will not, without the prior consent of the representatives, enter into any swap or other agreement that transfers, in whole or in part, any of the economic consequences of ownership of lock-up securities. The foregoing restrictions do not apply to:

(A) the shares of our common stock to be sold by us in this offering;

(B) the issuance by us of shares of common stock upon the exercise or settlement of options pursuant to our equity plans that are described in this prospectus, or upon the conversion of convertible securities outstanding as of the date of the underwriting agreement and as described in this prospectus;

(C) the issuance by us of lock-up securities pursuant to our stock plans that are described in this prospectus;

(D) the issuance by us of lock-up securities in connection with (1) the acquisition by us of the business, technology, not less than a majority or controlling portion of the securities, property or other assets of another person or entity or pursuant to an employee benefit plan assumed by us in connection with such acquisition and the issuance of any such securities pursuant to any such agreement, or (2) our bona fide commercial transactions (including joint ventures, commercial relationships or other strategic transactions); or

(E) the filing of any registration statement on Form S-8 relating to securities granted or to be granted pursuant to our stock plans that are described in this prospectus or any assumed employee benefit plan contemplated by clause (D) above.

The aggregate number of shares of common stock that we may sell or issue or agree to sell or issue pursuant to clause (D) above and, with respect to securities to be granted pursuant to any assumed employee benefit plan, pursuant to clause (E) above, shall not exceed 7.5% of the total number of shares of our common stock outstanding immediately following this offering. In the case of clauses (C) through (E) above, each recipient of such securities shall execute and deliver to the representatives, on or prior to the issuance of such securities, a lock-up agreement substantially to the effect set forth above.

Additionally, our officers and directors and the holders of substantially all of our equity securities (including NEA with respect to the equity securities it holds or acquires in the proposed concurrent private placement) have entered into lock-up agreements pursuant to which, for a period of 180 days from the date of this prospectus, we and they will not, without the prior written consent of the representatives, offer, sell, contract to sell, pledge, grant any option to purchase, make any short sale or otherwise dispose of any lock-up securities. The foregoing is subject to several exceptions including:

(A) The following transfers of lock-up securities:

(i) as a bona fide gift or gifts;

(ii) to any member of the lock-up signatory's immediate family or to any trust or other legal entity for the direct benefit of the lock-up signatory or his or her immediate family, or if the signatory is a trust, to a trustor or beneficiary of the trust or to the estate of a beneficiary of such trust, provided that any such transfer shall not involve a disposition for value;

(iii) by will, other testamentary document or the laws of intestate succession;

(iv) in connection with a sale of the lock-up signatory's shares acquired in the offering (other than any issuer-directed shares of lock-up securities purchased in the offering by any of our officers or directors) or in the open market following the offering;

(v) if the lock-up signatory is a corporation, partnership, limited liability company, trust or other business entity, (A) to any of its affiliates, or to any investment fund or other entity controlling, controlled by, managing or managed by or under common control with the lock-up signatory or its affiliates or (B) as part of a distribution, transfer or disposition to its affiliates, directors, officers, employees, managers, managing members, members, stockholders, partners, beneficiaries or other equity holders;

(vi) by surrender or forfeiture to us of shares of our common stock (A) in connection with "net" or "cashless" exercise or settlement of stock options, other rights to purchase lock-up securities or other awards expiring during the lock-up period, for payment of tax withholdings or remittance payments due as a result of the vesting, settlement or exercise of such awards pursuant to an equity incentive plan, stock purchase plan or other employee benefit plan or (B) upon the conversion of a convertible security of the Company in order to cover withholding tax obligations in connection with such conversion;

(vii) to us in connection with any contractual arrangement in effect on the date of this prospectus that provides for the repurchase of the lock-up signatory's equity securities by us in connection with the signatory's termination of service with us;

(viii) in connection with the conversion of any convertible security into shares of common stock in a manner consistent with the description of such securities contained in this prospectus, provided that such shares of common stock will remain subject to the provisions of the lock-up agreement;

(ix) to a nominee or custodian of a person or entity to whom a transfer would be permissible under (i), (ii), (iii) or (v) above;

(x) pursuant to a bona fide third-party tender offer, merger, consolidation or other similar transaction that is approved by our board of directors and made to all holders of our capital stock on substantially the same terms for holders of a majority of the voting power of our outstanding shares of capital stock involving a change of control of the Company;

(xi) in connection with conversion or reclassification of the outstanding preferred stock or other classes of common stock of the Company into shares of common stock as disclosed in this prospectus, provided that any such shares of common stock received upon such conversion or reclassification shall be subject to the terms of the lock-up agreement;

(xii) by operation of law, including pursuant to orders of a court, a qualified domestic order or in connection with a divorce settlement; or

(xiii) with the prior written consent of the representatives on behalf of the underwriters.

In the case of any transfer pursuant to (i), (ii), (iii), (v), (ix) and (xii) above, the donee, transferee or distributee must agree in writing to be bound by the lock-up restrictions. In the case of any transfer pursuant to (i), (ii), (iii), (iv) and (v) above, no filing under Section 16 of the Exchange Act or other public filing, report or announcement reporting a reduction in beneficial ownership of shares of common stock shall be required or voluntarily made during the lock-up period (other than a required filing on Form 5, Schedule 13G (or Schedule 13G/A) or Schedule 13F). In the case of (vi) above, if the lock-up signatory is required to file a report under Section 16 of the Exchange Act during the lock-up period, the lock-up signatory shall include a statement to the effect that such report relates to the circumstances described in (vi) above. In the case of (i), (ii), (iii), (v) and (ix) above, any transfer of lock-up securities must not involve a disposition for value. In the case of (vii) above, if the lock-up signatory is required to file a report under Section 16 of the Exchange Act during the lock-up period, the lock-up signatory shall include a statement in such report to the effect that such transfer is to the Company in connection with the repurchase of shares of common stock, as the case may be.

(B) Receipt from us of shares of common stock in connection with the exercise of options or other rights granted under a stock incentive plan or other equity award plan; or

(C) Entry into a written plan meeting the requirements of Rule 10b5-1 under the Exchange Act after the date of the lock-up agreement relating to the sale of the lock-up signatory's shares, provided that (i) the securities subject to such plan may not be transferred until after the lock-up period expires and (ii) no public announcement or filing under the Exchange Act shall be voluntarily made regarding the establishment of such plan during the lock-up period.

Prior to this offering, there has been no public market for our shares. Consequently, the initial public offering price for the shares was determined by negotiations between us and the representatives. Among the factors considered in determining the initial public offering price were our results of operations, our current financial condition, our future prospects, our markets, the economic conditions in and future prospects for the industry in which we compete, our management and currently prevailing general conditions in the equity securities markets, including current market valuations of publicly traded companies considered comparable to our company. We cannot assure you, however, that the price at which the shares will sell in the public market after this offering will not be lower than the initial public offering price or that an active trading market in our shares will develop and continue after this offering.

We have applied to list our common stock on the NASDAQ Global Select Market under the symbol "ALLK."

The following table shows the underwriting discounts and commissions that we and the selling stockholders are to pay to the underwriters in connection with this offering. These amounts are shown assuming both no exercise and full exercise of the underwriters' option to purchase additional shares.

	No Exercise	Full Exercise
Per share	$	$
Total	$	$

We estimate that our total expenses of this offering will be approximately $3.4 million, excluding underwriter discounts and commission. We will agree to reimburse the underwriters for expenses related to any applicable state securities filings and to the Financial Industry Regulatory Authority incurred by them in connection with this offering in an amount up to $35,000.

In connection with the offering, the underwriters may purchase and sell shares of common stock in the open market. These transactions may include short sales, stabilizing transactions and purchases to cover positions created by short sales. Short sales involve the sale by the underwriters of a greater number of shares than they are required to purchase in the offering, and a short position represents the amount of such sales that have not been covered by subsequent purchases. A "covered short position" is a short position that is not greater than the amount of additional shares for which the underwriters' option described above may be exercised. The underwriters may cover any covered short position by either exercising their option to purchase additional shares or purchasing shares in the open market. In determining the source of shares to cover the covered short position, the underwriters will consider, among other things, the price of shares available for purchase in the open market as compared to the price at which they may purchase additional shares pursuant to the option described above. "Naked" short sales are any short sales that create a short position greater than the amount of additional shares for which the option described above may be exercised. The underwriters must cover any such naked short position by purchasing shares in the open market. A naked short position is more likely to be created if the underwriters are concerned that there may be downward pressure on the price of the common stock in the open market after pricing that could adversely affect

investors who purchase in the offering. Stabilizing transactions consist of various bids for or purchases of common stock made by the underwriters in the open market prior to the completion of the offering.

The underwriters may also impose a penalty bid. This occurs when a particular underwriter repays to the underwriters a portion of the underwriting discount received by it because the representatives have repurchased shares sold by or for the account of such underwriter in stabilizing or short covering transactions.

Purchases to cover short positions and stabilizing purchases, as well as other purchases by the underwriters for their own accounts, may have the effect of preventing or retarding a decline in the market price of the shares. They may also cause the price of the shares to be higher than the price that would otherwise exist in the open market in the absence of these transactions. The underwriters may conduct these transactions on NASDAQ, in an over-the-counter market or otherwise. If the underwriters commence any of these transactions, they may discontinue them at any time.

The underwriters and their respective affiliates are full-service financial institutions engaged in various activities, which may include sales and trading, commercial and investment banking, advisory, investment management, investment research, principal investment, hedging, market making, financing and brokerage activities. Certain of the underwriters and their respective affiliates have, from time to time, performed, and may in the future perform, various financial advisory and investment banking services for us, for which they received or will receive customary fees and reimbursement of expenses.

In the ordinary course of their various business activities, the underwriters and their respective affiliates may purchase, sell or hold a broad array of instruments and actively trade debt and equity securities (or related derivative securities), commodities, currencies, credit default swaps and other financial instruments (including bank loans) for their own account and for the accounts of their customers and may at any time hold long and short positions in such securities and instruments. Such investment and securities activities may involve or relate to our assets, securities and instruments (directly, as collateral serving other obligations or otherwise) and/or persons and entities with relationships with the issuer. The underwriters and their respective affiliates may also communicate independent investment recommendations, market color or trading ideas and/or publish or express independent research views in respect of such assets, securities or instruments and may at any time hold, or recommend to clients that they should acquire, long and/or short positions in such assets, securities and instruments.

We have agreed to indemnify the several underwriters against certain liabilities, including liabilities under the Securities Act, or to contribute to payments the underwriters may be required to make because of any of those liabilities.

European Economic Area

In relation to each Member State of the European Economic Area which has implemented the Prospectus Directive (each, a Relevant Member State), an offer to the public of our common stock may not be made in that Relevant Member State, except that an offer to the public in that Relevant Member State of our common stock may be made at any time under the following exemptions under the Prospectus Directive:

(a) to any legal entity which is a qualified investor as defined in the Prospectus Directive;

(b) to fewer than 150 natural or legal persons (other than qualified investors as defined in the Prospectus Directive), subject to obtaining the prior consent of the Representatives for any such offer; or

(c) in any other circumstances falling within Article 3(2) of the Prospectus Directive;

provided that no such offer of shares of our common stock shall result in a requirement for the publication by us or any underwriter of a prospectus pursuant to Article 3 of the Prospectus Directive.

For the purposes of this provision, the expression an “offer to the public” in relation to our common stock in any Relevant Member State means the communication in any form and by any means of sufficient information on the terms of the offer and our common stock to be offered so as to enable an investor to decide to purchase our common stock, as the same may be varied in that Member State by any measure implementing the Prospectus Directive in that Member State, the expression “Prospectus Directive” means Directive 2003/71/EC (as amended), including by Directive 2010/73/EU and includes any relevant implementing measure in the Relevant Member State.

This European Economic Area selling restriction is in addition to any other selling restrictions set out below.

United Kingdom

In the United Kingdom, this prospectus is only addressed to and directed at qualified investors who are (i) investment professionals falling within Article 19(5) of the Financial Services and Markets Act 2000 (Financial Promotion) Order 2005 (the Order); or (ii) high net worth entities and other persons to whom it may lawfully be communicated, falling within Article 49(2)(a) to (d) of the Order (all such persons together being referred to as “relevant persons”). Any investment or investment activity to which this prospectus relates is available only to relevant persons and will only be engaged with relevant persons. Any person who is not a relevant person should not act or relay on this prospectus or any of its contents.

Canada

Our common stock may be sold in Canada only to purchasers purchasing, or deemed to be purchasing, as principal that are accredited investors, as defined in National Instrument 45-106 Prospectus Exemptions or subsection 73.3(1) of the Securities Act (Ontario), and are permitted clients, as defined in National Instrument 31-103 Registration Requirements, Exemptions, and Ongoing Registrant Obligations. Any resale of our common stock must be made in accordance with an exemption from, or in a transaction not subject to, the prospectus requirements of applicable securities laws.

Securities legislation in certain provinces or territories of Canada may provide a purchaser with remedies for rescission or damages if this prospectus (including any amendment thereto) contains a misrepresentation, provided that the remedies for rescission or damages are exercised by the purchaser within the time limit prescribed by the securities legislation of the purchaser’s province or territory. The purchaser should refer to any applicable provisions of the securities legislation of the purchaser’s province or territory of these rights or consult with a legal advisor.

Pursuant to section 3A.3 of National Instrument 33-105 Underwriting Conflicts (NI 33-105), the underwriters are not required to comply with the disclosure requirements of NI 33-105 regarding underwriter conflicts of interest in connection with this offering, provided that no such offer of shares of our common stock shall result in a requirement for the publication by us or any underwriter of a prospectus pursuant to Article 3 of the Prospectus Directive.

Hong Kong

Our common stock may not be offered or sold in Hong Kong by means of any document other than (i) in circumstances which do not constitute an offer to the public within the meaning of the Companies (Winding Up and Miscellaneous Provisions) Ordinance (Cap. 32 of the Laws of Hong Kong), or Companies (Winding Up and Miscellaneous Provisions) Ordinance, or which do not constitute an invitation to the public within the meaning of the Securities and Futures Ordinance (Cap. 571 of the Laws of Hong Kong), or Securities and Futures Ordinance, (ii) to "professional investors" as defined in the Securities and Futures Ordinance and any rules made thereunder or (iii) in other circumstances which do not result in the document being a "prospectus" as defined in the Companies (Winding Up and Miscellaneous Provisions) Ordinance, and no advertisement, invitation or document relating to the shares may be issued or may be in the possession of any person for the purpose of issue (in each case whether in Hong Kong or elsewhere), which is directed at, or the contents of which are likely to be accessed or read by, the public in Hong Kong (except if permitted to do so under the securities laws of Hong Kong) other than with respect to shares of common stock which are or are intended to be disposed of only to persons outside Hong Kong or only to "professional investors" in Hong Kong as defined in the Securities and Futures Ordinance and any rules made thereunder.

Singapore

This prospectus has not been registered as a prospectus with the Monetary Authority of Singapore. Accordingly, this prospectus and any other document or material in connection with the offer or sale, or invitation for subscription or purchase, of our common stock may not be circulated or distributed, nor may our common stock be offered or sold, or be made the subject of an invitation for subscription or purchase, whether directly or indirectly, to persons in Singapore other than (i) to an institutional investor (as defined under Section 4A of the Securities and Futures Act, Chapter 289 of Singapore (the "SFA"), under Section 274 of the SFA, (ii) to a relevant person (as defined in Section 275(2) of the SFA) pursuant to Section 275(1) of the SFA, or any person pursuant to Section 275(1A) of the SFA, and in accordance with the conditions specified in Section 275 of the SFA or (iii) otherwise pursuant to, and in accordance with the conditions of, any other applicable provision of the SFA, in each case subject to conditions set forth in the SFA.

Where our shares of common stock are subscribed or purchased under Section 275 of the SFA by a relevant person which is a corporation (which is not an accredited investor (as defined in Section 4A of the SFA)) the sole business of which is to hold investments and the entire share capital of which is owned by one or more individuals, each of whom is an accredited investor, the securities (as defined in Section 239(1) of the SFA) of that corporation shall not be transferable for six months after that corporation has acquired our common stock under Section 275 of the SFA except: (1) to an institutional investor under Section 274 of the SFA or to a relevant person (as defined in Section 275(2) of the SFA), (2) where such transfer arises from an offer in that corporation's securities pursuant to Section 275(1A) of the SFA, (3) where no consideration is or will be given for the transfer, (4) where the transfer is by operation of law, (5) as specified in Section 276(7) of the SFA or (6) as specified in Regulation 32 of the Securities and Futures (Offers of Investments) (Shares and Debentures) Regulations 2005 of Singapore ("Regulation 32").

Where our shares of common stock are subscribed or purchased under Section 275 of the SFA by a relevant person which is a trust (where the trustee is not an accredited investor (as defined in Section 4A of the SFA)) whose sole purpose is to hold investments and each beneficiary of the trust is an accredited investor, the beneficiaries' rights and interest (howsoever described) in that trust shall not be transferable for six months after that trust has acquired our common stock under Section 275 of the SFA except: (1) to an institutional investor under Section 274 of the SFA or to a relevant person (as defined in Section 275(2) of the SFA), (2) where such transfer arises from an offer that is made on

terms that such rights or interest are acquired at a consideration of not less than S$200,000 (or its equivalent in a foreign currency) for each transaction (whether such amount is to be paid for in cash or by exchange of securities or other assets), (3) where no consideration is or will be given for the transfer, (4) where the transfer is by operation of law, (5) as specified in Section 276(7) of the SFA or (6) as specified in Regulation 32.

Japan

Our common stock has not been and will not be registered under the Financial Instruments and Exchange Act of Japan (Act No. 25 of 1948, as amended) (the “FIEA”). Our common stock may not be offered or sold, directly or indirectly, in Japan or to or for the benefit of any resident of Japan (including any person resident in Japan or any corporation or other entity organized under the laws of Japan) or to others for reoffering or resale, directly or indirectly, in Japan or to or for the benefit of any resident of Japan, except pursuant to an exemption from the registration requirements of the FIEA and otherwise in compliance with any relevant laws and regulations of Japan.

LEGAL MATTERS

The validity of the issuance of our common stock offered in this prospectus will be passed upon for us by Wilson Sonsini Goodrich & Rosati, Professional Corporation, Palo Alto, California. Davis Polk & Wardwell LLP, Menlo Park, California, is acting as counsel for the underwriters. Certain members of, and investment partnerships comprised of members of, and persons associated with, Wilson Sonsini Goodrich & Rosati, Professional Corporation, own an aggregate of 5,685 shares of our common stock.

EXPERTS

Ernst & Young LLP, independent registered public accounting firm, has audited our financial statements at December 31, 2016 and 2017, and for each of the two years in the period ended December 31, 2017, as set forth in their report. We have included our financial statements in the prospectus and elsewhere in the registration statement in reliance on Ernst & Young LLP's report, given on their authority as experts in accounting and auditing.

WHERE YOU CAN FIND ADDITIONAL INFORMATION

We have filed with the SEC a registration statement on Form S-1 under the Securities Act with respect to the shares of our common stock offered by this prospectus. This prospectus, which constitutes a part of the registration statement, does not contain all of the information set forth in the registration statement, as permitted by the rules and regulations of the SEC. For further information with respect to us and our common stock, we refer you to the registration statement, including the exhibits filed as a part of the registration statement. Statements contained in this prospectus concerning the contents of any contract or any other document is not necessarily complete. If a contract or document has been filed as an exhibit to the registration statement, please see the copy of the contract or document that has been filed. Each statement in this prospectus relating to a contract or document filed as an exhibit is qualified in all respects by the filed exhibit. You may obtain copies of this information by mail from the Public Reference Section of the SEC, 100 F Street, N.E., Room 1580, Washington, D.C. 20549, at prescribed rates or view them online. You may obtain information on the operation of the public reference rooms by calling the SEC at 1-800-SEC-0330. The SEC also maintains an Internet website that contains the registration statement of which this prospectus forms a part, as well as the exhibits thereto. These documents, along with future reports, proxy statements and other information about us, are available at the SEC's website, www.sec.gov.

As a result of this offering, we will become subject to the information and reporting requirements of the Securities Exchange Act of 1934, as amended, and, in accordance with this law, will file periodic reports, proxy statements and other information with the SEC. These periodic reports, proxy statements and other information will be available for inspection and copying at the SEC's public reference facilities and the website of the SEC referred to above. We also maintain a website at www.allakos.com. Upon the completion of this offering, you may access these materials free of charge as soon as reasonably practicable after they are electronically filed with, or furnished to, the SEC. Information contained on our website is not a part of this prospectus and the inclusion of our website address in this prospectus is an inactive textual reference only.

INDEX TO FINANCIAL STATEMENTS

REPORT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

To the Stockholders and the Board of Directors of
Allakos Inc.

Opinion on the Financial Statements

We have audited the accompanying balance sheets of Allakos Inc. (the Company) as of December 31, 2016 and 2017, and the related statements of operations and comprehensive loss, convertible preferred stock and stockholders' deficit and cash flows for the years then ended, and the related notes (collectively referred to as the "financial statements"). In our opinion, the financial statements present fairly, in all material respects, the financial position of the Company at December 31, 2016 and 2017, and the results of its operations and its cash flows for the years then ended in conformity with U.S. generally accepted accounting principles.

Basis for Opinion

These financial statements are the responsibility of the Company's management. Our responsibility is to express an opinion on the Company's financial statements based on our audits. We are a public accounting firm registered with the Public Company Accounting Oversight Board (United States) (PCAOB) and are required to be independent with respect to the Company in accordance with the U.S. federal securities laws and the applicable rules and regulations of the Securities and Exchange Commission and the PCAOB.

We conducted our audits in accordance with the standards of the PCAOB. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements are free of material misstatement, whether due to error or fraud. The Company is not required to have, nor were we engaged to perform, an audit of its internal control over financial reporting. As part of our audits we are required to obtain an understanding of internal control over financial reporting but not for the purpose of expressing an opinion on the effectiveness of the Company's internal control over financial reporting. Accordingly, we express no such opinion.

Our audits included performing procedures to assess the risks of material misstatement of the financial statements, whether due to error or fraud, and performing procedures that respond to those risks. Such procedures included examining, on a test basis, evidence regarding the amounts and disclosures in the financial statements. Our audits also included evaluating the accounting principles used and significant estimates made by management, as well as evaluating the overall presentation of the financial statements. We believe that our audits provide a reasonable basis for our opinion.

/s/ Ernst & Young LLP

We have served as the Company's auditor since 2016.

Redwood City, California
April 10, 2018, except for the first paragraph of Note 2 and for Note 13, as to which the date is July 9, 2018

ALLAKOS INC.

BALANCE SHEETS
(in thousands, except per share data)

	December 31, 2016	December 31, 2017
Assets		
Current assets:		
Cash and cash equivalents	$ 13,416	$ 85,207
Prepaid expenses and other current assets	150	1,037
Total current assets	13,566	86,244
Property and equipment, net	333	445
Other long-term assets	277	340
Total assets	$ 14,176	$ 87,029
Liabilities, convertible preferred stock and stockholders' equity (deficit)		
Current liabilities:		
Accounts payable	$ 1,041	$ 1,703
Accrued expenses and other current liabilities	1,494	1,089
Total current liabilities	2,535	2,792
Debt facility	4,990	—
Other long-term liabilities	91	36
Total liabilities	7,616	2,828
Commitments (Note 6)		
Series A convertible preferred stock, $0.001 par value per share; 26,111 and 26,083 shares authorized as of December 31, 2016 and 2017, respectively; 20,866 shares issued and outstanding as of December 31, 2016 and 2017; aggregate liquidation preference of $46,950 as of December 31, 2016 and 2017	42,996	42,996
Series B convertible preferred stock, $0.001 par value per share; no shares and 12,632 shares authorized as of December 31, 2016 and 2017, respectively; no shares and 10,105 shares issued and outstanding as of December 31, 2016 and 2017; aggregate liquidation preference of $0 and $100,141 as of December 31, 2016 and 2017	—	99,973
Stockholders' equity (deficit):		
Common stock, $0.001 par value per share; 38,333 and 55,000 shares authorized as of December 31, 2016 and 2017, respectively; 1,605 and 2,114 shares issued and outstanding as of December 31, 2016 and 2017, respectively	2	3
Additional paid-in capital	584	1,803
Accumulated deficit	(37,022)	(60,574)
Total stockholders' deficit	(36,436)	(58,768)
Total liabilities, convertible preferred stock, and stockholders' equity (deficit)	$ 14,176	$ 87,029

See accompanying notes to financial statements

ALLAKOS INC.

STATEMENTS OF OPERATIONS AND COMPREHENSIVE LOSS
(in thousands, except per share data)

	Year Ended December 31,	
	2016	2017
Operating expenses		
Research and development	$ 14,672	$ 18,506
General and administrative	2,388	3,748
Total operating expenses	17,060	22,254
Loss from operations	(17,060)	(22,254)
Interest expense, net	(51)	(1,302)
Other income (expense), net	11	(287)
Loss before benefit from income taxes	(17,100)	(23,843)
Provision for (benefit from) income taxes	—	(291)
Net loss and comprehensive loss	$(17,100)	$(23,552)
Net loss per share:		
Basic and diluted	$ (13.03)	$ (14.54)
Weighted-average shares of common stock outstanding:		
Basic and diluted	1,312	1,620
Pro forma net loss per share:		
Basic and diluted (unaudited)		$ (1.01)
Pro forma weighted-average shares of common stock outstanding:		
Basic and diluted (unaudited)		23,372

See accompanying notes to financial statements

ALLAKOS INC.

STATEMENTS OF CONVERTIBLE PREFERRED STOCK AND STOCKHOLDERS' DEFICIT
(in thousands)

	Convertible Preferred Stock		Common Stock		Additional Paid-In Capital	Accumulated Deficit	Total Stockholders' Deficit
	Shares	Amount	Shares	Amount			
Balance as of December 31, 2015	12,422	$ 22,210	1,565	$ 2	$ 322	$ (19,922)	$ (19,598)
Issuance of Series A convertible preferred stock for cash, net of issuance costs of $8	8,444	18,991	—	—	—	—	—
Reclassification of preferred stock tranche liability upon issuance of Series A convertible preferred stock	—	1,795	—	—	—	—	—
Stock-based compensation expense	—	—	—	—	182	—	182
Issuance of common stock warrants in connection with debt facility	—	—	—	—	24	—	24
Issuance of common stock upon exercise of stock options	—	—	40	—	20	—	20
Vesting of restricted common stock	—	—	—	—	36	—	36
Net loss	—	—	—	—	—	(17,100)	(17,100)
Balance as of December 31, 2016	20,866	$ 42,996	1,605	$ 2	$ 584	$ (37,022)	$ (36,436)
Issuance of Series B convertible preferred stock for cash, net of issuance costs of $168	9,334	92,331	—	—	—	—	—
Issuance of Series B convertible preferred stock upon conversion of convertible promissory notes	771	7,642	—	—	—	—	—
Stock-based compensation expense	—	—	—	—	402	—	402
Repurchase of unvested restricted common stock	—	—	(34)	—	—	—	—
Issuance of common stock upon exercise of stock options	—	—	543	1	227	—	228
Vesting of restricted common stock	—	—	—	—	28	—	28
Recognition of beneficial conversion feature related to convertible promissory notes payable to related parties, net of tax benefit of $966	—	—	—	—	1,867	—	1,867
Reclassification of beneficial conversion feature related to convertible promissory notes payable to related parties, net of tax expense of $675	—	—	—	—	(1,305)	—	(1,305)
Net loss	—	—	—	—	—	(23,552)	(23,552)
Balance as of December 31, 2017	30,971	$142,969	2,114	$ 3	$ 1,803	$ (60,574)	$ (58,768)

See accompanying notes to financial statements

ALLAKOS INC.

STATEMENTS OF CASH FLOWS
(in thousands)

	Year Ended December 31,	
	2016	2017
Cash flows from operating activities		
Net loss	$ (17,100)	$ (23,552)
Adjustments to reconcile net loss to net cash used in operating activities:		
Depreciation and amortization	148	241
Stock-based compensation	182	402
Non-cash interest related to debt facility	29	101
Loss on extinguishment of debt facility	—	159
Non-cash interest related to convertible promissory notes payable to related parties	—	228
Amortization of beneficial conversion feature related to convertible promissory notes payable to related parties	—	853
Benefit from deferred income taxes	—	(291)
Changes in operating assets and liabilities:		
Prepaid expenses and other current assets	275	(637)
Accounts payable	(1,141)	510
Accrued expenses and other current liabilities	279	(432)
Other long-term assets	(250)	(150)
Net cash used in operating activities	(17,578)	(22,568)
Cash flows from investing activities		
Purchases of property and equipment	(234)	(264)
Net cash used in investing activities	(234)	(264)
Cash flows from financing activities		
Issuance of convertible preferred stock, net of issuance costs	18,991	92,331
Issuance of convertible promissory notes, net of issuance costs	—	7,414
Proceeds from debt facility, net of issuance costs	4,985	—
Repayment of debt facility	—	(5,250)
Proceeds from the exercise of stock options, net of repurchases	36	228
Payments for deferred financing costs	—	(100)
Net cash provided by financing activities	24,012	94,623
Net increase in cash and cash equivalents	6,200	71,791
Cash and cash equivalents, beginning of period	7,216	13,416
Cash and cash equivalents, end of period	$ 13,416	$ 85,207
Supplemental disclosures		
Cash paid for interest	39	228
Noncash investing and financing items		
Reclassification of preferred stock tranche liability upon settlement	1,795	—
Recognition of beneficial conversion feature related to convertible promissory notes payable to related parties, net of tax benefit	—	1,867
Reclassification of beneficial conversion feature related to convertible promissory notes payable to related parties, net of tax expense	—	1,305
Conversion of convertible promissory notes payable to related parties	—	7,642
Property and equipment purchased in accounts payable	—	89
Deferred initial public offering costs in accounts payable	—	63
Issuance of common stock warrants in connection with debt facility	24	—
Vesting of restricted common stock subject to repurchase	20	28

See accompanying notes to financial statements

ALLAKOS INC.
NOTES TO FINANCIAL STATEMENTS

1. Organization and Business

Allakos Inc. ("Allakos" or the "Company") was incorporated in the state of Delaware in March 2012. Allakos is a clinical stage biopharmaceutical company focused on the development of AK002 for the treatment of eosinophil and mast cell related diseases. The Company's primary activities to date have included establishing its facilities, recruiting personnel, conducting research and development of its product candidates and raising capital. The Company's operations are located in San Carlos, California.

Liquidity Matters

Since inception, the Company has incurred net losses and negative cash flows from operations. During the year ended December 31, 2017, the Company incurred a net loss of $23.6 million and used $22.6 million of cash in operations. At December 31, 2017, the Company had an accumulated deficit of $60.6 million and does not expect to experience positive cash flows from operating activities in the foreseeable future. The Company has financed its operations to date primarily through the sale and issuance of convertible preferred stock. Management expects to incur additional operating losses in the future as the Company continues to further develop, seek regulatory approval for and, if approved, commence commercialization of its product candidates. Accordingly, management recognizes the need to raise additional capital to fully implement its business plan. The Company intends to raise necessary capital privately or publicly through debt or equity financings, as well as through potential strategic alliances with third parties. The Company had $85.2 million of cash and cash equivalents at December 31, 2017. Based on the Company's business plans, management believes that this is sufficient to meet its obligations for at least the next twelve months from the issuance date of these financial statements.

2. Summary of Significant Accounting Policies

Basis of Presentation

The financial statements have been prepared in accordance with United States generally accepted accounting principles ("U.S. GAAP"). The preparation of financial statements in conformity with U.S. GAAP requires management to make estimates and assumptions that affect the amounts and disclosures reported in the financial statements and accompanying notes. On July 6, 2018, the Company filed an amendment to its amended and restated certificate of incorporation, effecting a 1-for-1.25 reverse stock split of its outstanding shares of common stock and convertible preferred stock, as well as all shares of common stock reserved for future issuance upon the exercise, issuance or conversion of equity instruments. The accompanying financial statements and notes to the financial statements give retroactive effect to the reverse stock split for all periods presented.

Use of Estimates

Management uses significant judgment when making estimates related to common stock valuation and related stock-based compensation expense, convertible preferred stock valuation and intrinsic value of related beneficial conversion features, accrued expenses related to clinical trials and deferred tax valuation allowances. Management bases its estimates on historical experience and on various other assumptions that are believed to be reasonable under the circumstances, the results of which form the basis for making judgments about the carrying values of assets and liabilities that are not readily apparent from other sources. Actual results could differ from those estimates under different assumptions or conditions, and those differences could be material to the financial position and results of operations.

ALLAKOS INC.
NOTES TO FINANCIAL STATEMENTS

Concentration of Credit Risk and Other Risks and Uncertainties

Financial instruments that potentially subject the Company to credit risk principally consist of cash and cash equivalents in the form of money market funds. These financial instruments are held in accounts at a single financial institution that management believes possesses high credit quality. Amounts on deposit with this financial institution have and will continue to exceed federally-insured limits. The Company has not experienced any losses on its cash deposits.

The Company is subject to a number of risks similar to that of other early-stage biopharmaceutical companies, including, but not limited to, the need to obtain adequate additional funding, possible failure of current or future clinical trials, its reliance on third parties to conduct its clinical trials, the need to obtain regulatory and marketing approvals for its product candidates, competitive developments, the need to successfully commercialize and gain market acceptance of the Company's product candidates, its right to develop and commercialize its product candidates pursuant to the terms and conditions of the licenses granted to the Company, protection of proprietary technology, the ability to make milestone, royalty or other payments due under licensing agreements, and the need to secure and maintain adequate manufacturing arrangements with third parties. If the Company does not successfully commercialize or partner its product candidates, it will be unable to generate product revenue or achieve profitability.

Cash and Cash Equivalents

The Company considers all highly liquid investments with a maturity date of purchase of three months or less to be cash equivalents. Cash equivalents consist primarily of money market funds and are stated at fair value.

Fair Value Measurements

The Company accounts for fair value of its financial instruments in accordance with Financial Accounting Standards Board (the "FASB") Accounting Standards Codification ("ASC") Topic No. 820, *Fair Value Measurements* ("ASC 820"). ASC 820 establishes a common definition for fair value, establishes a framework for measuring fair value and expands disclosures about such fair value measurements. Additionally, ASC 820 defines fair value as the price that would be received to sell an asset or paid to transfer a liability in an orderly transaction between market participants at the measurement date.

The Company measures fair value based on a three-level hierarchy of inputs, of which the first two are considered observable and the last unobservable. Unobservable inputs reflect the Company's own assumptions about current market conditions. The three-level hierarchy of inputs is as follows:

Level 1 – Quoted prices in active markets for identical assets or liabilities.

Level 2 – Inputs other than Level 1 that are observable, either directly or indirectly, such as quoted prices for similar assets or liabilities; quoted prices in markets that are not active; or other inputs that are observable or can be corroborated by observable market data for substantially the full term of the assets or liabilities.

Level 3 **–** Unobservable inputs that are supported by little or no market activity and that are significant to the fair value of assets or liabilities.

To the extent that the valuation is based on models or inputs that are less observable or unobservable in the market, the determination of fair value requires more judgment. Accordingly, the

degree of judgment exercised by the Company in determining fair value is greatest for instruments categorized in Level 3. A financial instrument's level within the fair value hierarchy is based on the lowest level of any input that is significant to the fair value measurement.

The carrying amounts reflected in the accompanying balance sheets for cash and cash equivalents and prepaid expenses and other current assets approximate their fair values, due to their short-term nature. The Company believes the terms of its debt facility were in line with market conditions for instruments with similar terms and maturity. As such, the carrying value of the Company's debt facility approximates its fair value.

Deferred Initial Public Offering Costs

Costs incurred in connection with the IPO primarily consist of direct incremental legal, printing and accounting fees. IPO costs are capitalized as incurred and will be offset against proceeds upon consummation of this offering. In the event the offering is terminated or abandoned, deferred IPO costs will be expensed in the period such determination has been made. As of December 31, 2017, there were $0.2 million of deferred IPO costs included in other long-term assets on the accompanying balance sheet. The Company did not have any deferred IPO costs as of December 31, 2016.

Lease Liability

The Company classifies the agreement for its office and laboratory facilities as an operating lease. Rent expense is recorded on a straight-line basis over the term of the lease. Differences that exist between cash rent payments and the recognition of rent expense, such as those resulting from rent abatements or contractual escalations of minimum lease payments, are recorded as a deferred rent liability and recognized as adjustments to rental expense on a straight-line basis over the term of the lease. The current portion of the deferred rent liability is included within accrued expenses and other current liabilities on the accompanying balance sheets. Noncurrent portion of deferred rent liability is classified as other long-term liabilities.

Term Loan Financing Costs

Expenses such as legal costs that are incurred upon issuance of debt, including term loans, are deferred and amortized over the term of the debt using the effective interest rate method. The costs are initially recorded as a reduction to the carrying value of the debt with amortization of the expense included in interest expense, net within the Company's statements of operations and comprehensive loss. Finance payments due to the lender at the end of the term of the loan are treated as deferred financing costs and are accreted to interest expense over the term of the loan using the effective interest rate method. Warrants to purchase common stock that are issued to the lender in connection with the debt financing are recorded as a reduction to the carrying value of the debt based on the estimated fair value of the financial instruments at issuance date. Upon extinguishment, the remaining amortization and accretion of the debt discount and deferred issuance costs are written off by recognizing a loss on extinguishment of debt within other income (expense), net on the Company's statements of operations and comprehensive loss.

ALLAKOS INC.
NOTES TO FINANCIAL STATEMENTS

Property and Equipment, Net

Property and equipment are stated at cost, net of accumulated depreciation. Depreciation is computed using the straight-line method over the estimated useful lives of the assets. The useful lives of property and equipment are as follows:

Laboratory equipment – 3 years

Leasehold improvements – Shorter of remaining lease term or estimated life of the assets

Upon retirement or sale, the cost of disposed assets and their related accumulated depreciation are removed from the balance sheet. Any resulting gains or losses on dispositions of property and equipment are included as a component of other income (expense), net. Repair and maintenance costs that do not significantly add value to the property and equipment, or prolong its life, are charged to operating expense as incurred.

Impairment of Long-Lived Assets

Long-lived assets are reviewed for indications of possible impairment whenever events or changes in circumstances indicate that the carrying amount of an asset may not be recoverable. Recoverability is measured by comparison of the carrying amounts to the future undiscounted cash flows attributable to these assets. An impairment loss is recognized to the extent an asset group is not recoverable, and the carrying amount exceeds the projected discounted future cash flows arising from such assets. There were no impairments of long-lived assets for the years ended December 31, 2016 and 2017.

Accrued Research and Development Costs

Service agreements with contract research organizations (“CROs”) and contract development and manufacturing organizations (“CDMOs”) comprise a significant component of the Company’s research and development activities. External costs for CROs and CDMOs are recognized as the services are incurred. The Company accrues for expenses resulting from obligations under agreements with its third parties for which the timing of payments does not match the periods over which the materials or services are provided to the Company. Accruals are recorded based on estimates of services received and efforts expended pursuant to agreements established with CROs, CDMOs and other outside service providers. These estimates are typically based on contracted amounts applied to the proportion of work performed and determined through analysis with internal personnel and external service providers as to the progress or stage of completion of the services.

The Company makes judgements and estimates in determining the accrual balance in each reporting period. In the event advance payments are made to a CRO, CDMO or other outside service provider, the payments are recorded within prepaid expenses and other current assets and subsequently recognized as research and development expense when the associated services have been performed. As actual costs become known, the Company adjusts its liabilities and assets. Inputs, such as the extent of services received and the duration of services to be performed, may vary from the Company’s estimates, which will result in adjustments to research and development expense in future periods. Changes in these estimates that result in material changes to the Company’s accruals could materially affect the Company’s results of operations. The Company’s historical estimates have not been materially different from actual amounts recorded.

ALLAKOS INC.
NOTES TO FINANCIAL STATEMENTS

Convertible Debt Features

Beneficial conversion features embedded within the Company's convertible debt instruments are recognized at their intrinsic value at the commitment date. Intrinsic value is calculated as the difference between the effective conversion price and the fair value of the preferred stock into which the debt is convertible, multiplied by the number of shares of preferred stock into which the debt is convertible. The Company allocates a portion of the proceeds from issuance of the convertible debt to the beneficial conversion feature as a reduction to the carrying value of the debt, with the offset to additional paid-in capital. The resulting debt discount is amortized to interest expense through the stated maturity date of the convertible debt instrument using the effective interest method. Conversion of the debt to convertible preferred stock is accounted for as an extinguishment. Upon conversion, all unamortized discounts at the conversion date are recognized immediately as interest expense. The Company then allocates a portion of the reacquisition price to the repurchase of the beneficial conversion feature, as calculated by the intrinsic value of the conversion option at the extinguishment date. The residual amount, if any, is allocated to the convertible debt instrument. The gain or loss on extinguishment of the convertible debt instrument is measured as the difference between the retired debt's reacquisition price and carrying amount prior to extinguishment. Gains or losses resulting from convertible debt instruments issued to related parties are classified as capital contributions or distributions.

Preferred Stock Tranche Rights

Convertible preferred stock that includes features the Company has determined are not clearly and closely related to the equity host are bifurcated and accounted for separately as freestanding derivative assets or liabilities on the balance sheet at their estimated fair value. The Company historically recorded preferred stock derivative liabilities resulting from certain investors' rights to purchase from the Company, on the same terms as the Series A Preferred Stock Purchase Agreement executed in December 2012, additional shares of Series A convertible preferred stock in a second and third tranche. At initial recognition, the Company recorded these derivatives as an asset or liability on the balance sheets at their estimated fair value. The derivatives were subject to remeasurement at each balance sheet date, with changes in fair value recognized as a component of other income (expense), net on the Company's statements of operations and comprehensive loss. At the time of each tranche funding, the Company remeasured the derivative asset or liability, with the change in fair value recognized as a component of other income (expense), net and then reclassified the remaining value associated with the preferred stock derivative to Series A convertible preferred stock.

Convertible Preferred Stock

The Company records all shares of convertible preferred stock net of offering costs at their respective fair values on the dates of issuance. The convertible preferred stock is recorded outside of stockholders' deficit because, in the event of certain deemed liquidation events considered not solely within the Company's control, such as a merger, acquisition or sale of all or substantially all of the Company's assets, the convertible preferred stock will become redeemable at the option of the holders. In the event of a change of control of the Company, proceeds received from the sale of such shares will be distributed in accordance with the liquidation preferences set forth in the Company's Second Amended and Restated Certificate of Incorporation unless the holders of convertible preferred stock had previously converted their shares of convertible preferred stock into shares of common stock. The Company has not adjusted the carrying value of the convertible preferred stock to their redemption values, since it is uncertain whether or when a redemption event will occur.

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Segments

Operating segments are defined as components of an entity about which separate discrete information is available for evaluation by the chief operating decision maker or decision-making group, in deciding how to allocate resources and in assessing performance. The Company's chief operating decision maker, its Chief Executive Officer, views its operations and manages its business in one operating segment operating exclusively in the United States.

Research and Development Expense

Research and development costs are expensed as incurred. Research and development costs include, among others, consulting costs, salaries, benefits, travel, stock-based compensation, laboratory supplies and other non-capital equipment utilized for in-house research, allocation of facilities and overhead costs and external costs paid to third parties that conduct research and development activities on the Company's behalf. Amounts incurred in connection with license agreements are also included in research and development expense.

Advance payments for goods or services to be rendered in the future for use in research and development activities are deferred and included in prepaid expenses and other current assets. The deferred amounts are expensed as the related goods are delivered or the services are performed.

Patent Costs

The Company expenses patent application and related legal costs as incurred and classifies such costs as general and administrative expenses in the accompanying statements of operations and comprehensive loss.

Stock-Based Compensation

The Company accounts for its stock-based compensation in accordance with FASB ASC Topic 718, *Compensation—Stock Compensation* ("ASC 718"). ASC 718 requires all stock-based payments to employees and directors to be recognized as expense in the statements of operations and comprehensive loss based on their grant date fair values. For purposes of determining the estimated fair value of stock options granted to employees and directors, the Company uses the Black-Scholes option pricing model. The Black-Scholes option pricing model requires the input of certain assumptions that involve judgment, for which changes can materially affect the resulting estimates of fair value. The assumptions used to determine the fair value of stock options granted were as follows:

Expected volatility – Due to the lack of a public market for the Company's common stock and a lack of company-specific historical and implied volatility data, the Company has based its computation of expected volatility on the historical volatility of a representative group of public companies with similar characteristics to the Company, including stage of product development and life science industry focus. The historical volatility is calculated based on a period of time commensurate with the expected term assumption.

Expected term – The Company determines the expected term in accordance with the "simplified method" described by SEC Staff Accounting Bulletin No. 107, *Share-Based Payment*, as it does not have sufficient historical exercise data to provide a reasonable basis upon which to estimate the expected term.

Risk-free interest rate – The Company bases the risk-free interest rate on United States Treasury securities with terms consistent to the expected term of the stock option being valued.

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Expected dividends – The expected dividend yield is assumed to be zero as the Company has never paid dividends and has no current plans to pay any dividends on its common stock.

The Company uses historical data to estimate pre-vesting forfeitures and records stock-based compensation expense only for those awards expected to vest. To the extent that actual forfeitures differ from estimates, the difference is recorded as a cumulative adjustment in the period the estimates are revised. The Company expenses the fair value of its stock-based compensation awards to employees on a straight-line basis over the requisite service period, which is generally the vesting period.

Estimated Fair Value of Common Stock Warrants Issued with Debt

The Company estimates the fair values of common stock warrants using an option pricing model based on inputs as of the valuation measurement dates, including the fair value of the Company's common stock, the estimated volatility of the price of the Company's common stock, the expected term of the warrants and the risk-free interest rates.

Income Taxes

Income taxes are accounted for using an asset and liability approach that requires the recognition of deferred tax assets and liabilities for the expected future tax consequences of temporary differences between the financial statement and tax bases of assets and liabilities at the applicable enacted tax rates. A valuation allowance is provided when it is more likely than not that some portion or all of the deferred tax assets will not be realized. The Company evaluates the realizability of its deferred tax assets by assessing its valuation allowance and by adjusting the amount of such allowance, if necessary.

The Company recognizes the tax benefit from tax positions only if it is more likely than not that the tax positions will be sustained upon examination by tax authorities, based on the technical merits of the position. The tax benefit is measured based on the largest benefit that has a greater than 50% likelihood of being realized upon ultimate settlement.

The Company recognizes interest and penalties related to income taxes as a component of other income (expense), net in the statements of operations and comprehensive loss.

Comprehensive Loss

Comprehensive loss is defined as a change in equity during a period from transactions and other events and circumstances from nonowner sources. For all periods presented, there have been no items qualifying as other comprehensive loss and therefore, the Company's comprehensive loss was the same as its reported net loss.

Net Loss per Share

The Company calculates basic net loss per share by dividing the net loss attributable to common stockholders by the weighted-average shares of common stock outstanding during the period, without consideration for potentially dilutive securities. The Company calculates diluted net loss per share after giving consideration to all potentially dilutive securities outstanding during the period using the treasury-stock and if-converted methods, except where the effect of including such securities would be

anti-dilutive. Because the Company has reported net losses since inception, the effect from potentially dilutive securities would have been anti-dilutive and therefore has been excluded from the calculation of diluted net loss per share.

Basic and diluted net loss per share was calculated as follows (in thousands, except per share data):

	Year Ended December 31,	
	2016	2017
Numerator:		
Net loss	$(17,100)	$(23,552)
Denominator:		
Weighted-average shares of common stock outstanding, basic and diluted	1,312	1,620
Net loss per share, basic and diluted	$ (13.03)	$ (14.54)

The following table sets forth the potentially dilutive securities that have been excluded from the calculation of diluted net loss per share due to their anti-dilutive effect for the periods indicated (in thousands):

	Year Ended December 31,	
	2016	2017
Series A convertible preferred stock	20,866	20,866
Series B convertible preferred stock	—	10,105
Options to purchase common stock	2,722	4,884
Warrants to purchase common stock	48	48
Unvested restricted common stock	205	104
Total	23,841	36,007

Unaudited Pro Forma Net Loss per Share

The unaudited pro forma net loss per share for the year ended December 31, 2017 was computed using the weighted-average number of shares of common stock outstanding during the period, after giving effect to the conversion of all outstanding shares of convertible preferred stock into shares of common stock, as if such conversion had occurred at the later of their issuance date or the beginning of the period. The unaudited pro forma basic and diluted net loss per share amounts do not include shares of common stock expected to be sold as part of this offering.

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Unaudited pro forma net loss per share for the year ended December 31, 2017 was calculated as follows (in thousands, except per share data):

Numerator:	
Net loss	$(23,552)
Denominator:	
Weighted-average shares of common stock outstanding, basic and diluted	1,620
Adjustment for assumed conversion of convertible preferred stock	21,752
Pro forma weighted-average shares of common stock outstanding, basic and diluted	23,372
Pro forma net loss per share, basic and diluted	$ (1.01)

Foreign Currency Transactions

The Company is party to multiple contract manufacturing and clinical research agreements for which services to be performed are denominated in foreign currencies other than the United States Dollar. The Company records gains and losses attributable to fluctuations in foreign currencies as a component of other income (expense), net on the accompanying statements of operations and comprehensive loss.

Recent Accounting Pronouncements

In February 2016, the FASB issued Accounting Standards Update ("ASU") No. 2016-02, *Leases* ("ASU 2016-02"). ASU 2016-02 requires an entity to recognize assets and liabilities arising from a lease for both financing and operating leases. ASU 2016-02 will also require new qualitative and quantitative disclosures to help investors and other financial statement users better understand the amount, timing and uncertainty of cash flows arising from leases. For public entities, ASU 2016-02 is effective for fiscal years beginning after December 15, 2018. Early adoption is permitted. The Company has not yet determined the potential effects of ASU 2016-02 on its financial statements but does not expect it to have a significant impact.

In March 2016, the FASB issued ASU No. 2016-09, *Compensation – Stock Compensation* ("ASU 2016-09"), which simplifies the accounting for employee stock-based transactions. The amendments in this ASU 2016-09 cover such areas as the recognition of excess tax benefits and deficiencies, the classification of those excess tax benefits on the statement of cash flows, an accounting policy election for forfeitures, the amount an employer can withhold to cover income taxes and still qualify for equity classification and the classification of those taxes paid on the statement of cash flows. For public entities, ASU 2016-09 was effective for fiscal years, and interim periods within those years, beginning after December 15, 2016. Early adoption is permitted. The Company early adopted ASU 2016-09 effective January 1, 2017 electing to continue its current policy of estimating forfeitures. The adoption of ASU 2016-09 did not have a material effect on the Company's financial statements or related disclosures.

In August 2016, the FASB issued ASU No. 2016-15, *Statement of Cash Flows: Classification of Certain Cash Receipts and Cash Payments* ("ASU 2016-15"). ASU 2016-15 is intended to address how certain cash receipts and cash payments, including the prepayment and extinguishment of debt, are presented and classified in the statement of cash flows. This update is intended to reduce the existing diversity in practice. For public entities, ASU 2016-15 is effective for fiscal years beginning

after December 15, 2017, and interim periods within those fiscal years. Early adoption is permitted. Early adoption of ASU 2016-15 effective January 1, 2017 did not have a material effect on the Company's financial statements.

In November 2016, the FASB issued ASU No. 2016-18, *Statement of Cash Flows: Restricted Cash* ("ASU 2016-18"). ASU 2016-18 amends the classification and presentation of changes in restricted cash or restricted cash equivalents in the statement of cash flows. ASU 2016-18 is effective for public business entities for fiscal years beginning after December 15, 2017, and interim periods within those fiscal years. Early adoption is permitted. The Company is currently evaluating the impact the adoption of ASU 2016-18 will have on its financial statements but does not expect it to have a material impact.

3. Fair Value Measurements

The Company measures and reports certain financial instruments as assets and liabilities at fair value on a recurring basis. The Company's financial assets measured at fair value on a recurring basis were as follows (in thousands):

	December 31, 2016			
	Level 1	Level 2	Level 3	Total
Cash equivalents	$11,461	$ —	$ —	$11,461
Total financial assets	$11,461	$ —	$ —	$11,461

	December 31, 2017			
	Level 1	Level 2	Level 3	Total
Cash equivalents	$82,526	$ —	$ —	$82,526
Total financial assets	$82,526	$ —	$ —	$82,526

Financial assets included in cash equivalents are primarily comprised of money market funds. The Company measures the fair value of its money market funds using quoted prices in active markets for identical assets.

The final closing of the Company's Series A convertible preferred stock in January 2016 resulted in the reclassification of the associated preferred stock derivatives to convertible preferred stock and, as such, no liabilities were outstanding at December 31, 2016 or 2017. Historically, the Company estimated the fair value of its preferred stock tranche liabilities at the time of issuance with subsequent remeasurement at each reporting date through settlement. Fair value was calculated using an option pricing model that required significant unobservable inputs supported by little or no market activity. Assumptions include timing and likelihood of future financings, expected volatility, expected life, probabilities of technical success and risk-free interest rate. Changes to these assumptions may result in a significant impact to estimated fair value reported.

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The following table provides a reconciliation of all liabilities measured at fair value using Level 3 significant unobservable inputs during the year ended December 31, 2016 (in thousands):

	Tranche liability
Fair value at the beginning of the year	$ 1,795
Reclassification to convertible preferred stock	(1,795)
Fair value at the end of the year	$ —

The Company evaluates transfers between levels at the end of each reporting period. There were no transfers of assets or liabilities between levels during the years ended December 31, 2016 and 2017.

At December 31, 2016 the fair value approximated the carrying value of the Company's debt facility.

4. Balance Sheet Components and Supplemental Disclosures

Property and Equipment, Net

Property and equipment, net, consisted of the following (in thousands):

	December 31,	
	2016	2017
Laboratory equipment	$ 596	$ 949
Leasehold improvements	55	55
	651	1,004
Less accumulated depreciation	(318)	(559)
Property and equipment, net	$ 333	$ 445

Depreciation and amortization expense for the years ended December 31, 2016 and 2017 was $0.1 million and $0.2 million, respectively.

Accrued Expenses and Other Current Liabilities

Accrued expenses and other current liabilities consisted of the following (in thousands):

	December 31,	
	2016	2017
Accrued outside professional services	$ 445	$ 787
Accrued compensation	1,007	265
Other current liabilities	42	37
Total	$1,494	$1,089

5. Debt Facility

In June 2016, the Company entered into a Loan and Security Agreement with a financial institution, providing for term loans to the Company, in two tranches for an aggregate principal amount

of $5.0 million. Interest on the term loans was calculated at a floating per annum rate equal to the prime rate reported in The Wall Street Journal plus one quarter of one percent (0.25%). Upon execution of the agreement, the Company had immediate access to borrow up to $2.5 million in principal. The remaining $2.5 million in principal would be made available to the Company on or prior to December 31, 2016, subject to the satisfaction of certain borrowing conditions including the achievement of certain pre-defined clinical development milestones. In July 2016, the Company drew down an initial term loan of $2.5 million. Subsequently, in December 2016, the Company drew down the remaining $2.5 million term loan. During 2017 this debt facility was fully repaid and terminated.

The Company incurred upfront costs of $15,000 to issue the debt facility which were classified as a discount to the carrying value of the term loans included on the accompanying balance sheet at December 31, 2016. Final payments due to the lender for facility fees of $0.2 million were treated as deferred issuance costs and accreted to interest expense over the term of the loans. Amortization of the upfront issuance costs and accretion of the deferred issuance costs was calculated using the effective interest method.

Additionally, as part of the Loan and Security Agreement, the Company agreed to issue the financial institution warrants to purchase shares of its common stock upon each draw of the term loans. During the year ended December 31, 2016, the Company issued the financial institution warrants to purchase a total of 47,616 shares of common stock at a weighted average exercise price of $0.61 per share. The common stock warrants were immediately exercisable upon issuance and shall remain outstanding for a period of ten years from the date of issuance. Fair value of the common stock warrants totaling $24,000 was recorded as a reduction to the carrying value of the loans and amortized to interest expense over the remaining term of the loans using the effective interest method. The initial fair value of the warrants was determined using the Black-Scholes option pricing model including weighted average assumptions for expected volatility of 80.0%, an expected life equal to the contractual term of the warrants of 10 years and a risk-free interest rate of 2.0%. All warrants to purchase common stock were unexercised as of December 31, 2017.

Loss on Extinguishment

In connection with the prepayment of the term loans in December 2017, the Company recognized a loss on extinguishment of debt totaling $0.2 million. This amount consisted of a $50,000 prepayment penalty, a write-off of $17,000 of unamortized discount and the write-off of $92,000 of unamortized debt issuance costs. The loss on extinguishment of debt was recorded as other income (expense), net on the accompanying statements of operations and comprehensive loss. The write-offs of unamortized discount and unamortized debt issuance costs represent a non-cash adjustment to reconcile net income to net cash used in operating activities on the statement of cash flows.

6. Commitments and Contingencies

Operating Lease Obligations

The Company’s operating lease obligations primarily relate to its leased office and laboratory space under a noncancelable operating lease expiring in June 2019. The lease agreement, which was amended in August 2015, includes two renewal provisions allowing the Company to extend the lease for an additional period of one year each. The amended lease agreement includes a rent abatement and escalation clauses for increased rent over the lease term. In addition to the minimum future lease commitments presented below, the lease requires the Company to pay property taxes, insurance,

maintenance and repair costs. Rent expense is recognized using the straight-line method over the term of the lease. The Company records a deferred rent liability calculated as the difference between rent expense and cash rental payments. The current portion of the liability is included within accrued expenses and other current liabilities on the balance sheets. The remaining non-current portion is classified in other long-term liabilities.

Future minimum lease payments required under operating leases are as follows (in thousands):

Fiscal Year Ending December 31,	
2018	$414
2019	210
Total	$624

In November 2015, the Company entered into a sublease agreement with a third party for a portion of the Company's facilities in San Carlos, California. The sublease has a month-to-month term and can be terminated by either party with a thirty-day written notice. Sublease payments owed are recorded as an offset to the Company's rent expense.

Net rent expense was $0.4 million and $0.5 million for the years ended December 31, 2016 and 2017, respectively.

Purchase Obligations

The Company has entered into contractual agreements with various research and development organizations and suppliers in the normal course of its business. All contracts are terminable, with varying provisions regarding termination. If a contract were to be terminated, the Company would only be obligated for the products or services that the Company had received at the time of termination as well as any non-cancelable minimum payments contractually agreed upon prior to the effective date of termination. In the case of terminating a clinical trial agreement with an investigational site conducting clinical activities on behalf of the Company, the Company would also be obligated to provide continued support for appropriate safety procedures through completion or termination of the associated study. At December 31, 2017, the Company had total minimum purchase obligations of $0.9 million, all of which are payable during the year ending December 31, 2018.

In-Licensing Agreements

The Company has entered into exclusive and non-exclusive, royalty bearing license agreements with third-parties for certain intellectual property. Under the terms of the license agreements, the Company is obligated to pay milestone payments upon the achievement of specified clinical, regulatory and commercial milestones. Actual amounts due under the license agreements will vary depending on factors including, but not limited to, the number of products developed and the Company's ability to further develop and commercialize the licensed products. The Company is also subject to future royalty payments based on sales of the licensed products. In-licensing payments to third parties for milestones are recognized as research and development expense in the period of achievement.

The Company recognized $0.3 million of research and development expense related to the achievement of milestones in the year ended December 31, 2016. The Company did not recognize any milestone expense in the year ended December 31, 2017. Milestone payments are not creditable against royalties. As of December 31, 2017, the Company has not incurred any royalty liabilities related to its license agreements, as product sales have not yet commenced.

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Exclusive License Agreement with The Johns Hopkins University

In December 2013, the Company entered into a license agreement with The Johns Hopkins University ("JHU") for a worldwide exclusive license to develop, use, manufacture and commercialize covered product candidates including AK001 and AK002, which was amended in September 30, 2016. Under the terms of the agreement, the Company has made upfront and milestone payments of $0.3 million as of December 31, 2017 and may be required to make aggregate additional milestone payments of up to $4.0 million. The Company also issued to JHU 88,887 shares of common stock. In addition to milestone payments, the Company is also subject to single-digit royalties to JHU based on future net sales of each licensed therapeutic product candidate by the Company and its affiliates and sublicensees, with up to a low six digit dollar minimum annual royalty payment.

Non-exclusive License Agreement with BioWa Inc. and Lonza Sales AG

In October 2013, the Company entered into a tripartite agreement with BioWa Inc. ("BioWa"), and Lonza Sales AG ("Lonza"), for the non-exclusive worldwide license to develop and commercialize product candidates including AK002 that are manufactured using a technology jointly developed and owned by BioWa and Lonza. Under the terms of the agreement, the Company has made milestone payments of $0.1 million as of December 31, 2017 and the Company may be required to make aggregate additional milestone payments of up to $41.3 million. In addition to milestone payments, the Company is also subject to minimum annual commercial license fees of $40,000 per year to BioWa until such time as BioWa receives royalty payments, as well as low single-digit royalties to BioWa and to Lonza. Royalties are based on future net sales by the Company and its affiliates and sublicensees and vary dependent on Lonza's participation as sole manufacturer for commercial production.

Indemnification Agreements

The Company has entered into indemnification agreements with certain directors and officers that require the Company, among other things, to indemnify them against certain liabilities that may arise by reason of their status or service as directors or officers. To date, no such matters have arisen and the Company does not believe that the outcome of any claims under indemnification arrangements will have a material adverse effect on its financial positions, results of operations or cash flows. Accordingly, the Company has not recorded a liability related to such indemnifications at December 31, 2017.

7. Convertible Promissory Notes Payable to Related Parties, Net

In August 2017, the Company entered into a note purchase agreement with existing investors as related parties to raise proceeds of up to $15.0 million via the issuance of convertible promissory notes (the "Notes"). The Notes bore interest at 6% per annum and were subject to automatic conversion upon a subsequent qualified financing event. Additional terms included within the note purchase agreement included an option at the election of the holder, upon maturity, to convert all outstanding principal and accrued interest into Series A convertible preferred stock at a fixed price per share, subject to appropriate adjustment in the event of any stock dividend, stock split, combination or other similar recapitalization. The Company determined this option represented a beneficial conversion feature ("BCF") at the date of issuance as the fair value of the securities into which the Notes were convertible upon maturity was greater than the effective conversion price on the date of issuance.

During the year ended December 31, 2017, the Company issued $7.5 million in Notes. The Company recorded the Notes at the principal amount received, net of transaction costs of $86,000,

with a portion of the proceeds being allocated to the BCF relative to its intrinsic value of $2.8 million. The Company calculated the intrinsic value of the BCF as the difference between the fair value of the underlying Series A convertible preferred stock and the effective conversion price embedded in the Notes. The BCF was initially recorded as an increase to additional paid-in capital with the offset recorded as a discount on the Notes.

During the year ended December 31, 2017, in addition to stated interest of $0.1 million, the Company recognized non-cash interest expense of $0.9 million associated with the amortization of the discounts, issuance costs and BCF. The amortization schedule was calculated using the effective interest method through August 2018, the contractual maturity of the Notes.

In November 2017, the Notes were redeemed contemporaneously with the Company's Series B convertible preferred stock financing. The aggregate of the outstanding principal and accrued interest balance of $7.6 million was converted into 771,083 shares of Series B convertible preferred stock based on the Series B convertible preferred stock fair value. The redemption of the Notes was accounted for as a debt extinguishment with a portion of the reacquisition price allocated to the BCF and total unamortized debt discount of $60,000 written off to interest expense. The amount allocated to reacquire the BCF was measured using the intrinsic value of the conversion option at the extinguishment date and reflected as a reduction to equity. As a result, the amount allocated to reacquire the Notes was less than the carrying value of the Notes which resulted in a deemed capital contribution received from related parties of $0.9 million.

8. Convertible Preferred Stock and Stockholders' Deficit

In December 2012, the Company entered into the Series A Preferred Stock Purchase Agreement with investors under which the Company agreed to sell and investors agreed to purchase up to 14,222,218 shares of Series A convertible preferred stock at a purchase price of $2.25 per share. Upon execution of the agreement, the Company issued 4,444,441 shares of Series A convertible preferred stock for net cash proceeds of $9.8 million (the "Initial Closing").

In August 2014, the Company and its investors amended the Series A Preferred Stock Purchase Agreement, pursuant to which the Company agreed to sell and investors agreed to purchase up to an additional 4,444,446 shares of Series A convertible preferred stock under the same terms as the original agreement. From August 2014 through September 2014, the Company issued 6,666,662 shares of Series A convertible preferred stock at a purchase price of $2.25 per share for net cash proceeds of $14.9 million (the "Second Closings").

In March 2015, the Company and its investors amended the Series A Preferred Stock Purchase Agreement a second time, pursuant to which the Company agreed to sell and investors agreed to purchase up to an additional 2,222,229 shares of Series A convertible preferred stock under the same terms as the original agreement. Concurrent with the second amendment, the Company issued 1,310,906 shares of Series A convertible preferred stock at a purchase price of $2.25 per share for net cash proceeds of $2.9 million (the "Additional Second Closings").

In January 2016, the Company issued 8,444,440 shares of Series A convertible preferred stock at a purchase price of $2.25 per share for net cash proceeds of $19.0 million (the "Third Closings").

On November 30, 2017, the Company entered into the Series B Preferred Stock Purchase Agreement with existing as well as new investors for the issuance of up to 10,105,181 shares of

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Series B convertible preferred stock at a purchase price of $9.91 per share. Upon the execution of the agreement, the Company issued 9,334,098 shares of Series B convertible preferred stock for net cash proceeds of $92.3 million and 771,083 shares issued upon the conversion of outstanding convertible promissory notes to related parties, including accrued interest, in the amount of $7.6 million.

Series A Preferred Stock Tranche Rights

Included in the terms of the original and amended Series A Preferred Stock Purchase Agreement were certain rights (the "Tranche Rights") that provided purchasers the right to purchase and the Company the right to sell, additional shares of Series A convertible preferred stock at the original purchase price of $2.25 per share. The Company's right was contingent upon the Company's Board of Directors' approval of the achievement of certain pre-defined performance milestones.

The Company concluded that the Tranche Rights met the definition of a freestanding financial instrument, as they were legally detachable and separately exercisable from the Series A convertible preferred stock. Therefore, the Company allocated the proceeds received from the issuance of shares under the Series A Preferred Stock Purchase Agreement between the Tranche Rights and the Series A convertible preferred stock. As the Series A convertible preferred stock was redeemable at the election of the holders of the then-outstanding shares, the Tranche Rights were classified as an asset or liability under FASB ASC Topic 480, *Distinguishing Liabilities from Equity*. Upon each funding, the Company first allocated the proceeds received to the Tranche Rights, based on their fair value at the date of issuance, with the remaining proceeds being allocated to the Series A convertible preferred stock. The estimated fair value of the Tranche Rights was determined using an option pricing model with changes in fair value at each remeasurement date recognized as a component of other income (expense), net in the statements of operations and comprehensive loss. At the time of each funding, the Company remeasured the asset or liability, with the final change in fair value recognized as a component of other income (expense), net and reclassified the remaining value associated with the Tranche Rights reclassified to Series A convertible preferred stock.

All derivative assets and liabilities associated with the Tranche Rights were settled upon the final issuance of Series A convertible preferred stock in January 2016.

Convertible Preferred Stock Terms

The Company's Second Amended and Restated Certificate of Incorporation filed on November 30, 2017 increased the total number of shares authorized for issuance from 82,994,462 shares to 93,714,587 shares. Of these shares, 38,714,587 shares are designated as preferred stock including 26,083,081 Series A shares and 12,631,506 Series B shares.

Dividends – Holders of shares of convertible preferred stock shall be entitled to receive noncumulative dividends prior to, and in preference to any declaration or payment of any dividend on the common stock at the rate of 8% of the original issue price of the applicable series of convertible preferred stock, when and if declared by the Company's Board of Directors. After payment of dividends to the holders of shares of convertible preferred stock, any additional dividends are to be paid equally among the holders of convertible preferred stock and common stock on an as converted basis. Through December 31, 2017, no dividends had been declared.

Liquidation Preference – In the event of any voluntary or involuntary liquidation, dissolution or winding up of the Company, the holders of Series B convertible preferred stock shall be entitled to

receive, prior and in preference to any distribution from the assets of the Company to the holders of Series A convertible preferred stock or common stock, a per-share amount equal to the sum of the original issue price of Series B convertible preferred stock plus all accrued but unpaid dividends. After the payment of the full Series B liquidation preference, holders of the Series A convertible preferred stock shall be entitled to receive, prior and in preference to any distribution from the assets of the Company to the holders of common stock, a per-share amount equal to the sum of the original issue price of Series A convertible preferred stock plus all accrued but unpaid dividends. After the payment of all preferential amounts required to be paid upon liquidation to the holders of the convertible preferred stock, the remaining assets will be distributed to holders of the common stock on a pro-rata basis.

Conversion – Shares of convertible preferred stock are convertible at the holder's option into shares of common stock, on a share-for-share basis, using a conversion rate determined by dividing the original issue price by the conversion price. The conversion rate may be adjusted upon certain events and for certain dilutive issuances, splits and combinations. The initial conversion price for the Series A and Series B convertible preferred stock is $2.25 and $9.91, respectively. Each share of convertible preferred stock will be automatically converted into common stock, at its then applicable conversion rate, upon (i) the closing of an underwritten public offering of the Company's common stock that provides not less than $50 million of gross proceeds at an offering price of not less than $9.91 per share of common stock, as adjusted for recapitalization or (ii) the written request for conversion by the holders of at least a majority of the convertible preferred stock, voting together on an as converted basis.

Voting Rights – Each share of convertible preferred stock has the same voting rights as the number of shares of common stock into which it is convertible and vote together with the holders of common stock as a single class.

Protective Provisions – The holders of convertible preferred stock have certain protective provisions. As long as one million shares of convertible preferred stock remain outstanding, the Company shall not, without the approval of the holders of more than 50% of the then-outstanding shares of convertible preferred stock, voting as a single class on an as-converted basis, (i) authorize or create any new class or series of equity security that is senior to or on parity with the convertible preferred stock, (ii) increase or decrease the authorized number of shares under the Company's equity incentive plans, (iii) consummate a liquidation, dissolution or winding up of the Company, or any deemed liquidation event, (iv) redeem, purchase or otherwise acquire shares of common stock, subject to certain exceptions, (v) change the authorized number of directors, (vi) pay or declare dividends, or (vii) alter or change the rights, preferences or privileges of the convertible preferred stock in a manner that adversely affects their rights, preferences or privileges. In addition, the holders of Series B convertible preferred stock have certain incremental protective provisions. As long as one million shares of Series B convertible preferred stock remain outstanding, the Company shall not, without the approval of the holders of at least 60% of the then-outstanding shares of Series B convertible preferred stock, voting as a single class on an as-converted basis, (i) increase or decrease the authorized number of Series B convertible preferred stock, or (ii) amend the Company's certificate of incorporation in a manner that adversely affects the rights, powers, preferences and other terms of the Series B convertible preferred stock, but does not so affect the Series A convertible preferred stock.

ALLAKOS INC.
NOTES TO FINANCIAL STATEMENTS

Common Stock

Pursuant to the Second Amended and Restated Certificate of Incorporation filed on November 30, 2017, the Company is authorized to issue a total of 55,000,000 shares of common stock, of which 2,114,232 shares were issued and outstanding at December 31, 2017.

In May 2012, the Company issued 799,999 shares of its restricted common stock to founders in exchange for cash proceeds of $10,000. The founders' shares contain certain provisions that allow the Company to repurchase shares from the founders upon the occurrence of certain events including voluntary termination by the founder. The repurchase rights on the restricted common stock lapsed and fully expired in February 2016.

In April 2014, the Company issued to JHU 88,887 shares of common stock as consideration for intellectual property rights received by the Company under an exclusive license agreement with JHU executed in December 2013. The Company determined the fair value of the common stock was more readily determinable than the fair value of the services rendered. The fair value of the underlying common stock on the date of issuance was $0.39 per share, resulting in total stock compensation expense of $34,000 recognized immediately in accordance with the terms of the agreement, which provided that the shares were fully vested and nonforfeitable at the time of issuance.

Common shares reserved for future issuance upon the exercise, issuance or conversion of the respective equity instruments are as follows (in thousands):

	December 31,	
	2016	2017
Series A convertible preferred stock	26,111	26,083
Series B convertible preferred stock	—	12,632
Stock options issued and outstanding	2,722	4,884
Stock options available for future grant	21	2,346
Conversion of common stock warrants	48	48
Total	28,902	45,993

Common stockholders are entitled to dividends if and when declared by the Board of Directors subject to the prior rights of the preferred stockholders. As of December 31, 2017, no dividends on common stock had been declared by the Board of Directors.

9. Stock-Based Compensation

In December 2012, the Company adopted the 2012 Equity Incentive Plan (the "2012 Plan"), as amended and restated, under which it reserved 2,119,345 shares of common stock for the issuance of stock options, stock appreciation rights, restricted stock and restricted stock units to employees, directors and consultants. Stock options granted under the 2012 Plan generally vest over four years and expire no more than 10 years from the date of grant. Unless terminated sooner, the 2012 Plan will terminate automatically ten years from the later of the initial approval or subsequent approved amendment.

In August 2014, the Company amended the 2012 Plan to allow for the issuance of up to 2,743,582 shares of common stock. In January 2016, the Company amended the 2012 Plan to allow for the issuance of up to 3,396,207 shares of common stock. In April 2016, the Company amended the

ALLAKOS INC.
NOTES TO FINANCIAL STATEMENTS

2012 Plan to allow for the issuance of up to 3,459,087 shares of common stock. In August 2017, the Company amended the 2012 Plan to allow for the issuance of up to 6,455,045 shares of common stock. In November 2017, the Company amended the 2012 Plan twice, first to allow for the issuance of up to 6,775,045 shares of common stock, and a second time to allow for the issuance of up to 8,455,045 shares of common stock.

During the years ended December 31, 2016 and 2017, the Company only issued stock option awards under the 2012 Plan. As of December 31, 2016 and 2017, there were 20,917 and 2,345,748 shares of common stock available for future issuance under the 2012 plan, respectively.

Total stock-based compensation expense recognized, before taxes, during the years ended December 31, 2016 and 2017 is as follows (in thousands):

	Year Ended December 31,	
	2016	2017
Research and development	$108	$175
General and administrative	74	227
Total	$182	$402

No income tax benefits for stock-based compensation expense have been recognized for the years ended December 31, 2016 and 2017 as a result of the Company's full valuation allowance applied to net deferred tax assets and net operating loss carryforwards.

The following weighted-average assumptions were used to calculate the fair value of stock-based awards granted to employees and directors during the periods indicated:

	Year Ended December 31,	
	2016	2017
Risk-free interest rate	1.64%	1.83%
Expected volatility	73.22%	77.59%
Expected dividend yield	—	—
Expected term (in years)	6.02	6.08

ALLAKOS INC.
NOTES TO FINANCIAL STATEMENTS

Activity under the 2012 Plan is summarized as follows (in thousands, except per share data):

	Shares Available for Grant	Options Outstanding	Weighted-Average Exercise Price Per Share	Aggregate Intrinsic Value
Balance at December 31, 2015	1,388	1,332	$ 0.40	
Shares authorized	63	—		
Granted	(1,468)	1,468	$ 0.53	
Exercised	—	(40)	$ 0.49	
Forfeited	38	(38)	$ 0.47	
Balance at December 31, 2016	21	2,722	$ 0.46	$ 9,659
Shares authorized	4,996	—		
Granted	(3,053)	3,053	$ 0.78	
Exercised	—	(543)	$ 0.42	
Repurchased	34	—	$ 0.39	
Forfeited	348	(348)	$ 0.47	
Balance at December 31, 2017	2,346	4,884	$ 0.67	$ 16,331
Options exercisable		3,164	$ 0.61	$ 10,750
Options vested and expected to vest		4,874	$ 0.67	$ 16,308

The weighted-average fair value of options granted to employees and directors during the years ended December 31, 2016 and 2017 was $0.34 and $0.54 per share, respectively.

The aggregate fair value of stock options that vested during the years ended December 31, 2016 and 2017 was $0.2 million and $0.2 million, respectively.

The aggregate intrinsic value of stock options is calculated as the difference between the exercise price of the stock options and the fair value of the Company's common stock for those stock options that had exercise prices lower than the fair value of the Company's common stock. The aggregate intrinsic value of stock options exercised during the years ended December 31, 2016 and 2017 was $12,000 and $0.1 million, respectively.

The weighted-average remaining contractual life of options outstanding was 7.5 years and 8.7 years at December 31, 2016 and 2017, respectively. At December 31, 2017, the weighted-average remaining contractual life was 8.7 years for both exercisable options and vested and expected to vest options.

During the years ended December 31, 2016 and 2017, the Company did not grant any stock options with performance-based or market-based vesting conditions, nor did the Company grant any stock options to non-employees in exchange for services.

As of December 31, 2017, total unrecognized stock-based compensation expense relating to unvested stock options was $1.9 million. This amount is expected to be recognized over a weighted-average period of 3.0 years.

ALLAKOS INC.
NOTES TO FINANCIAL STATEMENTS

Restricted Common Stock

The 2012 Plan allows for the issuance of restricted common stock and early exercise of unvested stock options in exchange for restricted common stock. Unvested shares of restricted common stock are subject to repurchase by the Company at the original issuance price in the event of the employee's termination, either voluntarily or involuntarily. Consideration received for unvested stock-based awards is initially recorded as a liability and subsequently reclassified into stockholders' deficit as the related awards vest.

Since inception, the Company has issued a total of 307,664 shares of restricted common stock to employees associated with unvested stock-based awards. A summary of the restricted common stock activity during the year ended December 31, 2017 is as follows (in thousands, except per share data):

	Shares	Weighted-Average Grant Date Fair Value Per Share
Balance at December 31, 2016	205	$ 0.42
Vested	(67)	$ 0.43
Repurchased	(34)	$ 0.39
Balance at December 31, 2017	104	$ 0.43

The fair value of restricted common stock that vested during the years ended December 31, 2016 and 2017 was $36,000 and $28,000, respectively.

As of December 31, 2017, total liabilities related to unvested shares of restricted common stock was $44,000. This amount is expected to be recognized over a weighted-average period of 1.8 years.

10. Income Taxes

The Company's deferred income tax assets include operating losses and tax credit carryforwards, as well as certain temporary differences between the carrying amounts of assets and liabilities for financial reporting purposes and the amounts used for income tax purposes. Total deferred income tax assets, net of valuation allowance, at December 31, 2016 and 2017 were as follows (in thousands):

	December 31,	
	2016	2017
Deferred tax assets:		
Net operating loss carryforwards	$ 15,477	$ 15,769
Research and development credits	1,585	2,242
Accruals and reserves	299	50
Fixed and intangible assets	33	51
Total gross deferred tax assets	17,394	18,112
Less: Valuation allowance	(17,394)	(18,112)
Net deferred tax assets	$ —	$ —

Management has evaluated the positive and negative evidence surrounding the realizability of its deferred tax assets and has determined that it is more likely than not that the Company will not

recognize the benefits of its federal and state deferred tax assets, and as a result, a valuation allowance of $17.4 million and $18.1 million has been established at December 31, 2016 and 2017, respectively. The change in the valuation allowance was $7.2 million and $0.7 million for the years ended December 31, 2016 and 2017, respectively. The Company has incurred net operating losses ("NOL") since inception. At December 31, 2017, the Company had federal and state NOL carryforwards of $61.8 million and $38.7 million, respectively, which expire beginning in 2032. As of December 31, 2017, the Company had federal and state research and development tax credit carryforwards of $1.9 million and $1.9 million, respectively, which expire beginning in 2033. The Company does not have any NOL carryforwards associated with deductible stock option exercises at December 31, 2016 or 2017.

The Internal Revenue Code of 1986, as amended (the "Code"), provides for a limitation of the annual use of net operating losses and other tax attributes (such as research and development tax credit carryforwards) following certain ownership changes defined by the Code that could limit the Company's ability to utilize these carryforwards in the future. At this time, the Company has not completed a study to assess whether an ownership change under Section 382 of the Code has occurred, or whether there have been multiple ownership changes since the Company's formation. The Company may have experienced ownership changes, as defined by the Code, as a result of past financing transactions and may not be able to take full advantage of these carryforwards for federal or state income tax purposes.

The effective tax rate for the years ended December 31, 2016 and 2017 is different from the federal statutory rate primarily due to the valuation allowance against deferred tax assets as a result of insufficient income. The Company's effective tax rate differs from the federal statutory tax rate as follows:

	Year Ended December 31,	
	2016	2017
Federal statutory tax rate	34.0%	34.0%
Change in deferred tax asset valuation allowance	(42.3)%	(3.0)%
State taxes, net of federal benefit	7.3%	1.6%
Research and development tax credits	1.3%	0.4%
Remeasurement of deferreds	—	(31.2)%
Beneficial conversion feature	—	1.2%
Other	(0.3)%	(1.8)%
Effective tax rate	—	1.2%

Uncertain Tax Positions

The Company accounts for its uncertain tax positions in accordance with FASB ASC Topic No. 740-10, *Accounting for Uncertainty in Income Taxes* ("ASC 740-10"). Per ASC 740-10, the Company determines its uncertain tax positions based on a determination of whether and how much of a tax benefit taken by the Company in its tax filings is more likely than not to be sustained upon examination by the relevant income tax authorities.

ALLAKOS INC.
NOTES TO FINANCIAL STATEMENTS

A reconciliation of the beginning and ending amount of unrecognized benefits is as follows (in thousands):

	Year Ended December 31,	
	2016	2017
Balance at the beginning of the year	$ 490	$ 758
Increase related to current year tax positions	270	359
Increase related to prior year tax positions	(2)	32
Balance at the end of the year	$ 758	$ 1,149

If recognized, gross unrecognized tax benefits would not have an impact on the Company's effective tax rate due to the Company's full valuation allowance position. While it is often difficult to predict the final outcome of any particular uncertain tax position, the Company does not believe that the amount of gross unrecognized tax benefits will change significantly in the next twelve months.

It is the Company's policy to include penalties and interest expense related to income taxes as a component of the income tax provision as necessary. Management determined that no accrual for interest and penalties was required at December 31, 2016 or 2017. Since the Company is in a loss carryforward position, it is generally subject to examination by the U.S. federal, state and local income tax authorities for all tax years in which a loss carryforward is available.

Benefit from Income Taxes Related to Intra-Period Tax Allocations

The beneficial conversion feature associated with the Company's issuance of convertible promissory notes to related parties resulted in a temporary difference between the carrying amount and tax basis of the debt instruments. Upon issuance, the Company recognized the temporary difference as a deferred tax liability of $1.0 million with an offsetting adjustment to additional paid in capital. Recognition of the deferred tax liability resulted in a reduction to the Company's net deferred tax assets. Accordingly, the Company reduced its existing valuation allowance by $1.0 million and recognized a corresponding income tax benefit of $1.0 million in accordance with ASC 740-10. During the year ended December 31, 2017, the deferred tax liability was reduced in relation to the amortization of the beneficial conversion feature. Upon extinguishment of the notes in November 2017, the Company wrote down the remaining $0.7 million of deferred tax liability resulting in a net benefit from income taxes of $0.3 million for the year ended December 31, 2017.

Recent Changes to U.S. Tax Law

In December 2017, the 2017 Tax Cuts and Jobs Act (the "2017 Tax Act") was enacted and includes a broad range of provisions, many of which differ significantly from those contained in previous U.S. tax law. The Company accounts for changes in tax law in accordance with ASC 740 which requires companies to recognize the effect of such changes in the period of enactment. However, the SEC staff issued Staff Accounting Bulletin 118 which will allow companies to record provisional amounts during a measurement period that is similar to the measurement period used when accounting for business combinations. Accordingly, the Company adjusted its deferred taxes and related valuation allowances on a provisional basis to reflect the reduction in U.S. federal corporate tax rate from 35% to 21%, based on current understanding of the new law. The Company will continue to assess the impact of the recently enacted tax law (including any future guidance from federal and state tax authorities as well as any future guidance for the associated income tax accounting) on the financial statements over the next 12 months.

ALLAKOS INC.
NOTES TO FINANCIAL STATEMENTS

11. Defined Contribution Plan

In July 2013, the Company established a Savings Incentive Match Plan (the "SIMPLE IRA") for its employees, allowing for both employee and employer contributions for those employees who meet defined minimum age and service requirements. The SIMPLE IRA allows participants to defer a portion of their annual compensation on a pretax basis. During the years ended December 31, 2016 and 2017, the Company made contributions to the Plan of $59,000 and $0.1 million, respectively.

12. Related Party Transactions

In September 2014, as part of the Second Closings of its Series A convertible preferred stock (See Note 8), the Company received a $50,000 fully recourse promissory note from an employee as partial consideration for the purchase of Series A convertible preferred stock. The loan accrues interest at 2.97% per annum and is scheduled to mature on September 19, 2024. As of December 31, 2017, the carrying value of the related party promissory note was $55,000 including accrued interest. The principal portion of the related party promissory note is recorded in temporary equity on the balance sheet as a reduction to Series A convertible preferred stock. Interest accrued on the loan is recorded as a receivable within prepaid and other current assets on the balance sheet. For the years ended December 31, 2016 and 2017, the Company recognized interest income of $2,000 and $2,000, respectively. Interest income related to the promissory note is included as a component of interest expense, net within the Company's accompanying statements of operations and comprehensive loss.

13. Subsequent Events

In January 2018, the Company entered into a lease for 25,136 rentable square feet of office and laboratory space in Redwood City, California, with a lease term commencing on the later of the substantial completion and delivery of the premises and February 1, 2018. The base term of the lease is 10.75 years with an option to extend an additional term of 5 years. The lease agreement requires the Company to pay a security deposit of $0.8 million, which will be recorded in restricted cash on the Company's balance sheet. The lease has a total commitment of $14.0 million over the base term.

The Company's Board of Directors and stockholders approved a 1-for-1.25 reverse stock split of the Company's common stock and convertible preferred stock that became effective on July 6, 2018. All share and per share amounts in the financial statements and notes thereto have been retroactively adjusted for all periods presented to give effect to this reverse split.

From January 1, 2018 through July 6, 2018, the Company granted options for the purchase of an aggregate of 1,572,560 shares of common stock under the 2012 Plan, at a weighted-average exercise price of $5.63 per share, to employees and directors as compensation for future services to the Company and are subject to service-based vesting conditions.

On July 6, 2018, the Company's Board of Directors and stockholders approved the 2018 Equity Incentive Plan (the "2018 Plan"), which will become effective on the business day immediately prior to the effective date of the registration statement for the Company's initial public offering. The 2018 Plan provides for the grant of incentive stock options, nonstatutory stock options, stock appreciation rights, restricted stock units, restricted stock awards and other stock-based awards. There are 4,000,000 shares of common stock initially reserved for issuance under the 2018 Plan. The number of shares of common stock that may be issued under the 2018 Plan will automatically increase on each January 1, beginning with the fiscal year ending December 31, 2019, equal to the least of (i) 5,000,000 shares, (ii) 5% of the outstanding shares of common stock as of the last day of the immediately preceding fiscal year and (iii) such other amount determined by the Company's Board of Directors.

ALLAKOS INC.
NOTES TO FINANCIAL STATEMENTS

On July 6, 2018, the Company's Board of Directors and stockholders approved the 2018 Employee Stock Purchase Plan (the "2018 ESPP"), which will become effective on the business day immediately prior to the effective date of the registration statement for the Company's initial public offering. There are 500,000 shares of common stock initially reserved for issuance under the 2018 ESPP. The number of shares of common stock that may be issued under the 2018 ESPP will automatically increase on each January 1, beginning with the fiscal year ending December 31, 2019, equal to the least of (i) 1,000,000 shares, (ii) 1% of the outstanding shares of common stock as of the last day of the immediately preceding fiscal year and (iii) such other amount determined by the 2018 ESPP administrator.

Management has reviewed and evaluated material subsequent events from the balance sheet date of December 31, 2017, through the date of the independent registered public accounting firm's report. No subsequent events have been identified for disclosure, other than those matters noted above.

ALLAKOS INC.

BALANCE SHEETS
(in thousands, except per share data)

	December 31, 2017	March 31, 2018 (Unaudited)	Pro Forma as of March 31, 2018 (Unaudited)
Assets			
Current Assets:			
Cash and cash equivalents	$ 85,207	$ 74,600	$ 74,600
Prepaid expenses and other current assets	1,037	2,722	2,722
Total current assets	86,244	77,322	77,322
Property and equipment, net	445	401	401
Other long-term assets	340	2,054	2,054
Total assets	$ 87,029	$ 79,777	$ 79,777
Liabilities, convertible preferred stock and stockholders' equity (deficit)			
Current liabilities:			
Accounts payable	$ 1,703	$ 2,095	$ 2,095
Accrued expenses and other current liabilities	1,089	1,323	1,323
Total current liabilities	2,792	3,418	3,418
Other long-term liabilities	36	23	23
Total liabilities	2,828	3,441	3,441
Commitments (Note 5)			
Series A convertible preferred stock, $0.001 par value per share; 26,083 shares authorized as of December 31, 2017 and March 31, 2018 (unaudited), respectively; 20,866 shares issued and outstanding as of December 31, 2017 and March 31, 2018 (unaudited); aggregate liquidation preference of $46,950 as of December 31, 2017 and March 31, 2018 (unaudited); no shares issued and outstanding, pro forma (unaudited)	42,996	42,996	—
Series B convertible preferred stock, $0.001 par value per share; 12,632 shares authorized as of December 31, 2017 and March 31, 2018 (unaudited), respectively; 10,105 shares issued and outstanding as of December 31, 2017 and March 31, 2018 (unaudited); aggregate liquidation preference of $100,141 as of December 31, 2017 and March 31, 2018 (unaudited); no shares issued and outstanding, pro forma (unaudited)	99,973	99,973	—
Stockholders' equity (deficit):			
Common stock, $0.001 par value per share; 55,000 shares authorized as of December 31, 2017 and March 31, 2018 (unaudited), respectively; 2,114 shares issued and outstanding as of December 31, 2017 and March 31, 2018 (unaudited), respectively; 33,086 shares issued and outstanding, pro forma (unaudited)	3	3	41
Additional paid-in capital	1,803	2,423	145,354
Accumulated deficit	(60,574)	(69,059)	(69,059)
Total stockholders' equity (deficit)	(58,768)	(66,633)	76,336
Total liabilities, convertible preferred stock, and stockholders' equity (deficit)	$ 87,029	$ 79,777	$ 79,777

See accompanying notes to unaudited interim financial statements

ALLAKOS INC.

UNAUDITED STATEMENTS OF OPERATIONS AND COMPREHENSIVE LOSS
(in thousands, except per share data)

	Three Months Ended March 31,	
	2017	2018
Operating expenses		
Research and development	$ 4,364	$ 6,401
General and administrative	613	2,308
Total operating expenses	4,977	8,709
Loss from operations	(4,977)	(8,709)
Interest income (expense), net	(64)	224
Other expense, net	(15)	—
Net loss and comprehensive loss	$(5,056)	$ (8,485)
Net loss per share:		
Basic and diluted	$ (3.56)	$ (4.19)
Weighted-average shares of common stock outstanding:		
Basic and diluted	1,420	2,024
Pro forma net loss per share:		
Basic and diluted		$ (0.26)
Pro forma weighted-average shares of common stock outstanding:		
Basic and diluted		32,995

See accompanying notes to unaudited interim financial statements

ALLAKOS INC.

UNAUDITED STATEMENTS OF CASH FLOWS
(in thousands)

	Three Months Ended March 31,	
	2017	2018
Cash flows from operating activities		
Net loss	$ (5,056)	$ (8,485)
Adjustments to reconcile net loss to net cash used in operating activities:		
Depreciation and amortization	51	61
Stock-based compensation	46	614
Non-cash interest related to debt facility	25	—
Changes in operating assets and liabilities:		
Prepaid expenses and other current assets	(68)	(1,773)
Accounts payable	267	7
Accrued expenses and other current liabilities	(460)	227
Other long-term assets	(240)	8
Net cash used in operating activities	(5,435)	(9,341)
Cash flows from investing activities		
Purchases of property and equipment	(93)	(17)
Net cash used in investing activities	(93)	(17)
Cash flows from financing activities		
Proceeds from the exercise of stock options, net of repurchases	3	—
Payments for deferred financing costs	—	(447)
Net cash provided by (used in) financing activities	3	(447)
Net decrease in cash, cash equivalents and restricted cash	(5,525)	(9,805)
Cash, cash equivalents and restricted cash at beginning of period	13,416	85,207
Cash, cash equivalents and restricted cash at end of period	$ 7,891	$75,402
Supplemental disclosures		
Cash paid for interest	42	—
Noncash investing and financing items		
Property and equipment purchased in accounts payable	98	—
Deferred initial public offering costs in accounts payable	—	385
Vesting of restricted common stock subject to repurchase	8	6

See accompanying notes to unaudited interim financial statements

ALLAKOS INC.
NOTES TO UNAUDITED INTERIM FINANCIAL STATEMENTS

1. Organization and Business

Allakos Inc. ("Allakos" or the "Company") was incorporated in the state of Delaware in March 2012. Allakos is a clinical stage biopharmaceutical company focused on the development of AK002 for the treatment of eosinophil and mast cell related diseases. The Company's primary activities to date have included establishing its facilities, recruiting personnel, conducting research and development of its product candidates and raising capital. The Company's operations are located in San Carlos, California.

Liquidity Matters

Since inception, the Company has incurred net losses and negative cash flows from operations. During the three months ended March 31, 2018, the Company incurred a net loss of $8.5 million and used $9.3 million of cash in operations. At March 31, 2018, the Company had an accumulated deficit of $69.1 million and does not expect to experience positive cash flows from operating activities in the foreseeable future. The Company has financed its operations to date primarily through the sale and issuance of convertible preferred stock. Management expects to incur additional operating losses in the future as the Company continues to further develop, seek regulatory approval for and, if approved, commence commercialization of its product candidates. Accordingly, management recognizes the need to raise additional capital to fully implement its business plan. The Company intends to raise necessary capital privately or publicly through debt or equity financings, as well as through potential strategic alliances with third parties. The Company had $74.6 million of cash and cash equivalents at March 31, 2018. Based on the Company's business plans, management believes that this is sufficient to meet its obligations for at least the next 12 months from the issuance date of these financial statements.

2. Summary of Significant Accounting Policies

Basis of Presentation

The unaudited interim financial statements have been prepared in accordance with United States generally accepted accounting principles ("U.S. GAAP"). The preparation of financial statements in conformity with U.S. GAAP requires management to make estimates and assumptions that affect the amounts and disclosures reported in the financial statements and accompanying notes. On July 6, 2018, the Company filed an amendment to its amended and restated certificate of incorporation, effecting a 1-for-1.25 reverse stock split of its outstanding shares of common stock and convertible preferred stock, as well as all shares of common stock reserved for future issuance upon the exercise, issuance or conversion of equity instruments. The accompanying financial statements and notes to the financial statements give retroactive effect to the reverse stock split for all periods presented.

Use of Estimates

Management uses significant judgment when making estimates related to common stock valuation and related stock-based compensation expense, accrued expenses related to clinical trials and deferred tax valuation allowances. Management bases its estimates on historical experience and on various other assumptions that are believed to be reasonable under the circumstances, the results of which form the basis for making judgments about the carrying values of assets and liabilities that are not readily apparent from other sources. Actual results could differ from those estimates under different assumptions or conditions, and those differences could be material to the financial position and results of operations.

ALLAKOS INC.
NOTES TO UNAUDITED INTERIM FINANCIAL STATEMENTS

Unaudited Interim Financial Statements

The interim balance sheet as of March 31, 2018, the statements of operations and comprehensive loss, and statements of cash flows for the three months ended March 31, 2017 and 2018 are unaudited. The unaudited interim financial statements have been prepared on the same basis as the annual audited financial statements and reflect, in the opinion of management, all adjustments of a normal and recurring nature that are necessary for the fair presentation of the Company's financial position as of March 31, 2018 and its results of operations and cash flows for the three months ended March 31, 2017 and 2018. Certain information and note disclosures normally included in annual audited financial statements prepared in accordance with U.S. GAAP have been omitted. The financial data and the other financial information disclosed in these notes to the interim financial statements related to the three-month periods are also unaudited. The results of operations for the three months ended March 31, 2018 are not necessarily indicative of the results to be expected for the year ended December 31, 2018 or for any other future annual or interim period. The balance sheet as of December 31, 2017 included herein was derived from the audited financial statements as of that date. These interim financial statements should be read in conjunction with the Company's audited financial statements included elsewhere in this prospectus.

Unaudited Pro Forma Information

Immediately prior to the Company's initial public offering ("IPO"), all outstanding shares of convertible preferred stock will automatically convert into common stock. Unaudited pro forma balance sheet information as of March 31, 2018 assumes the conversion of all outstanding convertible preferred stock into shares of common stock using the if-converted method. The shares of common stock issuable and the proceeds expected to be received in the initial public offering are excluded from such pro forma financial information.

Concentration of Credit Risk and Other Risks and Uncertainties

Financial instruments that potentially subject the Company to credit risk principally consist of cash and cash equivalents in the form of money market funds. These financial instruments are held in accounts at a single financial institution that management believes possesses high credit quality. Amounts on deposit with this financial institution have and will continue to exceed federally-insured limits. The Company has not experienced any losses on its cash deposits.

The Company is subject to a number of risks similar to that of other early-stage biopharmaceutical companies, including, but not limited to, the need to obtain adequate additional funding, possible failure of current or future clinical trials, its reliance on third parties to conduct its clinical trials, the need to obtain regulatory and marketing approvals for its product candidates, competitive developments, the need to successfully commercialize and gain market acceptance of the Company's product candidates, its right to develop and commercialize its product candidates pursuant to the terms and conditions of the licenses granted to the Company, protection of proprietary technology, the ability to make milestone, royalty or other payments due under licensing agreements, and the need to secure and maintain adequate manufacturing arrangements with third parties. If the Company does not successfully commercialize or partner its product candidates, it will be unable to generate product revenue or achieve profitability.

Cash, Cash Equivalents and Restricted Cash

The Company considers all highly liquid investments with original maturities of three months or less from the date of purchase to be cash equivalents. Cash equivalents consist of money market

ALLAKOS INC.
NOTES TO UNAUDITED INTERIM FINANCIAL STATEMENTS

funds and are stated at fair value. The following table provides a reconciliation of cash, cash equivalents and restricted cash reported within the Company's balance sheets and which, in aggregate, represent the amounts reported in the accompanying statements of cash flows (in thousands):

	December 31,		March 31,	
	2016	2017	2017	2018
Cash and cash equivalents	$13,416	$85,207	$7,891	$74,600
Restricted cash in long term assets, deposit for lease security	—	—	—	802
Total cash, cash equivalents and restricted cash	$13,416	$85,207	$7,891	$75,402

Restricted cash as of March 31, 2018 represents deposits restricted from withdrawal and held by a bank in the form of collateral for an irrevocable standby letter of credit held as security for the lease of the Company's facility in Redwood City, California.

Fair Value Measurements

The Company accounts for fair value of its financial instruments in accordance with Financial Accounting Standards Board (the "FASB") Accounting Standards Codification ("ASC") Topic No. 820, *Fair Value Measurements* ("ASC 820"). ASC 820 establishes a common definition for fair value, establishes a framework for measuring fair value and expands disclosures about such fair value measurements. Additionally, ASC 820 defines fair value as the price that would be received to sell an asset or paid to transfer a liability in an orderly transaction between market participants at the measurement date.

The Company measures fair value based on a three-level hierarchy of inputs, of which the first two are considered observable and the last unobservable. Unobservable inputs reflect the Company's own assumptions about current market conditions. The three-level hierarchy of inputs is as follows:

Level 1 – Quoted prices in active markets for identical assets or liabilities.

Level 2 – Inputs other than Level 1 that are observable, either directly or indirectly, such as quoted prices for similar assets or liabilities; quoted prices in markets that are not active; or other inputs that are observable or can be corroborated by observable market data for substantially the full term of the assets or liabilities.

Level 3 **–** Unobservable inputs that are supported by little or no market activity and that are significant to the fair value of assets or liabilities.

To the extent that the valuation is based on models or inputs that are less observable or unobservable in the market, the determination of fair value requires more judgment. Accordingly, the degree of judgment exercised by the Company in determining fair value is greatest for instruments categorized in Level 3. A financial instrument's level within the fair value hierarchy is based on the lowest level of any input that is significant to the fair value measurement.

The carrying amounts reflected in the accompanying balance sheets for cash and cash equivalents, prepaid expenses and other current assets, and other long-term assets approximate fair value due to their short-term nature.

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Deferred Initial Public Offering Costs

Costs incurred in connection with the IPO primarily consist of direct incremental legal, printing and accounting fees. IPO costs are capitalized as incurred and will be offset against proceeds upon consummation of this offering. In the event the offering is terminated or abandoned, deferred IPO costs will be expensed in the period such determination has been made. As of December 31, 2017 and March 31, 2018, there was $0.2 million and $0.8 million, respectively, of deferred IPO costs included in other long-term assets on the accompanying balance sheets.

Lease Liability

The Company classifies the agreement for its office and laboratory facilities as an operating lease. Rent expense is recorded on a straight-line basis over the term of the lease. Differences that exist between cash rent payments and the recognition of rent expense, such as those resulting from rent abatements or contractual escalations of minimum lease payments, are recorded as a deferred rent liability and recognized as adjustments to rental expense on a straight-line basis over the term of the lease. The current portion of the deferred rent liability is included within accrued expenses and other current liabilities on the accompanying balance sheets. Noncurrent portion of deferred rent liability is classified as other long-term liabilities.

Term Loan Financing Costs

During the three months ended March 31, 2017, the Company recognized noncash interest expense of $25,000 related to its then outstanding debt facility. Noncash interest included the amortization and accretion of various costs incurred in connection with the issuance of the associated debt instruments and calculated using the effective interest rate method over the expected term of the debt. In December 2017, the Company repaid all outstanding debt. Noncash interest expense is included in interest income (expense), net within the Company's statements of operations and comprehensive loss.

Property and Equipment, Net

Property and equipment are stated at cost, net of accumulated depreciation. Depreciation is computed using the straight-line method over the estimated useful lives of the assets. The useful lives of property and equipment are as follows:

Laboratory equipment – 3 years

Leasehold improvements – Shorter of remaining lease term or estimated life of the assets

Upon retirement or sale, the cost of disposed assets and their related accumulated depreciation are removed from the balance sheet. Any resulting gains or losses on dispositions of property and equipment are included as a component of other expense, net. Repair and maintenance costs that do not significantly add value to the property and equipment, or prolong its life, are charged to operating expense as incurred.

Impairment of Long-Lived Assets

Long-lived assets are reviewed for indications of possible impairment whenever events or changes in circumstances indicate that the carrying amount of an asset may not be recoverable. Recoverability

is measured by comparison of the carrying amounts to the future undiscounted cash flows attributable to these assets. An impairment loss is recognized to the extent an asset group is not recoverable, and the carrying amount exceeds the projected discounted future cash flows arising from such assets. There were no impairments of long-lived assets for the three months ended March 31, 2017 and 2018.

Accrued Research and Development Costs

Service agreements with contract research organizations ("CROs") and contract development and manufacturing organizations ("CDMOs") comprise a significant component of the Company's research and development activities. External costs for CROs and CDMOs are recognized as the services are incurred. The Company accrues for expenses resulting from obligations under agreements with its third parties for which the timing of payments does not match the periods over which the materials or services are provided to the Company. Accruals are recorded based on estimates of services received and efforts expended pursuant to agreements established with CROs, CDMOs and other outside service providers. These estimates are typically based on contracted amounts applied to the proportion of work performed and determined through analysis with internal personnel and external service providers as to the progress or stage of completion of the services.

The Company makes judgements and estimates in determining the accrual balance in each reporting period. In the event advance payments are made to a CRO, CDMO or other outside service provider, the payments are recorded within prepaid expenses and other current assets and subsequently recognized as research and development expense when the associated services have been performed. As actual costs become known, the Company adjusts its liabilities and assets. Inputs, such as the extent of services received and the duration of services to be performed, may vary from the Company's estimates, which will result in adjustments to research and development expense in future periods. Changes in these estimates that result in material changes to the Company's accruals could materially affect the Company's results of operations. The Company's historical estimates have not been materially different from actual amounts recorded.

Convertible Preferred Stock

The Company records all shares of convertible preferred stock net of offering costs at their respective fair values on the dates of issuance. The convertible preferred stock is recorded outside of stockholders' deficit because, in the event of certain deemed liquidation events considered not solely within the Company's control, such as a merger, acquisition or sale of all or substantially all of the Company's assets, the convertible preferred stock will become redeemable at the option of the holders. In the event of a change of control of the Company, proceeds received from the sale of such shares will be distributed in accordance with the liquidation preferences set forth in the Company's Second Amended and Restated Certificate of Incorporation unless the holders of convertible preferred stock had previously converted their shares of convertible preferred stock into shares of common stock. The Company has not adjusted the carrying value of the convertible preferred stock to their redemption values, since it is uncertain whether or when a redemption event will occur.

Segments

Operating segments are defined as components of an entity about which separate discrete information is available for evaluation by the chief operating decision maker or decision-making group, in deciding how to allocate resources and in assessing performance. The Company's chief operating decision maker, its Chief Executive Officer, views its operations and manages its business in one operating segment operating exclusively in the United States.

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Research and Development Expense

Research and development costs are expensed as incurred. Research and development costs include, among others, consulting costs, salaries, benefits, travel, stock-based compensation, laboratory supplies and other non-capital equipment utilized for in-house research, allocation of facilities and overhead costs and external costs paid to third parties that conduct research and development activities on the Company's behalf. Amounts incurred in connection with license agreements are also included in research and development expense.

Advance payments for goods or services to be rendered in the future for use in research and development activities are deferred and included in prepaid expenses and other current assets. The deferred amounts are expensed as the related goods are delivered or the services are performed.

Patent Costs

The Company expenses patent application and related legal costs as incurred and classifies such costs as general and administrative expenses in the accompanying statements of operations and comprehensive loss.

Stock-Based Compensation

The Company accounts for its stock-based compensation in accordance with FASB ASC Topic 718, *Compensation—Stock Compensation* ("ASC 718"). ASC 718 requires all stock-based payments to employees and directors to be recognized as expense in the statements of operations and comprehensive loss based on their grant date fair values. For purposes of determining the estimated fair value of stock options granted to employees and directors, the Company uses the Black-Scholes option pricing model. The Black-Scholes option pricing model requires the input of certain assumptions that involve judgment, for which changes can materially affect the resulting estimates of fair value. The assumptions used to determine the fair value of stock options granted were as follows:

Expected volatility – Due to the lack of a public market for the Company's common stock and a lack of company-specific historical and implied volatility data, the Company has based its computation of expected volatility on the historical volatility of a representative group of public companies with similar characteristics to the Company, including stage of product development and life science industry focus. The historical volatility is calculated based on a period of time commensurate with the expected term assumption.

Expected term – The Company determines the expected term in accordance with the "simplified method" described by SEC Staff Accounting Bulletin No. 107, *Share-Based Payment*, as it does not have sufficient historical exercise data to provide a reasonable basis upon which to estimate the expected term.

Risk-free interest rate – The Company bases the risk-free interest rate on United States Treasury securities with terms consistent to the expected term of the stock option being valued.

Expected dividends – The expected dividend yield is assumed to be zero as the Company has never paid dividends and has no current plans to pay any dividends on its common stock.

The Company uses historical data to estimate pre-vesting forfeitures and records stock-based compensation expense only for those awards expected to vest. To the extent that actual forfeitures differ from estimates, the difference is recorded as a cumulative adjustment in the period the estimates

are revised. The Company expenses the fair value of its stock-based compensation awards to employees on a straight-line basis over the requisite service period, which is generally the vesting period.

Estimated Fair Value of Common Stock Warrants Issued with Debt

The Company estimates the fair values of common stock warrants using an option pricing model based on inputs as of the valuation measurement dates, including the fair value of the Company's common stock, the estimated volatility of the price of the Company's common stock, the expected term of the warrants and the risk-free interest rates.

Comprehensive Loss

Comprehensive loss is defined as a change in equity during a period from transactions and other events and circumstances from nonowner sources. For all periods presented, there have been no items qualifying as other comprehensive loss and therefore, the Company's comprehensive loss was the same as its reported net loss.

Net Loss per Share

The Company calculates basic net loss per share by dividing the net loss attributable to common stockholders by the weighted-average shares of common stock outstanding during the period, without consideration for potentially dilutive securities. The Company calculates diluted net loss per share after giving consideration to all potentially dilutive securities outstanding during the period using the treasury-stock and if-converted methods, except where the effect of including such securities would be anti-dilutive. Because the Company has reported net losses since inception, the effect from potentially dilutive securities would have been anti-dilutive and therefore has been excluded from the calculation of diluted net loss per share.

Basic and diluted net loss per share was calculated as follows (in thousands, except per share data):

	Three Months Ended March 31,	
	2017	2018
Numerator:		
Net loss	$(5,056)	$(8,485)
Denominator:		
Weighted-average shares of common stock outstanding, basic and diluted	1,420	2,024
Net loss per share, basic and diluted	$ (3.56)	$ (4.19)

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The following table sets forth the potentially dilutive securities that have been excluded from the calculation of diluted net loss per share due to their anti-dilutive effect for the periods indicated (in thousands):

	Three Months Ended March 31,	
	2017	2018
Series A convertible preferred stock	20,866	20,866
Series B convertible preferred stock	—	10,105
Options to purchase common stock	2,716	6,225
Warrants to purchase common stock	48	48
Unvested restricted common stock	181	90
Total	23,811	37,334

Pro Forma Net Loss per Share

The pro forma net loss per share for the three months ended March 31, 2018 was computed using the weighted-average number of shares of common stock outstanding during the period, after giving effect to the conversion of all outstanding shares of convertible preferred stock into shares of common stock, as if such conversion had occurred at the later of their issuance date or the beginning of the period. The pro forma basic and diluted net loss per share amounts do not include shares of common stock expected to be sold as part of this offering.

Pro forma net loss per share for the three months ended March 31, 2018 was calculated as follows (in thousands, except per share data):

Numerator:	
Net loss	$ (8,485)
Denominator:	
Weighted-average shares of common stock outstanding, basic and diluted	2,024
Adjustment for assumed conversion of convertible preferred stock	30,971
Pro forma weighted-average shares of common stock outstanding, basic and diluted	32,995
Pro forma net loss per share, basic and diluted	$ (0.26)

Foreign Currency Transactions

The Company is party to multiple contract manufacturing and clinical research agreements for which services to be performed are denominated in foreign currencies other than the United States Dollar. The Company records gains and losses attributable to fluctuations in foreign currencies as a component of other expense, net on the accompanying statements of operations and comprehensive loss.

Recent Accounting Pronouncements

In February 2016, the FASB issued Accounting Standards Update (“ASU”) No. 2016-02, *Leases* (“ASU 2016-02”). ASU 2016-02 requires an entity to recognize assets and liabilities arising from a

ALLAKOS INC.
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lease for both financing and operating leases. ASU 2016-02 will also require new qualitative and quantitative disclosures to help investors and other financial statement users better understand the amount, timing and uncertainty of cash flows arising from leases. For public entities, ASU 2016-02 is effective for fiscal years beginning after December 15, 2018. Early adoption is permitted. The Company has not yet determined the potential effects of ASU 2016-02 on its financial statements but does not expect it to have a significant impact.

In November 2016, the FASB issued ASU No. 2016-18, *Statement of Cash Flows: Restricted Cash* ("ASU 2016-18"). ASU 2016-18 amends the classification and presentation of changes in restricted cash or restricted cash equivalents in the statement of cash flows. ASU 2016-18 is effective for public business entities for fiscal years beginning after December 15, 2017, and interim periods within those fiscal years. The Company adopted ASU 2016-18 retrospectively as of January 1, 2018. There was no significant impact to the Company's financial statements as there were no restricted cash or restricted cash equivalent balances in the prior periods.

3. Fair Value Measurements

The Company measures and reports certain financial instruments as assets and liabilities at fair value on a recurring basis. The Company's financial assets measured at fair value on a recurring basis were as follows (in thousands):

	December 31, 2017			
	Level 1	Level 2	Level 3	Total
Cash equivalents	$82,526	$ —	$ —	$82,526
Total financial assets	$82,526	$ —	$ —	$82,526

	March 31, 2018			
	Level 1	Level 2	Level 3	Total
Cash equivalents	$72,632	$ —	$ —	$72,632
Total financial assets	$72,632	$ —	$ —	$73,632

Financial assets included in cash equivalents are comprised of money market funds. The Company measures the fair value of its money market funds using quoted prices in active markets for identical assets.

The Company evaluates transfers between levels at the end of each reporting period. There were no transfers of assets or liabilities between levels during the three months ended March 31, 2017 and 2018.

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4. Balance Sheet Components and Supplemental Disclosures

Property and Equipment, Net

Property and equipment, net, consisted of the following (in thousands):

	December 31, 2017	March 31, 2018
Laboratory equipment	$ 949	$ 966
Leasehold improvements	55	55
	1,004	1,021
Less accumulated depreciation	(559)	(620)
Property and equipment, net	$ 445	$ 401

Depreciation and amortization expense for the three months ended March 31, 2017 and 2018 was $51,000 and $61,000, respectively.

Accrued Expenses and Other Current Liabilities

Accrued expenses and other current liabilities consisted of the following (in thousands):

	December 31, 2017	March 31, 2018
Accrued outside professional services	$ 787	$ 461
Accrued compensation	265	827
Other current liabilities	37	35
Total	$ 1,089	$ 1,323

5. Commitments and Contingencies

Operating Lease Obligations

The Company's operating lease obligations primarily relate to its leased office and laboratory space under two separate noncancelable operating leases that begin to expire in June 2019. The Company's San Carlos lease agreement, which was amended in August 2015, includes two renewal provisions allowing the Company to extend the lease for an additional period of one year each. The amended lease agreement includes a rent abatement and escalation clauses for increased rent over the lease term.

The Company's Redwood City lease agreement was entered into January 2018, with a lease term commencing upon substantial completion and delivery of the premises. The base term of the lease is 10.75 years with an option to extend an additional term of 5 years. The lease agreement required a security deposit of $0.8 million, which the Company satisfied by establishing a letter of credit and secured by restricted cash. Restricted cash is recorded in other long-term assets on the Company's balance sheet.

In addition to the minimum future lease commitments presented below, both leases require the Company to pay property taxes, insurance, maintenance and repair costs. Rent expense is recognized using the straight-line method over the respective terms. The Company records a deferred rent liability

calculated as the difference between rent expense and cash rental payments. The current portion of the liability is included within accrued expenses and other current liabilities on the balance sheets. The remaining non-current portion is classified in other long-term liabilities.

Future minimum lease payments required under operating leases are as follows (in thousands):

Fiscal Year Ending December 31, 2018	
2018 (9 months)	$ 312
2019	818
2020	1,239
2021	1,277
2022	1,315
Thereafter	9,428
Total	$14,389

In November 2015, the Company entered into a sublease agreement with a third party for a portion of the Company's facilities in San Carlos, California. The sublease has a month-to-month term and can be terminated by either party with a thirty-day written notice. Sublease payments owed are recorded as an offset to the Company's rent expense.

Net rent expense was $0.1 million and $0.1 million for the three months ended March 31, 2017 and 2018, respectively.

Purchase Obligations

The Company has entered into contractual agreements with various research and development organizations and suppliers in the normal course of its business. All contracts are terminable, with varying provisions regarding termination. If a contract were to be terminated, the Company would only be obligated for the products or services that the Company had received at the time of termination as well as any non-cancelable minimum payments contractually agreed upon prior to the effective date of termination. In the case of terminating a clinical trial agreement with an investigational site conducting clinical activities on behalf of the Company, the Company would also be obligated to provide continued support for appropriate safety procedures through completion or termination of the associated study. At March 31, 2018, the Company had total minimum purchase obligations of $1.9 million, all of which are payable during the year ending December 31, 2018.

In-Licensing Agreements

The Company has entered into exclusive and non-exclusive, royalty bearing license agreements with third-parties for certain intellectual property. Under the terms of the license agreements, the Company is obligated to pay milestone payments upon the achievement of specified clinical, regulatory and commercial milestones. Actual amounts due under the license agreements will vary depending on factors including, but not limited to, the number of products developed and the Company's ability to further develop and commercialize the licensed products. The Company is also subject to future royalty payments based on sales of the licensed products. In-licensing payments to third parties for milestones are recognized as research and development expense in the period of achievement.

The Company recognized $0.3 million of milestone expense for the three months ended March 31, 2018. The Company did not recognize any milestone expense during the three months ended

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March 31, 2017. Milestone payments are not creditable against royalties. As of March 31, 2018, the Company has not incurred any royalty liabilities related to its license agreements, as product sales have not yet commenced.

Exclusive License Agreement with The Johns Hopkins University

In December 2013, the Company entered into a license agreement with The Johns Hopkins University ("JHU") for a worldwide exclusive license to develop, use, manufacture and commercialize covered product candidates including AK001 and AK002, which was amended in September 30, 2016. Under the terms of the agreement, the Company has made upfront and milestone payments of $0.3 million as of March 31, 2018 and may be required to make aggregate additional milestone payments of up to $4.0 million. The Company also issued 88,887 shares of common stock as consideration under the JHU license agreement. In addition to milestone payments, the Company is also subject to single-digit royalties to JHU based on future net sales of each licensed therapeutic product candidate by the Company and its affiliates and sublicensees, with up to a low six digit dollar minimum annual royalty payment.

Non-exclusive License Agreement with BioWa Inc. and Lonza Sales AG

In October 2013, the Company entered into a tripartite agreement with BioWa Inc. ("BioWa"), and Lonza Sales AG ("Lonza"), for the non-exclusive worldwide license to develop and commercialize product candidates including AK002 that are manufactured using a technology jointly developed and owned by BioWa and Lonza. Under the terms of the agreement, the Company has made milestone payments of $0.4 million as of March 31, 2018 and the Company may be required to make aggregate additional milestone payments of up to $41.0 million. In addition to milestone payments, the Company is also subject to minimum annual commercial license fees of $40,000 per year to BioWa until such time as BioWa receives royalty payments, as well as low single-digit royalties to BioWa and to Lonza. Royalties are based on future net sales by the Company and its affiliates and sublicensees and vary dependent on Lonza's participation as sole manufacturer for commercial production.

Indemnification Agreements

The Company has entered into indemnification agreements with certain directors and officers that require the Company, among other things, to indemnify them against certain liabilities that may arise by reason of their status or service as directors or officers. To date, no such matters have arisen and the Company does not believe that the outcome of any claims under indemnification arrangements will have a material adverse effect on its financial positions, results of operations or cash flows. Accordingly, the Company has not recorded a liability related to such indemnifications at March 31, 2018.

6. Convertible Preferred Stock and Stockholders' Deficit

The Company is authorized to issue a total of 93,714,587 shares of stock. Of these shares, 38,714,587 are designated as preferred stock, including 26,083,081 Series A shares and 12,631,506 Series B shares. The Company is authorized to issue a total of 55,000,000 shares of common stock, of which 2,114,232 shares were issued and outstanding at March 31, 2018.

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Common Stock

A summary of common stock shares reserved for future issuance upon the exercise, issuance or conversion of the respective equity instruments is as follows (in thousands):

	December 31, 2017	March 31, 2018
Series A convertible preferred stock	26,083	26,083
Series B convertible preferred stock	12,632	12,632
Stock options issued and outstanding	4,884	6,225
Stock options available for future grant	2,346	1,005
Conversion of common stock warrants	48	48
Total	45,993	45,993

Common stockholders are entitled to dividends if and when declared by the Board of Directors subject to the prior rights of the preferred stockholders. As of March 31, 2018, no dividends on common stock had been declared by the Board of Directors.

7. Stock-Based Compensation

Total stock-based compensation expense recognized, before taxes, during the three months ended March 31, 2017 and 2018 is as follows (in thousands):

	Three Months Ended March 31,	
	2017	2018
Research and development	$ 27	$ 168
General and administrative	19	446
Total	$ 46	$ 614

No income tax benefits for stock-based compensation expense have been recognized for the three months ended March 31, 2017 and 2018 as a result of the Company's full valuation allowance applied to net deferred tax assets and net operating loss carryforwards.

The following weighted-average assumptions were used to calculate the fair value of stock-based awards granted to employees and directors during the periods indicated:

	Three Months Ended March 31,	
	2017	2018
Risk-free interest rate	1.98%	2.48%
Expected volatility	78.00%	77.82%
Expected dividend yield	—	—
Expected term (in years)	6.08	5.93

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Activity under the 2012 Plan is summarized as follows (in thousands, except per share data):

	Shares Available for Grant	Options Outstanding	Weighted-Average Exercise Price Per Share	Aggregate Intrinsic Value
Balance at December 31, 2017	2,346	4,884	$ 0.67	$ 16,331
Granted	(1,341)	1,341	$ 4.01	
Balance at March 31, 2018	1,005	6,225	$ 1.39	$ 18,198
Options exercisable		3,725	$ 1.01	$ 12,314
Options vested and expected to vest		6,207	$ 1.38	$ 18,216

The weighted-average fair value of options granted to employees and directors during the three months ended March 31, 2017 and 2018 was $0.78 and $2.73 per share, respectively.

The aggregate fair value of stock options that vested during the three months ended March 31, 2017 and 2018 was $49,000 and $44,000, respectively.

The aggregate intrinsic value of stock options is calculated as the difference between the exercise price of the stock options and the fair value of the Company's common stock for those stock options that had exercise prices lower than the fair value of the Company's common stock. The aggregate intrinsic value of stock options exercised during the three months ended March 31, 2017 and 2018 was $2,000 and $0, respectively.

The weighted-average remaining contractual life of options outstanding was 8.7 years at March 31, 2018. At March 31, 2018, the weighted-average remaining contractual life was 8.6 years for exercisable options and 8.7 years for vested and expected to vest options.

During the three months ended March 31, 2017 and 2018, the Company did not grant any stock options with performance-based or market-based vesting conditions, nor did the Company grant any stock options to non-employees in exchange for services.

As of March 31, 2018, total unrecognized stock-based compensation expense relating to unvested stock options was $5.4 million. This amount is expected to be recognized over a weighted-average period of 2.9 years.

Restricted Common Stock

A summary of the restricted common stock activity during the three months ended March 31, 2018 is as follows (in thousands, except per share data):

	Shares	Weighted-Average Grant Date Fair Value Per Share
Balance at December 31, 2017	104	$ 0.43
Vested	(14)	$ 0.43
Balance at March 31, 2018	90	$ 0.43

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The fair value of restricted common stock that vested during the three months ended March 31, 2017 and 2018 was $8,000 and $6,000, respectively.

As of March 31, 2018, total liabilities related to unvested shares of restricted common stock was $38,000. This amount is expected to be recognized over a weighted-average period of 1.6 years.

8. Defined Contribution Plan

In July 2013, the Company established a Savings Incentive Match Plan (the “SIMPLE IRA plan”) for its employees, allowing for both employee and employer contributions for those employees who meet defined minimum age and service requirements. The SIMPLE IRA plan allows participants to defer a portion of their annual compensation on a pretax basis. During the three months ended March 31, 2017, the Company made contributions to the SIMPLE IRA plan of $30,000.

In January 2018, the Company terminated and replaced the SIMPLE IRA with a defined contribution plan under Section 401(k) of the Internal Revenue Code (the “401(k) plan”). The 401(k) plan covers all employees who meet defined minimum age and service requirements. Employee contributions are voluntary and are determined on an individual basis, limited to the maximum amount allowable under U.S. federal tax regulations. The Company makes matching contributions of up to 4% of the eligible employees’ compensation to the 401(k) plan. During the three months ended March 31, 2018, the Company made contributions to the 401(k) plan of $59,000.

9. Related Party Transactions

In September 2014, as part of the Second Closings of its Series A convertible preferred stock, the Company received a $50,000 fully recourse promissory note from an employee as partial consideration for the purchase of Series A convertible preferred stock. The loan accrues interest at 2.97% per annum and is scheduled to mature on September 19, 2024. As of March 31, 2018, the carrying value of the related party promissory note was $55,000 including accrued interest. The principal portion of the related party promissory note is recorded in temporary equity on the balance sheet as a reduction to Series A convertible preferred stock. Interest accrued on the loan is recorded as a receivable within prepaid and other current assets on the balance sheet. For the three months ended March 31, 2017 and 2018, the Company recognized less than $1,000 of interest income in each reporting period. Interest income related to the promissory note is included as a component of interest income (expense), net within the Company’s accompanying statements of operations and comprehensive loss.

10. Subsequent Events

Management has reviewed and evaluated material subsequent events from the balance sheet date of March 31, 2018, through May 18, 2018. No subsequent events have been identified for disclosure.

6,000,000 Shares

COMMON STOCK

Goldman Sachs & Co. LLC **Jefferies**

William Blair

PART II

INFORMATION NOT REQUIRED IN THE PROSPECTUS

Item 13. Other Expenses of Issuance and Distribution

The following table sets forth the expenses to be incurred in connection with the offering described in this Registration Statement, other than underwriting discounts and commissions, all of which will be paid by us. All amounts are estimates except the Securities and Exchange Commission's registration fee, the Financial Industry Regulatory Authority, Inc.'s filing fee and the NASDAQ listing fee.

	Amount to be Paid
SEC registration Fee	$ 14,604
FINRA filing fee	18,095
NASDAQ listing fee	150,000
Printing and engraving expenses	425,000
Legal fees and expenses	1,250,000
Accounting fees and expenses	1,384,900
Transfer agent and registrar fees	6,500
Miscellaneous expenses	150,901
Total	$ 3,400,000

Item 14. Indemnification of Directors and Officers

Section 145 of the Delaware General Corporation Law empowers a corporation to indemnify its directors and officers and to purchase insurance with respect to liability arising out of their capacity or status as directors and officers, provided that the person acted in good faith and in a manner the person reasonably believed to be in our best interests, and, with respect to any criminal action, had no reasonable cause to believe the person's actions were unlawful. The Delaware General Corporation Law further provides that the indemnification permitted thereunder shall not be deemed exclusive of any other rights to which the directors and officers may be entitled under the corporation's bylaws, any agreement, a vote of stockholders or otherwise. The certificate of incorporation of the registrant to be in effect upon the completion of this offering provides for the indemnification of the registrant's directors and officers to the fullest extent permitted under the Delaware General Corporation Law. In addition, the bylaws of the registrant to be in effect upon the completion of this offering require the registrant to fully indemnify any person who was or is a party or is threatened to be made a party to any threatened, pending or completed action, suit or proceeding (whether civil, criminal, administrative or investigative) by reason of the fact that such person is or was a director or officer of the registrant, or is or was a director or officer of the registrant serving at the registrant's request as a director, officer, employee or agent of another corporation, partnership, joint venture, trust or other enterprise, against expenses (including attorney's fees), judgments, fines and amounts paid in settlement actually and reasonably incurred by such person in connection with such action, suit or proceeding, to the fullest extent permitted by applicable law.

Section 102(b)(7) of the Delaware General Corporation Law permits a corporation to provide in its certificate of incorporation that a director of the corporation shall not be personally liable to the corporation or its stockholders for monetary damages for breach of fiduciary duty as a director, except (1) for any breach of the director's duty of loyalty to the corporation or its stockholders, (2) for acts or omissions not in good faith or which involve intentional misconduct or a knowing violation of law, (3) for payments of unlawful dividends or unlawful stock repurchases or redemptions or (4) for any transaction from which the director derived an improper personal benefit. The registrant's certificate of

incorporation to be in effect upon the completion of this offering provides that the registrant's directors shall not be personally liable to it or its stockholders for monetary damages for breach of fiduciary duty as a director and that if the Delaware General Corporation Law is amended to authorize corporate action further eliminating or limiting the personal liability of directors, then the liability of the registrant's directors shall be eliminated or limited to the fullest extent permitted by the Delaware General Corporation Law, as so amended.

Section 174 of the Delaware General Corporation Law provides, among other things, that a director who willfully or negligently approves of an unlawful payment of dividends or an unlawful stock purchase or redemption may be held liable for such actions. A director who was either absent when the unlawful actions were approved, or dissented at the time, may avoid liability by causing his or her dissent to such actions to be entered in the books containing minutes of the meetings of the board of directors at the time such action occurred or immediately after such absent director receives notice of the unlawful acts.

As permitted by the Delaware General Corporation Law, the registrant intends to enter into separate indemnification agreements with each of the registrant's directors and certain of the registrant's officers which would require the registrant, among other things, to indemnify them against certain liabilities which may arise by reason of their status as directors, officers or certain other employees.

The registrant expects to obtain and maintain insurance policies under which its directors and officers are insured, within the limits and subject to the limitations of those policies, against certain expenses in connection with the defense of, and certain liabilities which might be imposed as a result of, actions, suits or proceedings to which they are parties by reason of being or having been directors or officers. The coverage provided by these policies may apply whether or not the registrant would have the power to indemnify such person against such liability under the provisions of the Delaware General Corporation Law.

These indemnification provisions and the indemnification agreements intended to be entered into between the registrant and the registrant's officers and directors may be sufficiently broad to permit indemnification of the registrant's officers and directors for liabilities (including reimbursement of expenses incurred) arising under the Securities Act of 1933, as amended.

The underwriting agreement between the registrant and the underwriters to be filed as Exhibit 1.1 to this registration statement provides for the indemnification by the underwriters of the registrant's directors and officers and certain controlling persons against specified liabilities, including liabilities under the Securities Act with respect to information provided by the underwriters specifically for inclusion in the registration statement.

Item 15. Recent Sales of Unregistered Securities

The following list sets forth information regarding all unregistered securities sold by us since January 1, 2015. No underwriters were involved in the sales and the certificates representing the securities sold and issued contain legends restricting transfer of the securities without registration under the Securities Act or an applicable exemption from registration.

(a) In March 2015, we issued 1,310,906 shares of our Series A convertible preferred stock at $2.25 per share, for aggregate proceeds of $2.9 million, to a total of 9 accredited investors.

(b) In January 2016, we issued 8,444,440 shares of our Series A convertible preferred stock at $2.25 per share, for aggregate proceeds of $19.0 million, to a total of 10 accredited investors.

(c) In June 2016, we issued to one accredited investor a warrant to purchase an aggregate of 23,808 shares of our common stock for an exercise price of $0.53 per share, for an aggregate exercise price of approximately $12,000. In December 2016, the number of shares exercisable under the warrant was increased to 47,616 shares due to the occurrence of an event that triggered such increase under the terms of the warrant. The additional 23,808 shares of our common stock that became exercisable under the warrant in December 2016 have an exercise price of $0.69 per share, for an aggregate exercise price of approximately $16,000.

(d) In August 2017, we issued unsecured convertible promissory notes in the aggregate principal amount of $7.5 million to a total of 17 accredited investors. These notes converted into 771,083 shares of our Series B convertible preferred stock in November 2017 upon the closing of our Series B financing.

(e) In November 2017, we issued 10,105,181 shares of our Series B convertible preferred stock at approximately $9.91 per share, for aggregate proceeds of $100.1 million, including shares issued upon the conversion of the principal amount and accrued interest of outstanding notes, to a total of 40 accredited investors.

(f) From January 2015 through July 9, 2018, we granted stock options to purchase an aggregate of 7,684,242 shares of common stock to certain employees, directors and consultants under our 2012 Plan at exercise prices per share ranging from $0.43 to $16.00, for an aggregate exercise price of approximately $15.9 million.

(g) From January 2015 through July 9, 2018, we issued and sold to our employees an aggregate of 1,705,899 shares of common stock upon the exercise of options under our 2012 Plan at exercise prices per share ranging from $0.36 to $1.16, for an aggregate exercise price of approximately $0.8 million.

The offers, sales and issuances of the securities described in Items 15(a) through 15(e) were exempt from registration under the Securities Act under Section 4(a)(2) of the Securities Act or Regulation D promulgated thereunder as transactions by an issuer not involving a public offering. The recipients of securities in each of these transactions acquired the securities for investment only and not with a view to or for sale in connection with any distribution thereof and appropriate legends were affixed to the securities issued in these transactions. Each of the recipients of securities in these transactions was an accredited person and had adequate access, through employment, business or other relationships, to information about the registrant.

The offers, sales and issuances of the securities described in Items 15(f) and 15(g) were exempt from registration under the Securities Act under either (1) Rule 701 in that the transactions were under compensatory benefit plans and contracts relating to compensation as provided under Rule 701 or (2) Section 4(a)(2) of the Securities Act as transactions by an issuer not involving any public offering. The recipients of such securities were the registrant's employees, consultants or directors and received the securities under the registrant's 2012 Plan. The recipients of securities in each of these transactions represented their intention to acquire the securities for investment only and not with view to or for sale in connection with any distribution thereof and appropriate legends were affixed to the securities issued in these transactions.

Item 16. Exhibit and Financial Statement Schedules

(a) Exhibits.

We have filed the exhibits listed on the accompanying Exhibit Index of this Registration Statement.

(b) Financial Statement Schedules.

Schedules have been omitted because the information required to be set forth therein is not applicable or is shown in the financial statements or notes thereto.

Item 17. Undertakings

The undersigned registrant hereby undertakes to provide to the underwriters at the closing specified in the underwriting agreements, certificates in such denominations and registered in such names as required by the underwriters to permit prompt delivery to each purchaser.

Insofar as indemnification for liabilities arising under the Securities Act may be permitted to directors, officers and controlling persons of the registrant pursuant to the foregoing provisions, or otherwise, the registrant has been advised that in the opinion of the Securities and Exchange Commission such indemnification is against public policy as expressed in the Securities Act and is, therefore, unenforceable. In the event that a claim for indemnification against such liabilities (other than the payment by the registrant of expenses incurred or paid by a director, officer or controlling person of the registrant in the successful defense of any action, suit or proceeding) is asserted by such director, officer or controlling person in connection with the securities being registered, the registrant will, unless in the opinion of its counsel the matter has been settled by controlling precedent, submit to a court of appropriate jurisdiction the question whether such indemnification by it is against public policy as expressed in the Securities Act and will be governed by the final adjudication of such issue.

The undersigned hereby undertakes that:

(1) For purposes of determining any liability under the Securities Act, the information omitted from the form of prospectus filed as part of this registration statement in reliance upon Rule 430A and contained in a form of prospectus filed by the registrant pursuant to Rule 424(b)(1) or (4) or 497(h) under the Securities Act of 1933 shall be deemed to be part of this registration statement as of the time it was declared effective.

(2) For the purpose of determining any liability under the Securities Act, each post-effective amendment that contains a form of prospectus shall be deemed to be a new registration statement relating to the securities offered therein, and the offering of such securities at that time shall be deemed to be the initial bona fide offering thereof.

EXHIBIT INDEX

Exhibit Number	Description
1.1	Form of Underwriting Agreement, including Form of Lock-up Agreement.
3.1	Amended and Restated Certificate of Incorporation of the Registrant, as currently in effect.
3.2	Form of Amended and Restated Certificate of Incorporation of the Registrant, to be in effect upon the completion of this offering.
3.3^	Amended and Restated Bylaws of the Registrant, as currently in effect.
3.4	Form of Amended and Restated Bylaws of the Registrant, to be in effect upon the completion of this offering.
4.1	Amended and Restated Investors' Rights Agreement among the Registrant and certain of its stockholders, dated November 30, 2017, as amended.
4.2	Specimen common stock certificate of the Registrant.
5.1	Opinion of Wilson Sonsini Goodrich & Rosati, Professional Corporation.
10.1+^	Form of Indemnification Agreement between the Registrant and each of its directors and executive officers.
10.2+^	2012 Equity Incentive Plan, as amended, and forms of agreement thereunder.
10.3+	2018 Equity Incentive Plan and forms of agreements thereunder, to be in effect upon the completion of this offering.
10.4	2018 Employee Stock Purchase Plan, to be in effect upon the completion of this offering.
10.5+	Employment Letter between the Registrant and Robert Alexander, Ph.D.
10.6+	Employment Letter between the Registrant and Adam Tomasi, Ph.D.
10.7+	Employment Letter between the Registrant and Henrik Rasmussen, M.D., Ph.D.
10.8+	Employment Agreement between the Registrant and Christopher Bebbington, D.Phil.
10.9+^	Executive Incentive Compensation Plan.
10.10+	Outside Director Compensation Policy.
10.11+	Change in Control and Severance Policy.
10.12^	Lease Agreement between the Registrant and ARE-San Francisco No. 29, LLC, dated May 1, 2013, as amended.
10.13^	Lease Agreement between the Registrant and Westport Office Park, LLC, dated January 4, 2018, as amended.
10.14#	Non-exclusive License Agreement between the Registrant, BioWa, Inc. and Lonza Sales AG, dated October 31, 2013.
10.15#	Amended and Restated Exclusive License Agreement between the Registrant and the Johns Hopkins University, dated September 30, 2016.
23.1	Consent of Independent Registered Public Accounting Firm.

Exhibit Number	Description
23.2	Consent of Wilson Sonsini Goodrich & Rosati, Professional Corporation (included in Exhibit 5.1).
24.1^	Power of Attorney (see page II-6 to Form S-1 filed with the SEC on June 22, 2018).

^ Previously filed.
+ Indicated management contract or compensatory plan.
# Portions of this exhibit (indicated by asterisks) have been omitted pursuant to a request for confidential treatment and this exhibit has been filed separately with the SEC.

SIGNATURES

Pursuant to the requirements of the Securities Act of 1933, as amended, the registrant has duly caused this registration statement to be signed on its behalf by the undersigned, thereunto duly authorized, in the City of San Carlos, State of California, on the 9th day of July, 2018.

ALLAKOS INC.

By: /s/ Robert Alexander
Robert Alexander, Ph.D.
President and Chief Executive Officer

Pursuant to the requirements of the Securities Act of 1933, as amended, this registration statement has been signed by the following persons in the capacities and on the dates indicated.

Signature	Title	Date
/s/ Robert Alexander Robert Alexander, Ph.D.	President, Chief Executive Officer and Director *(Principal Executive Officer)*	July 9, 2018
/s/ Adam Tomasi Adam Tomasi, Ph.D.	Chief Operating Officer, Chief Financial Officer and Secretary *(Principal Financial and Accounting Officer)*	July 9, 2018
* Daniel Janney	Chair of the Board	July 9, 2018
* Robert Andreatta	Director	July 9, 2018
* Steve James	Director	July 9, 2018
* John McKearn, Ph.D.	Director	July 9, 2018
* Paul Walker	Director	July 9, 2018

*By: /s/ Adam Tomasi
Adam Tomasi, Ph.D.
Attorney-in-fact

Exhibit 1.1

Allakos Inc.

Common Stock, par value $0.001 per share

Underwriting Agreement

[•], 2018

Goldman Sachs & Co. LLC, and
Jefferies LLC
As representatives (the "Representatives") of the several Underwriters
named in Schedule I hereto,

c/o Goldman Sachs & Co. LLC
200 West Street,
New York, New York 10282-2198

c/o Jefferies LLC
520 Madison Avenue
New York, NY 10022

Ladies and Gentlemen:

Allakos Inc., a Delaware corporation (the "Company"), proposes, subject to the terms and conditions stated in this agreement (this "Agreement"), to issue and sell to the Underwriters named in Schedule I hereto (the "Underwriters") an aggregate of [•] shares (the "Firm Shares") and, at the election of the Underwriters, up to [•] additional shares (the "Optional Shares") of the Common Stock, par value $0.001 per share ("Stock") of the Company (the Firm Shares and the Optional Shares that the Underwriters elect to purchase pursuant to Section 2 hereof being collectively called the "Shares").

1. The Company represents and warrants to, and agrees with, each of the Underwriters that:

(a) A registration statement on Form S-1 (File No. 333-225836) (the "Initial Registration Statement") in respect of the Shares has been filed with the Securities and Exchange Commission (the "Commission"); the Initial Registration Statement and any post-effective amendment thereto, each in the form heretofore delivered to you, have been declared effective by the Commission in such form; other than a registration statement, if any, increasing the size of the offering (a "Rule 462(b) Registration Statement"), filed pursuant to Rule 462(b) under the Securities Act of 1933, as amended (the "Act"), which became effective upon filing, no other document with respect to the Initial Registration Statement has been filed with the Commission; and no stop order suspending the effectiveness of the Initial Registration Statement, any post-effective amendment thereto or the Rule 462(b) Registration Statement, if any, has been issued and no proceeding for

that purpose has been initiated or, to the Company's knowledge, threatened by the Commission (any preliminary prospectus included in the Initial Registration Statement or filed with the Commission pursuant to Rule 424(a) of the rules and regulations of the Commission under the Act is hereinafter called a "Preliminary Prospectus"; the various parts of the Initial Registration Statement and the Rule 462(b) Registration Statement, if any, including all exhibits thereto and including the information contained in the form of final prospectus filed with the Commission pursuant to Rule 424(b) under the Act in accordance with Section 5(a) hereof and deemed by virtue of Rule 430A under the Act to be part of the Initial Registration Statement at the time it was declared effective, each as amended at the time such part of the Initial Registration Statement became effective or such part of the Rule 462(b) Registration Statement, if any, became or hereafter becomes effective, are hereinafter collectively called the "Registration Statement"; the Preliminary Prospectus relating to the Shares that was included in the Registration Statement immediately prior to the Applicable Time (as defined in Section 1(c) hereof) is hereinafter called the "Pricing Prospectus"; and such final prospectus, in the form first filed pursuant to Rule 424(b) under the Act, is hereinafter called the "Prospectus"; any oral or written communication with potential investors undertaken in reliance on Section 5(d) of the Act is hereinafter called a "Section 5(d) Communication"; and any Section 5(d) Communication that is a written communication within the meaning of Rule 405 under the Act is hereinafter called a "Section 5(d) Writing"; and any "issuer free writing prospectus" as defined in Rule 433 under the Act relating to the Shares is hereinafter called an "Issuer Free Writing Prospectus");

(b) (A) No order preventing or suspending the use of any Preliminary Prospectus or any Issuer Free Writing Prospectus has been issued by the Commission, and (B) each Preliminary Prospectus, at the time of filing thereof, conformed in all material respects to the requirements of the Act and the rules and regulations of the Commission thereunder, and did not contain an untrue statement of a material fact or omit to state a material fact required to be stated therein or necessary to make the statements therein, in the light of the circumstances under which they were made, not misleading; *provided*, *however*, that this representation and warranty shall not apply to any statements or omissions made in reliance upon and in conformity with the Underwriter Information (as defined in Section 9(b) of this Agreement);

(c) For the purposes of this Agreement, the "Applicable Time" is [•] p.m. (Eastern time) on the date of this Agreement. The Pricing Prospectus, as supplemented by the information listed on Schedule II(c) hereto, taken together (collectively, the "Pricing Disclosure Package"), as of the Applicable Time, did not include any untrue statement of a material fact or omit to state any material fact necessary in order to make the statements therein, in the light of the circumstances under which they were made, not misleading; and each Issuer Free Writing Prospectus and each Section 5(d) Writing does not conflict with the information contained in the Registration Statement, the Pricing Prospectus or the Prospectus and each Issuer Free Writing Prospectus and each Section 5(d) Writing, as supplemented by and taken together with the Pricing Disclosure Package, as of the Applicable Time, did not include any untrue statement of a material fact or omit to state any material fact necessary in order to make the statements therein, in the light of the circumstances under which they were made, not misleading; provided, however, that this representation and warranty shall not apply to statements or omissions made in reliance upon and in conformity with the Underwriter Information;

(d) The Registration Statement, at the time it was declared effective, conforms, and the Prospectus and any further amendments or supplements to the Registration Statement and the Prospectus, on their respective filing dates, will conform, in all material respects to the requirements of the Act and the rules and regulations of the Commission thereunder and do not and will not, as of the applicable effective date as to each part of the Registration Statement, as of the applicable filing date as to the Prospectus and any amendment or supplement thereto, and as of each Time of Delivery, contain an untrue statement of a material fact or omit to state a material fact required to be stated therein or necessary to make the statements therein not misleading; provided, however, that this representation and warranty shall not apply to any statements or omissions made in reliance upon and in conformity with the Underwriter Information;

(e) The Company has not, since the date of the latest audited financial statements included in the Pricing Prospectus, (i) sustained any material loss or interference with its business from fire, explosion, flood or other calamity, whether or not covered by insurance, or from any labor dispute or court or governmental action, order or decree or (ii) entered into any transaction or agreement (whether or not in the ordinary course of business) that is material to the Company or incurred any liability or obligation, direct or contingent, that is material to the Company, in each case otherwise than as set forth or contemplated in the Pricing Prospectus; and, since the respective dates as of which information is given in the Registration Statement and the Pricing Prospectus, there has not been (x) any change in the capital stock (other than as a result of (i) the exercise, if any, of stock options or the award, if any, of stock options or restricted stock in the ordinary course of business pursuant to the Company's equity plans that are described in the Pricing Prospectus and the Prospectus or (ii) the issuance, if any, of stock upon conversion of Company securities as described in the Pricing Prospectus and the Prospectus) or long-term debt of the Company or (y) any Material Adverse Effect (as defined below); as used in this Agreement, "Material Adverse Effect" shall mean any material adverse change or effect, or any development involving a prospective material adverse change or effect, in or affecting (i) the business, properties, general affairs, management, financial position, stockholders' equity or results of operations of the Company, except as set forth or contemplated in the Pricing Prospectus, or (ii) the ability of the Company to perform its obligations under this Agreement, including the issuance and sale of the Shares, or to consummate the transactions contemplated in the Pricing Prospectus and the Prospectus;

(f) Nothing has come to the attention of the Company that has caused the Company to believe that the statistical and market-related data included in the Registration Statement, the Pricing Disclosure Package and the Prospectus is not based on or derived from sources that are reliable and accurate in all material respects;

(g) The Company has good and marketable title to all personal property (other than with respect to Intellectual Property (as defined below), which is addressed exclusively in subsection (h) below owned by it, in each case free and clear of all liens, encumbrances and defects except such as are described in the Pricing Prospectus or such as do not materially affect the value of such property and do not interfere with the use made and proposed to be made of such property by the Company; and any real property and buildings held under lease by the Company are held by it under, to the Company's knowledge, valid, subsisting and enforceable leases (subject to the effects of (i) bankruptcy, insolvency, fraudulent conveyance, fraudulent transfer, reorganization, moratorium or other similar

laws relating to or affecting the rights or remedies of creditors generally; (ii) the application of general principles of equity; and (iii) applicable law and public policy with respect to rights to indemnity and contribution) with such exceptions as are not material and do not materially interfere with the use made and proposed to be made of such property and buildings by the Company;

(h) The Company owns or possesses sufficient rights to use all owned or in-licensed patents, patent applications, trademarks, service marks, trade names, trademark registrations, service mark registrations, domain names and other source indicators, copyrights and copyrightable works, know-how, trade secrets, systems, procedures, proprietary or confidential information and all other worldwide intellectual property, industrial property and proprietary rights (including all goodwill associated with the foregoing) (collectively, "Intellectual Property") material to the conduct of its business as presently conducted or currently proposed to be conducted in the Registration Statement, the Pricing Disclosure Package and the Prospectus. Except as described in the Registration Statement, the Pricing Disclosure Package and the Prospectus, to the knowledge of the Company, the Company has not materially infringed, misappropriated or otherwise violated any Intellectual Property of any person and the conduct of its business as presently conducted or as proposed to be conducted in the Registration Statement, the Pricing Disclosure Package and the Prospectus does not and will not infringe, misappropriate or otherwise violate any Intellectual Property of any person. Except as would not, individually or in the aggregate, reasonably be expected to have a Material Adverse Effect, or except as described in the Registration Statement, the Pricing Disclosure Package and the Prospectus, there is no pending or, to the knowledge of the Company, threatened action, suit, proceeding or claim (i) challenging the Company's rights in or to, or alleging the violation of any of the terms of, any of its Intellectual Property; (ii) alleging that the Company has infringed, misappropriated or otherwise violated or conflicted with any Intellectual Property of any third party; or (iii) challenging the validity, scope or enforceability of any Intellectual Property owned by or exclusively licensed to the Company. Except as would not, individually or in the aggregate, reasonably be expected to have a Material Adverse Effect, or except as described in the Registration Statement, the Pricing Disclosure Package and the Prospectus, (w) all Intellectual Property owned by or licensed to the Company (1) is, to the knowledge of the Company, valid and enforceable, (2) is solely owned by or, licensed or co-licensed by the Company, and (3) is owned free and clear of all liens, encumbrances, defects and other restrictions, and (x) to the knowledge of the Company, no third party has infringed, misappropriated or otherwise violated any Intellectual Property owned by or exclusively licensed to the Company. The Company has at all times taken reasonable steps in accordance with normal industry practice to protect and maintain the confidentiality of all material Intellectual Property the value of which to the Company is contingent, in whole or in part, upon maintaining the confidentiality thereof ("Trade Secret Information"). All founders, current and former employees, contractors, consultants and other parties involved in the development of material Intellectual Property for the Company have signed confidentiality and invention assignment agreements with the Company, pursuant to which the Company either (y) has obtained ownership of and is the exclusive owner of such material Intellectual Property, or (z) has obtained a valid right to exploit such material Intellectual Property, sufficient for the conduct of its business as currently conducted and as proposed in the Registration Statement, the Pricing Disclosure Package and the Prospectus to be conducted;

(i) The Company possesses all licenses, sub-licenses, certificates, permits and other authorizations issued by, and have made all declarations and filings with, the appropriate federal, state, local or foreign governmental or regulatory authorities that are required for the ownership or lease of its property or the conduct of its businesses as currently conducted and described in the Registration Statement, the Pricing Disclosure Package and the Prospectus, including, without limitation, from the U.S. Food and Drug Administration ("FDA"), except where the failure to possess or make the same would not, individually or in the aggregate, have a Material Adverse Effect; and except as described in the Registration Statement, the Pricing Disclosure Package and the Prospectus, the Company has not received notice of any revocation of any such license, sub-license, certificate, permit or authorization or has any reason to believe that any such license, sub-license, certificate, permit or authorization will not be renewed in the ordinary course;

(j) The Company (i) has operated and currently operates its business in compliance with all statutes, rules and regulations applicable to the ownership, testing, development, manufacture, packaging, processing, use, distribution, storage, import, export or disposal of any of the Company's product candidates, including, without limitation, requirements governing investigational drugs and devices under the U.S. Federal Food, Drug and Cosmetic Act and rules and regulations thereunder, regulations relating to Good Clinical Practices and Good Laboratory Practices, and the U.S. Animal Welfare Act and rules and regulations thereunder (collectively, "Applicable Laws"), except where the failure to so operate or be in compliance would not reasonably be expected to have a Material Adverse Effect, and (ii) have not received any FDA Form 483, written notice of adverse finding, warning letter, untitled letter or other correspondence or written notice from the FDA, any court or arbitrator or governmental or other regulatory authority alleging or asserting non-compliance with (A) any Applicable Laws or (B) any permits required by any such Applicable Laws, except where such alleged or asserted non-compliance would not reasonably be expected to have a Material Adverse Effect;

(k) Any studies, tests and preclinical and clinical trials conducted by the Company and, to the knowledge of the Company, any studies, tests and preclinical and clinical trials conducted on behalf of the Company or in which the Company has participated, were, and if still pending are, being conducted in accordance with experimental protocols, procedures and controls pursuant to accepted professional scientific standards and all applicable rules and regulations, including those of the FDA and comparable regulatory agencies outside of the United States, to which the Company is subject and, for studies submitted to regulatory authorities as a basis for regulatory approval and preclinical and clinical trials, current Good Clinical Practices and Good Laboratory Practices, except where the failure to be so conducted would not reasonably be expected to have a Material Adverse Effect; the descriptions of the results of such studies, tests and trials contained in the Registration Statement, the Pricing Prospectus and the Prospectus are, to the Company's knowledge, accurate and complete in all material respects and fairly present the data derived from such studies, tests and trials; except to the extent disclosed in the Registration Statement, the Pricing Prospectus and the Prospectus, the Company is not aware of any studies, tests or trials, the results of which the Company believes reasonably call into question the study, test, or trial results described or referred to in the Registration Statement, the Pricing Prospectus and the Prospectus when viewed in the context in which such results are

described and the clinical state of development; and, except to the extent disclosed in the Registration Statement, the Pricing Prospectus or the Prospectus, the Company has not received any notices or correspondence from the FDA or any other comparable federal, state, local or foreign governmental or regulatory authority requiring the termination or suspension of any studies, tests or preclinical or clinical trials conducted by or on behalf of the Company;

(l) To the Company's knowledge, the manufacturing facilities and operations of its suppliers and manufacturers are operated in compliance in all respects with all applicable statutes, rules, regulations and policies of the FDA and comparable regulatory agencies outside of the United States to which the Company is subject, except as would not reasonably be expected to have a Material Adverse Effect;

(m) Except as described in or expressly contemplated by the Registration Statement, the Pricing Disclosure Package and the Prospectus, the Company has insurance covering its property, operations, personnel and businesses, including clinical trial insurance and business interruption insurance, which insurance is, in the Company's reasonable judgment, in amounts and insures against such losses and risks as are generally maintained by similarly situated companies and which the Company believes are reasonably adequate to protect the Company; and the Company has not (i) received notice from any insurer or agent of such insurer that capital improvements or other expenditures are required or necessary to be made in order to continue such insurance or (ii) any reason to believe that it will not be able to renew its existing insurance coverage as and when such coverage expires or to obtain similar coverage at reasonable cost from similar insurers as may be necessary to continue its business;

(n) No material labor disturbance by or dispute with employees of the Company exists or, to the knowledge of the Company, is contemplated or threatened, and the Company is not aware of any existing or imminent labor disturbance by, or dispute with, the employees of any of its principal suppliers or contractors, except as would not, individually or in the aggregate, have a Material Adverse Effect. The Company has not received any notice of cancellation or termination with respect to any collective bargaining agreement material to the Company;

(o) Each employee benefit plan, within the meaning of Section 3(3) of the Employee Retirement Income Security Act of 1974, as amended ("ERISA"), for which the Company or any member of its "Controlled Group" (defined as any entity, whether or not incorporated, that is under common control with the Company within the meaning of Section 4001(a)(14) of ERISA or any entity that would be regarded as a single employer with the Company under Section 414(b),(c),(m) or (o) of the Internal Revenue Code of 1986, as amended (the "Code")) would have any liability (each, a "Plan") has been maintained in compliance with its terms and the requirements of any applicable statutes, orders, rules and regulations, including but not limited to ERISA and the Code, except for noncompliance that would not reasonably be expected to result in material liability to the Company; (ii) no prohibited transaction, within the meaning of Section 406 of ERISA or Section 4975 of the Code, has occurred with respect to any Plan, excluding transactions effected pursuant to a statutory or administrative exemption; (iii) for each Plan that is subject to the funding rules of Section 412 of the Code or Section 302 of ERISA, no Plan has failed (whether or not waived), or is

reasonably expected to fail, to satisfy the minimum funding standards (within the meaning of Section 302 of ERISA or Section 412 of the Code) applicable to such Plan; (iv) no Plan is, or is reasonably expected to be, in "at risk status" (within the meaning of Section 303(i) of ERISA) and no Plan that is a "multiemployer plan" within the meaning of Section 4001(a)(3) of ERISA is in "endangered status" or "critical status" (within the meaning of Sections 304 and 305 of ERISA) (v) for each Plan that is subject to the funding rules of Section 412 of the Code or Section 302 of ERISA, the fair market value of the assets of each such Plan exceeds the present value of all benefits accrued under such Plan (determined based on those assumptions used to fund such Plan); (vi) no "reportable event" (within the meaning of Section 4043(c) of ERISA and the regulations promulgated thereunder) has occurred or is reasonably expected to occur; (vii) each Plan that is intended to be qualified under Section 401(a) of the Code is so qualified, and to the knowledge of the Company, nothing has occurred, whether by action or by failure to act, which would cause the loss of such qualification; (viii) neither the Company nor any member of the Controlled Group has incurred, nor reasonably expects to incur, any liability under Title IV of ERISA (other than contributions to the Plan or premiums to the Pension Benefit Guarantee Corporation, in the ordinary course and without default) in respect of a Plan (including a "multiemployer plan" within the meaning of Section 4001(a)(3) of ERISA); and (ix) none of the following events has occurred or is reasonably likely to occur: (A) a material increase in the aggregate amount of contributions required to be made to all Plans by the Company or its Controlled Group affiliates in the current fiscal year of the Company and its Controlled Group affiliates compared to the amount of such contributions made in the Company's and its Controlled Group affiliates' most recently completed fiscal year; or (B) a material increase in the Company's "accumulated post-retirement benefit obligations" (within the meaning of Accounting Standards Codification Topic 715-60) compared to the amount of such obligations in the Company's most recently completed fiscal year, except in each case with respect to the events or conditions set forth in (i) through (ix) hereof, as would not, individually or in the aggregate, have a Material Adverse Effect;

(p) Except in each case as otherwise disclosed in the Pricing Prospectus and the Prospectus, the Company (x) has complied and is in compliance with all applicable federal, state, local and foreign laws, rules, regulations, requirements, decisions, judgments, decrees and orders relating to pollution, hazardous or toxic substances, wastes, pollutants, contaminants or the protection of human health or safety, the environment or natural resources (collectively, "Environmental Laws"); (y) has received and is in compliance with all permits, licenses, certificates or other authorizations or approvals required of it under any Environmental Laws to conduct its business; and (z) has not received notice of any actual or potential liability of the Company, or obligation of the Company under or relating to, or any actual or potential violation of, any Environmental Laws by the Company, including for the investigation or remediation of any disposal or release of hazardous or toxic substances or wastes, pollutants or contaminants, and has no knowledge of any event or condition that would reasonably be expected to result in any such notice, and (ii) there are no costs or liabilities associated with Environmental Laws of or relating to the Company, except in the case of each of (i) and (ii) above, for any such matter as would not, individually or in the aggregate, reasonably be expected to have a Material Adverse Effect; and (iii) except as described in each of the Pricing Disclosure Package and the Prospectus, (x) there is no proceeding that is pending, or that is known by the Company to be threatened or contemplated, against the Company under any Environmental Laws in which a

governmental entity is also a party, other than such proceeding regarding which the Company reasonably believes no monetary sanctions of $100,000 or more will be imposed, (y) the Company is not aware of any facts regarding compliance with Environmental Laws, or liabilities or other obligations under Environmental Laws or concerning hazardous or toxic substances or wastes, pollutants or contaminants, that individually or in the aggregate, would reasonably be expected to have a Material Adverse Effect, and (z) the Company does not anticipate material capital expenditures relating to any Environmental Laws;

(q) The Company does not have, and has not had, any subsidiaries;

(r) The Company has been (i) duly organized and is validly existing and in good standing under the laws of its jurisdiction of organization, with power and authority (corporate and other) to own its properties and conduct its business as described in the Pricing Prospectus, and (ii) duly qualified as a foreign corporation for the transaction of business and is in good standing under the laws of each other jurisdiction in which it owns or leases properties or conducts any business so as to require such qualification, except, in the case of this clause (ii), where the failure to be so qualified or in good standing would not, individually or in the aggregate, have a Material Adverse Effect;

(s) The Company has an authorized capitalization as set forth in the Pricing Prospectus and all of the issued shares of capital stock of the Company have been duly and validly authorized and issued and are fully paid and non-assessable and conform in all material respects to the description of the Stock contained in the Pricing Disclosure Package and Prospectus;

(t) The unissued Shares to be issued and sold by the Company to the Underwriters hereunder have been duly and validly authorized and, when issued and delivered against payment therefor as provided herein, will be duly and validly issued and fully paid and non-assessable and will conform in all material respects to the description of the Stock contained in the Pricing Disclosure Package and the Prospectus; and the issuance of the Shares is not subject to any preemptive or similar rights that have not been duly waived;

(u) The issue and sale of the Shares and the compliance by the Company with this Agreement and the consummation by the Company of the transactions contemplated in this Agreement and the Pricing Prospectus will not conflict with or result in a breach or violation of any of the terms or provisions of, or constitute a default under, (A) any indenture, mortgage, deed of trust, loan agreement or other agreement or instrument to which the Company is a party or by which the Company is bound or to which any of the property or assets of the Company is subject, except, in the case of this clause (A) for such defaults, breaches, or violations that would not, individually or in the aggregate, have a Material Adverse Effect, (B) the certificate of incorporation or by-laws (or other applicable organizational document) of the Company, or (C) any statute or any judgment, order, rule or regulation of any court or governmental agency or body having jurisdiction over the Company or any of its property, except, in the case of this clause (C) for such violations that would not, individually or in the aggregate, have a Material Adverse Effect; and no consent, approval, authorization, order, registration or qualification of or with any such court or governmental agency or body is required for the issue and sale of the Shares or the consummation by the Company of the transactions contemplated by this Agreement,

except such as have been obtained under the Act, the approval by the Financial Industry Regulatory Authority ("FINRA") of the underwriting terms and arrangements, the approval for listing on the NASDAQ Global Select Market ("NASDAQ"), and such consents, approvals, authorizations, registrations or qualifications as may be required under state securities or Blue Sky laws in connection with the purchase and distribution of the Shares by the Underwriters;

(v) The Company is not (i) in violation of its certificate of incorporation or by-laws (or other applicable organizational document), (ii) in violation of any statute or any judgment, order, rule or regulation of any court or governmental agency or body having jurisdiction over the Company or any of its property, or (iii) in default in the performance or observance of any obligation, agreement, covenant or condition contained in any indenture, mortgage, deed of trust, loan agreement, lease or other agreement or instrument to which it is a party or by which it or any of its property may be bound, except, in the case of the foregoing clauses (ii) and (iii), for such violations or defaults as would not, individually or in the aggregate, have a Material Adverse Effect;

(w) The statements set forth in the Pricing Prospectus and Prospectus under the caption "Description of Capital Stock", insofar as they purport to constitute a summary of the terms of the Stock, under the caption "Material U.S. Federal Income and Estate Tax Considerations for Non-U.S. Holders of Our Common Stock", and under the caption "Underwriting", insofar as they purport to describe the provisions of the laws and documents referred to therein, are accurate, complete and fair in all material respects;

(x) Other than as set forth in the Pricing Prospectus, there are no legal or governmental proceedings pending to which the Company is a party or of which any property of the Company is the subject which, if determined adversely to the Company (or such officer or director) would, individually or in the aggregate have a Material Adverse Effect; and, to the Company's knowledge, no such proceedings are threatened or contemplated by governmental authorities or threatened by others;

(y) No relationship, direct or indirect, exists between the Company, on the one hand, and the directors, officers, or stockholders of the Company, on the other, that is required by the Act to be described in the Registration Statement and the Prospectus and that is not so described in such documents and in the Pricing Disclosure Package;

(z) The Company is not and, after giving effect to the offering and sale of the Shares and the application of the proceeds thereof, will not be an "investment company", as such term is defined in the Investment Company Act of 1940, as amended;

(aa) At the time of filing the Initial Registration Statement and any post-effective amendment thereto, at the earliest time thereafter that the Company or any offering participant made a bona fide offer (within the meaning of Rule 164(h)(2) under the Act) of the Shares, and at the date hereof, the Company was not and is not an "ineligible issuer," as defined under Rule 405 under the Act;

(bb) There are (and prior to the Time of Delivery, will be) no debt securities or preferred stock issued or guaranteed by the Company that are rated by a "nationally recognized statistical rating organization", as such term is defined under Section 3(a)(62) under the Exchange Act;

(cc) Except as described in the Pricing Prospectus, the Company has not sold, issued, or distributed any shares of Stock during the six-month period preceding the date hereof, including any sales pursuant to Rule 144A under, or Regulation D or S of, the Act, other than shares issued pursuant to employee benefit plans or other employee compensation plans or pursuant to outstanding options, rights or warrants;

(dd) Ernst & Young LLP, who have certified certain financial statements of the Company, are independent public accountants as required by the Act and the rules and regulations of the Commission thereunder;

(ee) The Company maintains a system of internal control over financial reporting (as such term is defined in Rule 13a-15(f) under the Securities Exchange Act of 1934, as amended (the "Exchange Act")) that (i) complies with the requirements of the Exchange Act applicable to the Company and (ii) has been designed by the Company's principal executive officer and principal financial officer, or under their supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles and (iii) is sufficient to provide reasonable assurance that (A) transactions are executed in accordance with management's general or specific authorization, (B) transactions are recorded as necessary to permit preparation of financial statements in conformity with generally accepted accounting principles and to maintain accountability for assets, (C) access to assets is permitted only in accordance with management's general or specific authorization and (D) the recorded accountability for assets is compared with the existing assets at reasonable intervals and appropriate action is taken with respect to any differences; and the Company is not aware of any material weaknesses in its internal control over financial reporting (it being understood that this subsection shall not require the Company to comply with Section 404 of the Sarbanes-Oxley Act of 2002 as of an earlier date than it would otherwise be required to so comply under applicable law);

(ff) Since the date of the latest audited financial statements included in the Pricing Prospectus, there has been no change in the Company's internal control over financial reporting that has materially and adversely affected, or is reasonably likely to materially and adversely affect, the Company's internal control over financial reporting;

(gg) The Company maintains disclosure controls and procedures (as such term is defined in Rule 13a-15(e) under the Exchange Act) that comply with the requirements of the Exchange Act applicable to the Company; such disclosure controls and procedures have been designed to ensure that material information relating to the Company is made known to the Company's principal executive officer and principal financial officer by others within those entities; and such disclosure controls and procedures are effective;

(hh) The Company has taken all necessary steps to ensure that, upon the effectiveness of the Registration Statement, it shall be in compliance with any applicable provision of the Sarbanes-Oxley Act of 2002 and the rules and regulations promulgated in connection therewith that the Company is required to be in compliance with upon the effectiveness of the Registration Statement, including Section 402 related to loans;

(ii) The Company has all requisite rights, power and authority to execute and delivery this Agreement and to perform its obligations hereunder; and all action required to be taken for the due and proper authorization, execution and delivery by it of this Agreement and the consummation by it of the transactions contemplated hereby has been duly and validly taken;

(jj) This Agreement has been duly authorized, executed and delivered by the Company;

(kk) Neither the Company nor its directors, officers, employees and affiliates, nor, to the knowledge of the Company, any agent or other person associated with or acting on behalf of the Company (i) has made, offered, promised or authorized or will make, offer, promise or authorize any unlawful contribution, gift, entertainment or other unlawful expense; (ii) has made, offered, promised or authorized or will make, offer, promise or authorize any direct or indirect unlawful payment; or (iii) has violated or is in violation of any provision of the Foreign Corrupt Practices Act of 1977, the Bribery Act 2010 of the United Kingdom or any other applicable anti-bribery or anti-corruption law; the Company and its affiliates have conducted their businesses in compliance with applicable anti-bribery and anti-corruption laws and have instituted and maintain policies and procedures designed to promote and achieve compliance with such laws and with the representations and warranties contained herein; and the Company will not use, directly or indirectly, the proceeds of the offering and sale of the Shares in furtherance of an offer, payment, promise to pay or authorization of the payment or giving of money, or anything else of value, to any person in violation of any applicable anti-bribery or anti-corruption laws;

(ll) Except as described in the Pricing Prospectus and the Prospectus, the Company is not a party to any contract, agreement or understanding with any person (other than this Agreement) that would give rise to a valid claim against the Company or any Underwriter for a brokerage commission, finder's fee or like payment in connection with the offering and sale of the Shares;

(mm) No person has the right to require the Company to register any securities for sale under the Act by reason of the filing of the Registration Statement with the Commission or the issuance and sale of the Shares, except such rights that have been waived or complied with;

(nn) The Company has not taken, directly or indirectly, without giving effect to activities by the Underwriters or affiliate or agent of any Underwriter acting on behalf of such Underwriter, any action designed to or that would reasonably be expected to cause or result in any stabilization or manipulation of the price of the Shares;

(oo) The operations of the Company are and have been conducted at all times in compliance with the requirements of applicable anti-money laundering laws, including, but not limited to, the Bank Secrecy Act of 1970, as amended by the USA PATRIOT ACT of 2001, and the rules and regulations promulgated thereunder, and the applicable anti-money laundering laws of the various jurisdictions in which the Company conducts business (collectively, the "Money Laundering Laws") and no action, suit or proceeding by or before any court or governmental agency, authority or body or any arbitrator involving the Company with respect to the Money Laundering Laws is pending or, to the knowledge of the Company, threatened;

(pp) Neither the Company nor, to the knowledge of the Company, any director, officer, agent, employee or affiliate of the Company is, or is owned or controlled by one or more individuals or entities that is, currently the subject or the target of any sanctions administered or enforced by the U.S. Government, including, without limitation, the Office of Foreign Assets Control of the U.S. Department of the Treasury ("OFAC"), or the U.S. Department of State and including, without limitation, the designation as a "specially designated national" or "blocked person," the European Union, Her Majesty's Treasury, the United Nations Security Council, or other relevant sanctions authority (collectively, "Sanctions"), nor located, organized or resident in a country or territory that is the subject of Sanctions (including, without limitation, Crimea, Cuba, Iran, North Korea, Sudan and Syria); and the Company will not directly or indirectly use the proceeds of the offering of the Shares hereunder, or lend, contribute or otherwise make available such proceeds to any joint venture partner or other person or entity (i) to fund or facilitate any activities of or business with any person, or in any country or territory, that, at the time of such funding, is the subject or the target of Sanctions or (ii) in any other manner that will result in a violation by any person (including any person participating in the transaction, whether as underwriter, advisor, investor or otherwise) of Sanctions; and for the past five years, the Company has not knowingly engaged in and is not now knowingly engaged in any dealings or transactions with any person that at the time of the dealing or transaction is or was the subject or target of Sanctions or with any Sanctioned country;

(qq) The Company has paid all federal, state, local and foreign taxes and filed all tax returns required to be paid or filed through the date hereof (after giving effect to any valid extensions with respect to the filing of tax returns), except where the failure to pay or file would not, individually or in the aggregate, reasonably be expected to have a Material Adverse Effect, or except as described in the Registration Statement, the Pricing Disclosure Package and the Prospectus; and except as otherwise disclosed in the Registration Statement, the Pricing Disclosure Package and the Prospectus, there are no tax deficiencies that have been, or would reasonably be expected to be, asserted against the Company or any of its property or assets and which would, individually or in the aggregate, reasonably be expected to have a Material Adverse Effect;

(rr) The financial statements included in the Registration Statement, the Pricing Prospectus and the Prospectus, together with the related schedules and notes, present fairly, in all material respects, the financial position of the Company at the dates indicated and the statement of operations, stockholders' equity and cash flows of the Company for the periods specified; said financial statements have been prepared in conformity with U.S. generally accepted accounting principles ("GAAP") applied on a consistent basis throughout the periods involved. The supporting schedules, if any, present fairly in all material respects and in accordance with GAAP the information required to be stated therein. The selected financial data and the summary financial information included in the Registration Statement, the Pricing Prospectus and the Prospectus present fairly in all material respects the information shown therein and have been compiled on a basis consistent with that of the audited financial statements included therein. Except as included therein, no historical or pro forma financial statements or supporting schedules are required to be included in the Registration Statement, the Pricing Prospectus or the Prospectus under the Act or the rules and regulations promulgated thereunder. All disclosures contained in the Registration Statement, the Pricing Prospectus and the Prospectus regarding "non-GAAP financial measures" (as such term is defined by the rules and regulations of the Commission) comply with Regulation G of the Exchange Act and Item 10 of Regulation S-K of the Act, to the extent applicable; and

(ss) From the time of initial confidential submission of a registration statement relating to the Shares with the Commission (or, if earlier, the first date on which a Section 5(d) Communication was made) through the date hereof, the Company has been and is an "emerging growth company" as defined in Section 2(a)(19) of the Act (an "Emerging Growth Company").

2. Subject to the terms and conditions herein set forth, (a) the Company agrees to issue and sell to each of the Underwriters, and each of the Underwriters agrees, severally and not jointly, to purchase from the Company, at a purchase price per share of $[•], the number of Firm Shares set forth opposite the name of such Underwriter in Schedule I hereto and (b) in the event and to the extent that the Underwriters shall exercise the election to purchase Optional Shares as provided below, the Company agrees to issue and sell to each of the Underwriters, and each of the Underwriters agrees, severally and not jointly, to purchase from the Company, at the purchase price per share set forth in clause (a) of this Section 2, that portion of the number of Optional Shares as to which such election shall have been exercised (to be adjusted by you so as to eliminate fractional shares) determined by multiplying such number of Optional Shares by a fraction, the numerator of which is the maximum number of Optional Shares which such Underwriter is entitled to purchase as set forth opposite the name of such Underwriter in Schedule I hereto and the denominator of which is the maximum number of Optional Shares that all of the Underwriters are entitled to purchase hereunder.

The Company hereby grants to the Underwriters the right to purchase at their election up to [•] Optional Shares, at the purchase price per share set forth in the paragraph above, for the sole purpose of covering sales of shares in excess of the number of Firm Shares, provided that the purchase price per Optional Share shall be reduced by an amount per share equal to any dividends or distributions declared by the Company and payable on the Firm Shares but not payable on the Optional Shares. Any such election to purchase Optional Shares may be exercised only by written notice from you to the Company, given within a period of 30 calendar days after the date of this Agreement, setting forth the aggregate number of Optional Shares to be purchased and the date on which such Optional Shares are to be delivered, as determined by you but in no event earlier than the First Time of Delivery (as defined in Section 4 hereof) or, unless you and the Company otherwise agree in writing, earlier than two or later than ten business days after the date of such notice.

3. Upon the authorization by you of the release of the Firm Shares, the several Underwriters propose to offer the Firm Shares for sale upon the terms and conditions set forth in the Pricing Prospectus and the Prospectus.

4. (a) The Shares to be purchased by each Underwriter hereunder, in definitive or book-entry form, and in such authorized denominations and registered in such names as the Representatives may request upon at least forty-eight hours' prior notice to the Company shall be delivered by or on behalf of the Company to the Representatives, through the facilities of the Depository Trust Company ("DTC"), for the account of such Underwriter, against payment by or on behalf of such Underwriter of the purchase price therefor by wire transfer of Federal (same-day) funds to the account specified by the Company to the Representatives at least forty-eight hours in advance. The Company will

cause the certificates, if any, representing the Shares to be made available for checking and packaging at least twenty-four hours prior to the Time of Delivery (as defined below) with respect thereto at the office of DTC or its designated custodian (the "Designated Office"). The time and date of such delivery and payment shall be, with respect to the Firm Shares, 9:30 a.m., New York City time, on [•], 2018 or such other time and date as the Representatives and the Company may agree upon in writing, and, with respect to the Optional Shares, 9:30 a.m., New York time, on the date specified by the Representatives in the written notice given by the Representatives of the Underwriters' election to purchase such Optional Shares, or such other time and date as the Representatives and the Company may agree upon in writing. Such time and date for delivery of the Firm Shares is herein called the "First Time of Delivery", such time and date for delivery of the Optional Shares, if not the First Time of Delivery, is herein called the "Second Time of Delivery", and each such time and date for delivery is herein called a "Time of Delivery"; and

(b) The documents to be delivered at each Time of Delivery by or on behalf of the parties hereto pursuant to Section 8 hereof, including the cross receipt for the Shares and any additional documents requested by the Underwriters pursuant to Section 8(j) hereof, will be delivered at the offices of Davis Polk & Wardwell LLP, 1600 El Camino Real, Menlo Park, CA 94025 (the "Closing Location"), and the Shares will be delivered at the Designated Office, all at such Time of Delivery. A meeting will be held at the Closing Location at [•] p.m., New York City time, on the New York Business Day next preceding such Time of Delivery, at which meeting the final drafts of the documents to be delivered pursuant to the preceding sentence will be available for review by the parties hereto. For the purposes of this Section 4, "New York Business Day" shall mean each Monday, Tuesday, Wednesday, Thursday and Friday which is not a day on which banking institutions in New York City are generally authorized or obligated by law or executive order to close.

5. The Company agrees with each of the Underwriters:

(a) To prepare the Prospectus in a form approved by you and to file such Prospectus pursuant to Rule 424(b) under the Act not later than the Commission's close of business on the second business day following the execution and delivery of this Agreement, or, if applicable, such earlier time as may be required by Rule 430A(a)(3) under the Act; to make no further amendment or any supplement to the Registration Statement or the Prospectus prior to the last Time of Delivery which shall be disapproved by you promptly after reasonable notice thereof; to advise you, promptly after it receives notice thereof, of the time when any amendment to the Registration Statement has been filed or becomes effective or any amendment or supplement to the Prospectus has been filed and to furnish you with copies thereof; to file promptly all material required to be filed by the Company with the Commission pursuant to Rule 433(d) under the Act; to advise you, promptly after it receives notice thereof, of the issuance by the Commission of any stop order or of any order preventing or suspending the use of any Preliminary Prospectus or other prospectus in respect of the Shares, of the suspension of the qualification of the Shares for offering or sale in any jurisdiction, of the initiation or threatening of any proceeding for any such purpose, or of any request by the Commission for the amending or supplementing of the Registration Statement or the Prospectus or for additional information; and, in the event of the issuance of any stop order or of any order preventing or suspending the use of any Preliminary Prospectus or other prospectus or suspending any such qualification, to promptly use its best efforts to obtain the withdrawal of such order;

(b) Promptly from time to time to take such action as you may reasonably request to qualify the Shares for offering and sale under the securities laws of such jurisdictions as you may reasonably request and to comply with such laws so as to permit the continuance of sales and dealings therein in such jurisdictions for as long as may be necessary to complete the distribution of the Shares, provided that in connection therewith the Company shall not be required to qualify as a foreign corporation or to file a general consent to service of process in any jurisdiction or subject itself to taxation in any such jurisdiction in which it was not otherwise subject to taxation;

(c) Prior to 10:00 a.m., New York City time, on the New York Business Day next succeeding the date of this Agreement (or such later time as may be agreed by the Company and the Representatives) and from time to time, to furnish the Underwriters with written and electronic copies of the Prospectus in New York City in such quantities as you may reasonably request, and, if the delivery of a prospectus (or in lieu thereof, the notice referred to in Rule 173(a) under the Act) is required at any time prior to the expiration of nine months after the time of issue of the Prospectus in connection with the offering or sale of the Shares and if at such time any event shall have occurred as a result of which the Prospectus as then amended or supplemented would include an untrue statement of a material fact or omit to state any material fact necessary in order to make the statements therein, in the light of the circumstances under which they were made when such Prospectus (or in lieu thereof, the notice referred to in Rule 173(a) under the Act) is delivered, not misleading, or, if for any other reason it shall be necessary during such same period to amend or supplement the Prospectus in order to comply with the Act, to notify you and upon your request to prepare and furnish without charge to each Underwriter and to any dealer (whose name and address the Underwriters shall furnish to the Company) in securities as many written and electronic copies as you may from time to time reasonably request of an amended Prospectus or a supplement to the Prospectus which will correct such statement or omission or effect such compliance; and in case any Underwriter is required to deliver a prospectus (or in lieu thereof, the notice referred to in Rule 173(a) under the Act) in connection with sales of any of the Shares at any time nine months or more after the time of issue of the Prospectus, upon your request but at the expense of such Underwriter, to prepare and deliver to such Underwriter as many written and electronic copies as you may request of an amended or supplemented Prospectus complying with Section 10(a)(3) of the Act;

(d) To make generally available to its securityholders as soon as practicable (which may be satisfied by filing with the Commission's Electronic Data Gathering Analysis and Retrieval System ("EDGAR")), but in any event not later than sixteen months after the effective date of the Registration Statement (as defined in Rule 158(c) under the Act), an earnings statement of the Company (which need not be audited) complying with Section 11(a) of the Act and the rules and regulations of the Commission thereunder (including, at the option of the Company, Rule 158);

(e)(1) During the period beginning from the date hereof and continuing to and including the date 180 days after the date of the Prospectus (the "Lock-Up Period"), not to (i) offer, sell, contract to sell, pledge, grant any option to purchase, make any short sale or otherwise transfer or dispose of, directly or indirectly, or file with or confidentially submit to the Commission a registration statement under the Act relating to, any securities of the Company that are substantially similar to the Shares, including but not limited to any options

or warrants to purchase shares of Stock or any securities that are convertible into or exchangeable for, or that represent the right to receive, Stock or any such substantially similar securities, or publicly disclose the intention to make any offer, sale, pledge, disposition or filing or (ii) enter into any swap or other agreement that transfers, in whole or in part, any of the economic consequences of ownership of the Stock or any such other securities, whether any such transaction described in clause (i) or (ii) above is to be settled by delivery of Stock or such other securities, in cash or otherwise, without the Representatives' prior written consent; provided, however, that the foregoing restrictions shall not apply to (a) the Shares to be sold hereunder, (b) the issuance by the Company of shares of Common Stock upon the exercise or settlement of options pursuant to the Company's equity plans that are described in the Pricing Prospectus, or upon the conversion of convertible securities outstanding as of the date of this Agreement and as described in the Pricing Prospectus, (c) the issuance by the Company of shares of Common Stock or securities convertible into, exchangeable for or that represent the right to receive shares of Common Stock, in each case pursuant to the Company's stock plans that are described in the Pricing Prospectus, (d) the issuance by the Company of shares of Common Stock or securities convertible into, exchangeable for or that represent the right to receive shares of Common Stock in connection with (1) the acquisition by the Company of the business, technology, not less than a majority or controlling portion of the securities, property or other assets of another person or entity or pursuant to an employee benefit plan assumed by the Company in connection with such acquisition and the issuance of any such securities pursuant to any such agreement, or (2) the Company's bona fide commercial transactions (including joint ventures, commercial relationships or other strategic transactions) or (e) the filing of any registration statement on Form S-8 relating to securities granted or to be granted pursuant to the Company's stock plans that are described in the Pricing Prospectus or any assumed employee benefit plan contemplated by clause (d); provided that the aggregate number of shares of Common Stock that the Company may sell or issue or agree to sell or issue pursuant to clause (d) and, with respect to securities to be granted pursuant to any assumed employee benefit plan, pursuant to clause (e), shall not exceed 7.5% of the total number of shares of Common Stock outstanding immediately following the offering of the Shares contemplated by this Agreement; and provided, further, that in the case of clauses (c) through (e), each recipient of such securities shall execute and deliver to the Representatives, on or prior to the issuance of such securities, a lock-up agreement substantially to the effect set forth in Section 8(i) hereto;

(e)(2) If the Representatives, in their sole discretion, agree to release or waive the restrictions set forth in a lock-up letter described in Section 8(i) hereof for an officer or director of the Company and provide the Company with notice of the impending release or waiver at least three business days before the effective date of the release or waiver, the Company agrees to announce the impending release or waiver by a press release substantially in the form of Annex II hereto through a major news service at least two business days before the effective date of the release or waiver, to the extent required by FINRA Rule 5131 (or any successor provision thereto);

(f) During a period of three years from the effective date of the Registration Statement, so long as the Company is subject to the reporting requirements of either Section 13 or Section 15(d) of the Exchange Act, to furnish to its stockholders as soon as practicable after the end of each fiscal year an annual report (including a balance sheet and statements of income, stockholders' equity and cash flows of the Company and its

consolidated subsidiaries certified by independent public accountants) and, as soon as practicable after the end of each of the first three quarters of each fiscal year (beginning with the fiscal quarter ending after the effective date of the Registration Statement), to make available to its stockholders consolidated summary financial information of the Company and any subsidiaries for such quarter in reasonable detail (which information may be provided by filing on EDGAR);

(g) During a period of three years from the effective date of the Registration Statement, so long as the Company is subject to the reporting requirements of either Section 13 or Section 15(d) of the Exchange Act, to furnish to you copies of all reports or other communications (financial or other) furnished to stockholders, and to deliver to you as soon as they are available, copies of any reports and financial statements furnished to or filed with the Commission or any national securities exchange on which any class of securities of the Company is listed (such financial statements to be on a consolidated basis to the extent the accounts of the Company and any subsidiaries are consolidated in reports furnished to its stockholders generally or to the Commission), which information may be provided by filing on EDGAR;

(h) To use the net proceeds received by it from the sale of the Shares pursuant to this Agreement in the manner specified in the Pricing Prospectus under the caption “Use of Proceeds”;

(i) To use its best efforts to list for quotation the Shares on NASDAQ;

(j) To file with the Commission such information on Form 10-Q or Form 10-K as may be required by Rule 463 under the Act;

(k) If the Company elects to rely upon Rule 462(b), the Company shall file a Rule 462(b) Registration Statement with the Commission in compliance with Rule 462(b) by 10:00 P.M., Washington, D.C. time, on the date of this Agreement, and the Company shall at the time of filing either pay to the Commission the filing fee for the Rule 462(b) Registration Statement or give irrevocable instructions for the payment of such fee pursuant to Rule 111(b) under the Act;

(l) Upon request of any Underwriter, to furnish, or cause to be furnished, to such Underwriter an electronic version of the Company’s trademarks, servicemarks and corporate logo for use on the website, if any, operated by such Underwriter for the purpose of facilitating the on-line offering of the Shares (the “License”); provided, however, that the License shall be used solely for the purpose described above, is granted without any fee and may not be assigned or transferred; and

(m) To promptly notify you if the Company ceases to be an Emerging Growth Company at any time prior to the later of (i) completion of the distribution of the Shares within the meaning of the Act and (ii) the last Time of Delivery.

6. (a) The Company represents and agrees that, without the prior consent of the Representatives, it has not made and will not make any offer relating to the Shares that would constitute a “free writing prospectus” as defined in Rule 405 under the Act; each Underwriter represents and agrees that, without the prior consent of the Company and the Representatives, it has not made and will not make any offer relating to the Shares that would constitute a free writing prospectus required to be filed with the Commission; any such free writing prospectus the use of which has been consented to by the Company and the Representatives is listed on Schedule II(a) or Schedule II(d) hereto;

(b) The Company has complied and will comply with the requirements of Rule 433 under the Act applicable to any Issuer Free Writing Prospectus, including timely filing with the Commission or retention where required and legending; and the Company represents that it has satisfied and agrees that it will satisfy the conditions under Rule 433 under the Act to avoid a requirement to file with the Commission any electronic road show;

(c) The Company agrees that if at any time following issuance of an Issuer Free Writing Prospectus or Section 5(d) Writing any event occurred or occurs as a result of which such Issuer Free Writing Prospectus or Section 5(d) Writing would conflict with the information in the Registration Statement, the Pricing Prospectus or the Prospectus or would include an untrue statement of a material fact or omit to state any material fact necessary in order to make the statements therein, in the light of the circumstances then prevailing, not misleading, the Company will give prompt notice thereof to the Representatives and, if requested by the Representatives, will prepare and furnish without charge to each Underwriter an Issuer Free Writing Prospectus, Section 5(d) Writing or other document which will correct such conflict, statement or omission; provided, however, that this representation and warranty shall not apply to any statements or omissions in an Issuer Free Writing Prospectus made in reliance upon and in conformity with the Underwriter Information;

(d) The Company represents and agrees that (i) it has not engaged in, or authorized any other person to engage in, any Section 5(d) Communications, other than Section 5(d) Communications with the prior consent of the Representatives with entities that are qualified institutional buyers as defined in Rule 144A under the Act or institutions that are accredited investors as defined in Rule 501(a) under the Act; and (ii) it has not distributed, or authorized any other person to distribute, any Section 5(d) Writings, other than those distributed with the prior consent of the Representatives that are listed on Schedule II(d) hereto; and the Company reconfirms that the Underwriters have been authorized to act on its behalf in engaging in Section 5(d) Communications; and

(e) Each Underwriter represents and agrees that (i) any Section 5(d) Communications undertaken by it were with entities that are qualified institutional buyers as defined in Rule 144A under the Act or institutions that are accredited investors as defined in Rule 501(a) under the Act and (ii) it will not distribute, or authorize any other person to distribute, any Section 5(d) Writing, other than those distributed with the prior consent of the Company.

7. The Company covenants and agrees with the several Underwriters that the Company will pay or cause to be paid the following: (i) the fees, disbursements and expenses of the Company's counsel and accountants in connection with the registration of the Shares under the Act and all other expenses in connection with the preparation, printing, reproduction and filing of the Registration Statement, any Preliminary Prospectus, any Section 5(d) Writing, any Issuer Free Writing Prospectus and the Prospectus and amendments and supplements thereto and the mailing and delivering of copies thereof to the Underwriters and dealers; (ii) the cost of printing or producing any Agreement among Underwriters, this Agreement, any Blue Sky Memorandum, closing documents (including

any compilations thereof) and any other documents in connection with the offering, purchase, sale and delivery of the Shares; (iii) all expenses in connection with the qualification of the Shares for offering and sale under state securities laws as provided in Section 5(b) hereof, including the documented fees and disbursements of counsel for the Underwriters in connection with such qualification and in connection with any Blue Sky survey (iv) all fees and expenses in connection with listing the Shares on NASDAQ; (v) the filing fees incident to, and the reasonable and documented fees and disbursements of counsel for the Underwriters in connection with, any required review by FINRA of the terms of the sale of the Shares; (vi) the cost of preparing stock certificates; (vii) the cost and charges of any transfer agent or registrar; and (viii) all other costs and expenses incident to the performance of its obligations hereunder which are not otherwise specifically provided for in this Section 7; provided, however, that the amount payable by the Company pursuant to subsection (iii) and the reasonable fees and disbursements of counsel to the Underwriters described in subsection (v) of this Section 7 shall not exceed $35,000 in the aggregate. It is understood, however, that, except as provided in this Section, and Sections 9 and 12 hereof, the Underwriters will pay all of their own costs and expenses, including the fees of their counsel, stock transfer taxes on resale of any of the Shares by them, and any advertising expenses connected with any offers they may make.

8. The obligations of the Underwriters hereunder, as to the Shares to be delivered at each Time of Delivery, shall be subject, in their discretion, to the condition that all representations and warranties and other statements of the Company herein are, at and as of the Applicable Time and such Time of Delivery, true and correct, the condition that the Company shall have performed all of its obligations hereunder theretofore to be performed, and the following additional conditions:

(a) The Prospectus shall have been filed with the Commission pursuant to Rule 424(b) under the Act within the applicable time period prescribed for such filing by the rules and regulations under the Act and in accordance with Section 5(a) hereof; all material required to be filed by the Company pursuant to Rule 433(d) under the Act shall have been filed with the Commission within the applicable time period prescribed for such filing by Rule 433; if the Company has elected to rely upon Rule 462(b) under the Act, the Rule 462(b) Registration Statement shall have become effective by 10:00 P.M., Washington, D.C. time, on the date of this Agreement; no stop order suspending the effectiveness of the Registration Statement or any part thereof shall have been issued and no proceeding for that purpose shall have been initiated or threatened by the Commission; no stop order suspending or preventing the use of the Pricing Prospectus, Prospectus or any Issuer Free Writing Prospectus shall have been initiated or threatened by the Commission; and all requests for additional information on the part of the Commission shall have been complied with to your reasonable satisfaction;

(b) Davis Polk & Wardwell LLP, counsel for the Underwriters, shall have furnished to you their written opinion and 10b-5 statement, dated such Time of Delivery, in form and substance satisfactory to you, and such counsel shall have received such papers and information as they may reasonably request to enable them to pass upon such matters;

(c) Wilson Sonsini Goodrich & Rosati, Professional Corporation, counsel for the Company, shall have furnished to you their written opinion and 10b-5 statement, dated such Time of Delivery, in form and substance satisfactory to you;

(d) Morrison & Foerster LLP, intellectual property counsel for the Company, shall have furnished to you their written opinion, dated such Time of Delivery, in form and substance satisfactory to you;

(e) On the date of the Prospectus at a time prior to the execution of this Agreement, at 9:30 a.m., New York City time, on the effective date of any post-effective amendment to the Registration Statement filed subsequent to the date of this Agreement and also at each Time of Delivery, Ernst & Young LLP shall have furnished to you a letter or letters, dated the respective dates of delivery thereof, in form and substance satisfactory to you, to the effect set forth in Annex I hereto;

(f) (i) The Company shall not have sustained since the date of the latest audited financial statements included in the Pricing Prospectus any material loss or interference with its business from fire, explosion, flood or other calamity, whether or not covered by insurance, or from any labor dispute or court or governmental action, order or decree, otherwise than as set forth or contemplated in the Pricing Prospectus, and (ii) since the respective dates as of which information is given in the Pricing Prospectus there shall not have been any change in the capital stock (other than as a result of (A) the vesting, exercise, or settlement of stock options, restricted stock units or other equity incentives pursuant to the Company's equity incentive plans, or (B) the repurchase of shares of capital stock pursuant to agreements providing for an option to repurchase or a right of first refusal on behalf of the Company and (C) the issuance by the Company of shares of capital stock upon the exercise of warrants outstanding on the date hereof, in each case as such equity incentive plans, outstanding equity incentives and agreements are described in the Pricing Prospectus and the Prospectus) or long-term debt of the Company or any change or effect, or any development involving a prospective change or effect, in or affecting (x) the business, properties, general affairs, management, financial position, stockholders' equity or results of operations of the Company, except as set forth or contemplated in the Pricing Prospectus and the Prospectus, or (y) the ability of the Company to perform its obligations under this Agreement, including the issuance and sale of the Shares, or to consummate the transactions contemplated in the Pricing Prospectus and the Prospectus, the effect of which, in any such case described in clause (i) or (ii), is in your judgment so material and adverse as to make it impracticable or inadvisable to proceed with the public offering or the delivery of the Shares being delivered at such Time of Delivery on the terms and in the manner contemplated in the Pricing Prospectus and the Prospectus;

(g) On or after the Applicable Time there shall not have occurred any of the following: (i) a suspension or material limitation in trading in securities generally on NASDAQ; (ii) a suspension or material limitation in trading in the Company's securities on NASDAQ; (iii) a general moratorium on commercial banking activities declared by either Federal or New York State authorities or a material disruption in commercial banking or securities settlement or clearance services in the United States; (iv) the outbreak or escalation of hostilities involving the United States or the declaration by the United States of a national emergency or war or (v) the occurrence of any other calamity or crisis or any change in financial, political or economic conditions in the United States or elsewhere, if the effect of any such event specified in clause (iv) or (v) in your judgment makes it impracticable or inadvisable to proceed with the public offering or the delivery of the Shares being delivered at such Time of Delivery on the terms and in the manner contemplated in the Pricing Prospectus and the Prospectus;

(h) The Shares to be sold at such Time of Delivery shall have been duly listed, subject to notice of issuance, for quotation on NASDAQ;

(i) The Company shall have obtained and delivered to the Underwriters executed copies of an agreement from each member of the Company's board of directors, each executive officer of the Company and holders representing substantially all of the outstanding Common Stock on an as converted basis, substantially to the effect set forth in Annex III hereto;

(j) The Company shall have complied with the provisions of Section 5(c) hereof with respect to the furnishing of prospectuses on the New York Business Day next succeeding the date of this Agreement;

(k) You shall have received at each Time of Delivery satisfactory evidence of the good standing of the Company in its jurisdiction of organization and its good standing in such other jurisdictions as you may reasonably request, in each case in writing or any standard form of telecommunication from the appropriate governmental authorities of such jurisdictions; and

(l) The Company shall have furnished or caused to be furnished to you at such Time of Delivery certificates of officers of the Company satisfactory to you as to the accuracy of the representations and warranties of the Company herein at and as of such Time of Delivery, as to the performance by the Company of all of its obligations hereunder to be performed at or prior to such Time of Delivery and as to such other matters as you may reasonably request.

All opinions, letters, certificates and evidence mentioned above or elsewhere in this Agreement shall be deemed to be in compliance with the provisions hereof only if they are in form and substance reasonably satisfactory to counsel for the Underwriters.

9. (a) The Company will indemnify and hold harmless each Underwriter, the directors, officers, employees, affiliates and agents of each Underwriter and each person who controls any Underwriter within the meaning of either the Act or the Securities Exchange Act of 1934, as amended, and regulations promulgated thereunder, against any losses, claims, damages or liabilities, joint or several, to which they or any of them may become subject, under the Act or otherwise, insofar as such losses, claims, damages or liabilities (or actions in respect thereof) arise out of or are based upon an untrue statement or alleged untrue statement of a material fact contained in the Registration Statement, any Preliminary Prospectus, the Pricing Prospectus or the Prospectus, or any amendment or supplement thereto, any Issuer Free Writing Prospectus, any "roadshow" as defined in Rule 433(h) under the Act (a "roadshow"), any "issuer information" filed or required to be filed pursuant to Rule 433(d) under the Act or any Section 5(d) Writing prepared or authorized by the Company, or arise out of or are based upon the omission or alleged omission to state therein a material fact required to be stated therein or necessary to make the statements therein not misleading, and will reimburse each such indemnified party for any legal or other expenses reasonably incurred by such indemnified party in connection with investigating or defending any such action or claim as such expenses are incurred; *provided*, *however*, that the Company shall not be liable in any such case to the extent that any such loss, claim, damage or liability arises out of or is based upon an untrue statement or alleged untrue statement or omission or alleged omission made in the Registration Statement, any Preliminary Prospectus, the Pricing Prospectus or the Prospectus, or any amendment or supplement thereto, or any Issuer Free Writing Prospectus or any Section 5(d) Writing, in reliance upon and in conformity with the Underwriter Information;

(b) Each Underwriter will indemnify and hold harmless the Company against any losses, claims, damages or liabilities to which the Company may become subject, under the Act or otherwise, insofar as such losses, claims, damages or liabilities (or actions in respect thereof) arise out of or are based upon an untrue statement or alleged untrue statement of a material fact contained in the Registration Statement, any Preliminary Prospectus, the Pricing Prospectus or the Prospectus, or any amendment or supplement thereto, or any Issuer Free Writing Prospectus, or any roadshow or any Section 5(d) Writing, or arise out of or are based upon the omission or alleged omission to state therein a material fact required to be stated therein or necessary to make the statements therein not misleading, in each case to the extent, but only to the extent, that such untrue statement or alleged untrue statement or omission or alleged omission was made in the Registration Statement, any Preliminary Prospectus, the Pricing Prospectus or the Prospectus, or any amendment or supplement thereto, or any Issuer Free Writing Prospectus, or any roadshow or any Section 5(d) Writing, in reliance upon and in conformity with the Underwriter Information; and will reimburse the Company for any legal or other expenses reasonably incurred by the Company in connection with investigating or defending any such action or claim as such expenses are incurred. As used in this Agreement with respect to an Underwriter and an applicable document, "Underwriter Information" shall mean the written information furnished to the Company by such Underwriter through the Representatives expressly for use therein; it being understood and agreed upon that the only such information furnished by any Underwriter consists of the following information in the Prospectus furnished on behalf of each Underwriter: the concession figure appearing in the fourth paragraph under the caption "Underwriting", and the information contained in the twelfth, thirteenth and fourteenth paragraphs under the caption "Underwriting" beginning with the words "In connection with the offering . . .";

(c) Promptly after receipt by an indemnified party under subsection (a) or (b) of this Section 9 of notice of the commencement of any action, such indemnified party shall, if a claim in respect thereof is to be made against the indemnifying party under such subsection, notify the indemnifying party in writing of the commencement thereof; provided that the failure to notify the indemnifying party shall not relieve it from any liability that it may have under the preceding paragraphs of this Section 9 except to the extent that it has been materially prejudiced (through the forfeiture of substantive rights or defenses) by such failure; and provided further that the failure to notify the indemnifying party shall not relieve it from any liability that it may have to an indemnified party otherwise than under the preceding paragraphs of this Section 9. In case any such action shall be brought against any indemnified party and it shall notify the indemnifying party of the commencement thereof, the indemnifying party shall be entitled to participate therein and, to the extent that it shall wish, jointly with any other indemnifying party similarly notified, to assume the defense thereof, with counsel reasonably satisfactory to such indemnified party (who shall not, except with the consent of the indemnified party, be counsel to the indemnifying party), and, after notice from the indemnifying party to such indemnified party of its election so to assume the defense thereof, the indemnifying party shall not be liable to such indemnified party under such subsection for any legal expenses of other counsel or any other expenses, in each case subsequently incurred by such indemnified party, in connection with the defense thereof other than reasonable costs of investigation. No indemnifying party shall,

without the written consent of the indemnified party, effect the settlement or compromise of, or consent to the entry of any judgment with respect to, any pending or threatened action or claim in respect of which indemnification or contribution may be sought hereunder (whether or not the indemnified party is an actual or potential party to such action or claim) unless such settlement, compromise or judgment (i) includes an unconditional release of the indemnified party from all liability arising out of such action or claim and (ii) does not include a statement as to or an admission of fault, culpability or a failure to act, by or on behalf of any indemnified party;

(d) If the indemnification provided for in this Section 9 is unavailable to or insufficient to hold harmless an indemnified party under subsection (a) or (b) above in respect of any losses, claims, damages or liabilities (or actions in respect thereof) referred to therein, then each indemnifying party shall contribute to the amount paid or payable by such indemnified party as a result of such losses, claims, damages or liabilities (or actions in respect thereof) in such proportion as is appropriate to reflect the relative benefits received by the Company on the one hand and the Underwriters on the other from the offering of the Shares. If, however, the allocation provided by the immediately preceding sentence is not permitted by applicable law, then each indemnifying party shall contribute to such amount paid or payable by such indemnified party in such proportion as is appropriate to reflect not only such relative benefits but also the relative fault of the Company on the one hand and the Underwriters on the other in connection with the statements or omissions which resulted in such losses, claims, damages or liabilities (or actions in respect thereof), as well as any other relevant equitable considerations. The relative benefits received by the Company on the one hand and the Underwriters on the other shall be deemed to be in the same proportion as the total net proceeds from the offering (before deducting expenses) received by the Company bear to the total underwriting discounts and commissions received by the Underwriters, in each case as set forth in the table on the cover page of the Prospectus. The relative fault shall be determined by reference to, among other things, whether the untrue or alleged untrue statement of a material fact or the omission or alleged omission to state a material fact relates to information supplied by the Company on the one hand or the Underwriters on the other and the parties' relative intent, knowledge, access to information and opportunity to correct or prevent such statement or omission. The Company and the Underwriters agree that it would not be just and equitable if contribution pursuant to this subsection (d) were determined by *pro rata* allocation (even if the Underwriters were treated as one entity for such purpose) or by any other method of allocation which does not take account of the equitable considerations referred to above in this subsection (d). The amount paid or payable by an indemnified party as a result of the losses, claims, damages or liabilities (or actions in respect thereof) referred to above in this subsection (d) shall be deemed to include any legal or other expenses reasonably incurred by such indemnified party in connection with investigating or defending any such action or claim. Notwithstanding the provisions of this subsection (d), no Underwriter shall be required to contribute any amount in excess of the amount by which the total price at which the Shares underwritten by it and distributed to the public were offered to the public exceeds the amount of any damages which such Underwriter has otherwise been required to pay by reason of such untrue or alleged untrue statement or omission or alleged omission. No person guilty of fraudulent misrepresentation (within the meaning of Section 11(f) of the Act) shall be entitled to contribution from any person who was not guilty of such fraudulent misrepresentation. The Underwriters' obligations in this subsection (d) to contribute are several in proportion to their respective underwriting obligations and not joint; and

(e) The obligations of the Company under this Section 9 shall be in addition to any liability which the Company may otherwise have and shall extend, upon the same terms and conditions, to each person, if any, who controls any Underwriter within the meaning of the Act and each affiliate of any Underwriter; and the obligations of the Underwriters under this Section 9 shall be in addition to any liability which the respective Underwriters may otherwise have and shall extend, upon the same terms and conditions, to each officer and director of the Company (including any person who, with his or her consent, is named in the Registration Statement as about to become a director of the Company) and to each person, if any, who controls the Company within the meaning of the Act.

10. (a) If any Underwriter shall default in its obligation to purchase the Shares which it has agreed to purchase hereunder at a Time of Delivery, you may in your discretion arrange for you or another party or other parties to purchase such Shares on the terms contained herein. If within thirty-six hours after such default by any Underwriter you do not arrange for the purchase of such Shares, then the Company shall be entitled to a further period of thirty-six hours within which to procure another party or other parties satisfactory to you to purchase such Shares on such terms. In the event that, within the respective prescribed periods, you notify the Company that you have so arranged for the purchase of such Shares, or the Company notifies you that it has so arranged for the purchase of such Shares, you or the Company shall have the right to postpone such Time of Delivery for a period of not more than seven days, in order to effect whatever changes may thereby be made necessary in the Registration Statement or the Prospectus, or in any other documents or arrangements, and the Company agrees to file promptly any amendments or supplements to the Registration Statement or the Prospectus which in your opinion may thereby be made necessary. The term “Underwriter” as used in this Agreement shall include any person substituted under this Section with like effect as if such person had originally been a party to this Agreement with respect to such Shares;

(b) If, after giving effect to any arrangements for the purchase of the Shares of a defaulting Underwriter or Underwriters by you and the Company as provided in subsection (a) above, the aggregate number of such Shares which remains unpurchased does not exceed one-eleventh of the aggregate number of all the Shares to be purchased at such Time of Delivery, then the Company shall have the right to require each non-defaulting Underwriter to purchase the number of shares which such Underwriter agreed to purchase hereunder at such Time of Delivery and, in addition, to require each non-defaulting Underwriter to purchase its pro rata share (based on the number of Shares which such Underwriter agreed to purchase hereunder) of the Shares of such defaulting Underwriter or Underwriters for which such arrangements have not been made; but nothing herein shall relieve a defaulting Underwriter from liability for its default; and

(c) If, after giving effect to any arrangements for the purchase of the Shares of a defaulting Underwriter or Underwriters by you and the Company as provided in subsection (a) above, the aggregate number of such Shares which remains unpurchased exceeds one-eleventh of the aggregate number of all the Shares to be purchased at such Time of Delivery, or if the Company shall not exercise the right described in subsection (b) above to require non-defaulting Underwriters to purchase Shares of a defaulting Underwriter or Underwriters, then this Agreement (or, with respect to the Second Time of Delivery, the

obligations of the Underwriters to purchase and of the Company to sell the Optional Shares) shall thereupon terminate, without liability on the part of any non-defaulting Underwriter or the Company, except for the expenses to be borne by the Company and the Underwriters as provided in Section 7 hereof and the indemnity and contribution agreements in Section 9 hereof; but nothing herein shall relieve a defaulting Underwriter from liability for its default.

11. The respective indemnities, agreements, representations, warranties and other statements of the Company and the several Underwriters, as set forth in this Agreement or made by or on behalf of them, respectively, pursuant to this Agreement, shall remain in full force and effect, regardless of any investigation (or any statement as to the results thereof) made by or on behalf of any Underwriter or any controlling person of any Underwriter, or the Company, or any officer or director or controlling person of the Company, and shall survive delivery of and payment for the Shares.

12. If this Agreement shall be terminated pursuant to Section 10 hereof, the Company shall not then be under any liability to any Underwriter except as provided in Sections 7 and 9 hereof; but, if for any other reason, any Shares are not delivered by or on behalf of the Company as provided herein, the Company will reimburse the Underwriters through you for all out-of-pocket expenses approved in writing by you, including fees and disbursements of counsel, reasonably incurred by the Underwriters in making preparations for the purchase, sale and delivery of the Shares not so delivered, but the Company shall then be under no further liability to any Underwriter except as provided in Sections 7 and 9 hereof.

13. In all dealings hereunder, the Representatives shall act on behalf of each of the Underwriters, and the parties hereto shall be entitled to act and rely upon any statement, request, notice or agreement on behalf of any Underwriter made or given by you jointly.

All statements, requests, notices and agreements hereunder shall be in writing, and if to the Underwriters shall be delivered or sent by mail, telex or facsimile transmission to you as the representatives at (a) Goldman Sachs & Co. LLC, 200 West Street, New York, New York 10282-2198, Attention: Registration Department; (b) Jefferies LLC, 520 Madison Avenue, New York, NY 10022, Attention: General Counsel; and if to the Company shall be delivered or sent by mail, telex or facsimile transmission to the address of the Company set forth in the Registration Statement, Attention: Secretary; provided, however, that any notice to an Underwriter pursuant to Section 9(c) hereof shall be delivered or sent by mail, telex or facsimile transmission to such Underwriter at its address set forth in its Underwriters' Questionnaire, or telex constituting such Questionnaire, which address will be supplied to the Company by you upon request; provided, however, that notices under subsection 5(e) shall be in writing, and if to the Underwriters shall be delivered or sent by mail, telex or facsimile transmission to you as the representatives at Goldman Sachs & Co. LLC, 200 West Street, New York, New York 10282-2198, Attention: Control Room. Any such statements, requests, notices or agreements shall take effect upon receipt thereof.

In accordance with the requirements of the USA Patriot Act (Title III of Pub. L. 107-56 (signed into law October 26, 2001)), the underwriters are required to obtain, verify and record information that identifies their respective clients, including the Company, which information may include the name and address of their respective clients, as well as other information that will allow the underwriters to properly identify their respective clients.

14. This Agreement shall be binding upon, and inure solely to the benefit of, the Underwriters, the Company and, to the extent provided in Sections 9 and 11 hereof, the officers and directors of the Company and each person who controls the Company or any Underwriter, and their respective heirs, executors, administrators, successors and assigns, and no other person shall acquire or have any right under or by virtue of this Agreement. No purchaser of any of the Shares from any Underwriter shall be deemed a successor or assign by reason merely of such purchase.

15. Time shall be of the essence of this Agreement. As used herein, the term "business day" shall mean any day when the Commission's office in Washington, D.C. is open for business.

16. The Company acknowledges and agrees that (i) the purchase and sale of the Shares pursuant to this Agreement is an arm's-length commercial transaction between the Company, on the one hand, and the several Underwriters, on the other, (ii) in connection therewith and with the process leading to such transaction each Underwriter is acting solely as a principal and not the agent or fiduciary of the Company, (iii) no Underwriter has assumed an advisory or fiduciary responsibility in favor of the Company with respect to the offering contemplated hereby or the process leading thereto (irrespective of whether such Underwriter has advised or is currently advising the Company on other matters) or any other obligation to the Company except the obligations expressly set forth in this Agreement and (iv) the Company has consulted its own legal and financial advisors to the extent it deemed appropriate. The Company agrees that it will not claim that the Underwriters, or any of them, has rendered advisory services of any nature or respect, or owes a fiduciary or similar duty to the Company, in connection with such transaction or the process leading thereto.

17. This Agreement supersedes all prior agreements and understandings (whether written or oral) between the Company and the Underwriters, or any of them, with respect to the subject matter hereof.

18. **This Agreement and any transaction contemplated by this Agreement shall be governed by and construed in accordance with the laws of the State of New York without regard to principles of conflict of laws that would results in the application of any other law than the laws of the State of New York. The Company agrees that any suit or proceeding arising in respect of this Agreement or any transaction contemplated by this Agreement will be tried exclusively in the U.S. District Court for the Southern District of New York or, if that court does not have subject matter jurisdiction, in any state court located in The City and County of New York and the Company agrees to submit to the jurisdiction of, and to venue in, such courts.**

19. The Company and each of the Underwriters hereby irrevocably waives, to the fullest extent permitted by applicable law, any and all right to trial by jury in any legal proceeding arising out of or relating to this Agreement or the transactions contemplated hereby.

20. This Agreement may be executed by any one or more of the parties hereto in any number of counterparts, each of which shall be deemed to be an original, but all such counterparts shall together constitute one and the same instrument.

21. Notwithstanding anything herein to the contrary, the Company is authorized to disclose to any persons the U.S. federal and state income tax treatment and tax structure of the potential transaction and all materials of any kind (including tax opinions and other tax analyses) provided to the Company relating to that treatment and structure, without the Underwriters imposing any limitation of any kind. However, any information relating to the tax treatment and tax structure shall remain confidential (and the foregoing sentence shall not apply) to the extent necessary to enable any person to comply with securities laws. For this purpose, "tax structure" is limited to any facts that may be relevant to that treatment.

If the foregoing is in accordance with your understanding, please sign and return to us five counterparts hereof, and upon the acceptance hereof by you, on behalf of each of the Underwriters, this letter and such acceptance hereof shall constitute a binding agreement between each of the Underwriters and the Company. It is understood that your acceptance of this letter on behalf of each of the Underwriters is pursuant to the authority set forth in a form of Agreement among Underwriters, the form of which shall be submitted to the Company for examination upon request, but without warranty on your part as to the authority of the signers thereof.

Very truly yours,

ALLAKOS INC.

By:

Name:
Title:

Accepted as of the date hereof:

Goldman Sachs & Co. LLC

By: _____
Name:
Title:

Jefferies LLC

By: _____
Name:
Title:

On behalf of each of the Underwriters

SCHEDULE I

Underwriter	Firm Shares to be Purchased	Optional Shares to be Purchased if Maximum Option is Exercised
Goldman Sachs & Co. LLC		
Jefferies LLC		
William Blair & Company, L.L.C.		
Total		

SCHEDULE II

(a) Issuer Free Writing Prospectuses not included in the Pricing Disclosure Package:

Electronic roadshow dated [•], 2018

(b) Additional Documents Incorporated by Reference:

None

(c) Information other than the Pricing Prospectus that comprise the Pricing Disclosure Package:

The initial public offering price per share for the Shares is $[•]
The number of Shares purchased by the Underwriters is [•].
[Add any other pricing disclosure.]

(d) Section 5(d) Writings:

Investor presentation dated [•]

ANNEX I

Form of Comfort Letter

ANNEX II

Form of Press Release

Allakos Inc.
[Date]

Allakos Inc. (“Company”) announced today that Goldman Sachs & Co. LLC and Jefferies LLC, the lead book-running managers in the Company’s recent public sale of shares of common stock, are [waiving] [releasing] a lock-up restriction with respect to shares of the Company’s common stock held by [certain officers or directors] [an officer or director] of the Company. The [waiver] [release] will take effect on , 20 , and the shares may be sold on or after such date.

This press release is not an offer for sale of the securities in the United States or in any other jurisdiction where such offer is prohibited, and such securities may not be offered or sold in the United States absent registration or an exemption from registration under the United States Securities Act of 1933, as amended.

ANNEX III

Form of Lock-up Agreement

Allakos Inc.

Lock-Up Agreement

, 2018

Goldman Sachs & Co. LLC
Jefferies LLC

c/o Goldman Sachs & Co. LLC
200 West Street
New York, NY 10282-2198

c/o Jefferies LLC
520 Madison Avenue
New York, NY 10022

Re: Allakos Inc.—Lock-Up Agreement (this "Lock-Up Agreement")

Ladies and Gentlemen:

The undersigned understands that you, as representatives (the "Representatives"), propose to enter into an Underwriting Agreement on behalf of the several Underwriters named in Schedule I to such agreement (collectively, the "Underwriters"), with Allakos Inc., a Delaware corporation (the "Company"), providing for a public offering (the "Public Offering") of shares of the Common Stock of the Company, par value $0.001 per share (the "Shares") pursuant to a Registration Statement on Form S-1 (the "Registration Statement") to be filed with the Securities and Exchange Commission (the "SEC").

In consideration of the agreement by the Underwriters to offer and sell the Shares, and of other good and valuable consideration the receipt and sufficiency of which is hereby acknowledged, the undersigned agrees that, during the period beginning from the date of this Lock-Up Agreement and continuing to and including the date 180 days after the date set forth on the final prospectus (the "Prospectus") used to sell the Shares (the "Lock-Up Period"), subject to the exceptions set forth in this Lock-Up Agreement, the undersigned will not offer, sell, contract to sell, pledge, grant any option to purchase, make any short sale or otherwise dispose of ("Transfer") any shares of Common Stock of the Company, or any options or warrants to purchase any shares of Common Stock of the Company, or any securities convertible into, exchangeable for or that represent the right to receive shares of Common Stock of the Company

(collectively, the "Equity Securities"), whether now owned or hereinafter acquired, owned directly by the undersigned (including holding as a custodian) or with respect to which the undersigned has beneficial ownership within the rules and regulations of the SEC (collectively the "Undersigned's Shares"). In addition, the undersigned also agrees that it will not, during the Lock-Up Period, without the prior written consent of the Representatives on behalf of the Underwriters, make any demand for or exercise any right with respect to, the registration of any of the Undersigned's Shares. Notwithstanding the foregoing or any other agreement or waiver to which the undersigned is a party, the undersigned may make a demand under any registration rights agreement with the Company described in the Prospectus for, and exercise its rights under any such registration rights agreement with respect to, the registration after the expiration of the Lock-Up Period of Equity Securities that does not require the filing of a registration statement or any public announcement or activity regarding the registration by the undersigned, the Company or any third party during the Lock-Up Period (and no such public announcement or activity shall be voluntarily made or taken during the Lock-Up Period). The foregoing restrictions are expressly agreed to preclude the undersigned from engaging in any hedging or other transaction which is designed to or which reasonably could be expected to lead to or result in a sale or disposition of the Undersigned's Shares even if such Shares would be disposed of by someone other than the undersigned. Such prohibited hedging or other transactions would include without limitation any short sale or any purchase, sale or grant of any right (including without limitation any put or call option) with respect to any of the Undersigned's Shares or with respect to any security that includes, relates to, or derives any significant part of its value from such Shares. If the undersigned is an officer or director of the Company, the undersigned further agrees that the foregoing provisions shall be equally applicable to any issuer-directed Shares the undersigned may purchase in the Public Offering.

If the undersigned is an officer or director of the Company, (i) the Representatives agree that, at least three business days before the effective date of any release or waiver of the foregoing restrictions in connection with a Transfer of shares of Common Stock, the Representatives will notify the Company of the impending release or waiver, and (ii) the Company has agreed or will agree in the Underwriting Agreement to announce the impending release or waiver by press release through a major news service at least two business days before the effective date of the release or waiver. Any release or waiver granted by the Representatives hereunder to any such officer or director shall only be effective two business days after the publication date of such press release. The provisions of this paragraph will not apply if (a) the release or waiver is effected solely to permit a Transfer not for consideration and (b) the transferee has agreed in writing to be bound by the same terms described in this letter to the extent and for the duration that such terms remain in effect at the time of the Transfer.

Notwithstanding the foregoing, the undersigned may:

(a) Transfer the Undersigned's Shares:

(i) as a *bona fide* gift or gifts, including without limitation to a charitable organization or educational institution, or for *bona fide* estate planning purposes;

(ii) to any member of the undersigned's immediate family or to any trust or other legal entity for the direct or indirect benefit of the undersigned or the immediate family of the undersigned, or if the undersigned is a trust, to a trustor or beneficiary of the trust or to the estate of a beneficiary of such trust, provided that any such Transfer shall not involve a disposition for value;

(iii) by will, other testamentary document or the laws of intestate succession;

(iv) in connection with a sale of the Undersigned's Shares acquired in the Public Offering (other than any issuer-directed shares of Common Stock purchased in the Public Offering by an officer or director of the Company) or in open market transactions on or after the Public Offering;

(v) if the undersigned is a corporation, partnership, limited liability company, trust or other business entity, (A) to another corporation, member, partner, partnership, limited liability company, trust or other business entity that is an affiliate (as defined in Rule 405 as promulgated by the SEC under the Securities Act of 1933, as amended) of the undersigned, or to any investment fund or other entity controlling, controlled by, managing or managed by or under common control with the undersigned or affiliates of the undersigned (including, for the avoidance of doubt, where the undersigned is a partnership, to its general partner or a successor partnership or fund, or any other funds managed by such partnership), or (B) as part of a distribution, transfer or disposition by the undersigned to its or its affiliates' directors, officers, employees, managers, managing members, members, stockholders, partners, beneficiaries (or the estates thereof) or other equity holders;

(vi) (a) surrender or forfeiture to the Company of shares of Common Stock of the Company in connection with the "net" or "cashless" exercise or settlement of stock options, other rights to purchase shares of Common Stock or other awards expiring during the Lock-Up Period (collectively, the "Expiring Awards") or for the payment of tax withholdings or remittance payments due as a result of the vesting, settlement, or exercise of such Expiring Awards, in all such cases, pursuant to an equity incentive plan, stock purchase plan or other employee benefit plan described in the Registration Statement and the Prospectus, or (b) surrender or forfeiture to the Company of shares of Common Stock of the Company upon the conversion of a convertible security of the Company described in the Registration Statement and the Prospectus in order to cover withholding tax obligations in connection with such conversion;

(vii) to the Company in connection with any contractual arrangement in effect on the date of the Prospectus that provides for the repurchase of the undersigned's Equity Securities by the Company in connection with the termination of the undersigned's service with the Company;

(viii) in connection with the conversion of any convertible security into shares of Common Stock in a manner consistent with the description of such securities contained in the Prospectus, provided that for the avoidance of doubt such shares of Common Stock shall remain subject to the provisions of this Lock-Up Agreement;

(ix) to a nominee or custodian of a person or entity to whom a Transfer would be permissible under (i), (ii), (iii) or (v) above;

(x) pursuant to a bona fide third-party tender offer, merger, consolidation or other similar transaction that is approved by the board of directors of the Company and made to all holders of the Company's capital stock on substantially the same terms for holders of a majority of the voting power of the Company's outstanding shares of capital stock involving a Change of Control of the Company, provided that in the event that such tender offer, merger, consolidation or other similar transaction is not completed, the Undersigned's Shares shall remain subject to the provisions of this Lock-Up Agreement;

(xi) in connection with the conversion or reclassification of the outstanding preferred stock or other classes of common stock of the Company into shares of Common Stock as disclosed in the Prospectus, provided that any such shares of Common Stock received upon such conversion or reclassification shall be subject to the terms of this Lock-Up Agreement;

(xii) by operation of law, including pursuant to orders of a court, a qualified domestic order or in connection with a divorce settlement; or

(xiii) with the prior written consent of the Representatives on behalf of the Underwriters,

provided that (A) in the case of (i), (ii), (iii), (v), (ix) and (xii) above, it shall be a condition to the Transfer or distribution that the donee, transferee or distributee, as the case may be, agrees in writing to be bound by the restrictions set forth herein, (B) in the case of (i), (ii), (iii), (iv) and (v) above, no filing under Section 16 of the Securities Exchange Act of 1934, as amended (the "Exchange Act") or other public filing, report or announcement reporting a reduction in beneficial ownership of shares of Common Stock shall be required or shall be voluntarily made during the Lock-Up Period (other than a required filing on Form 5, Schedule 13G (or Schedule 13G/A) or Schedule 13F), (C) in the case of (vi) above, if the undersigned is required to file a report under Section 16 of the Exchange Act during the Lock-Up Period, the undersigned shall include a statement in any such report to the effect that such report relates to the circumstances described in (vi) above, (D) in the case of (i), (ii), (iii), (v) and (ix) above, it shall be a condition to the Transfer or distribution that such Transfer or distribution does not involve a disposition for value and (E) in the case of (vii) above, no filing under Section 16 of the Exchange Act,

or other public filing, report or announcement reporting a reduction in beneficial ownership of shares of Common Stock shall be voluntarily made during the Lock-Up Period and, if the undersigned is required to file a report under Section 16 of the Exchange Act during the Lock-Up Period, the undersigned shall include a statement in such report to the effect that such Transfer is to the Company in connection with the repurchase of shares of Common Stock, as the case may be.

(b) receive from the Company shares of Common Stock in connection with the exercise of options or other rights granted under a stock incentive plan or other equity award plan, which plan is described in the Registration Statement; or

(c) enter into a written plan meeting the requirements of Rule 10b5-1 under the Exchange Act after the date of this Lock-Up Agreement relating to the sale of the Undersigned's Shares, provided that (i) the securities subject to such plan may not be Transferred until after the expiration of the Lock-Up Period and (ii) no public announcement or filing under the Exchange Act shall be voluntarily made regarding the establishment of such plan during the Lock-Up Period.

In the event that, during the Lock-Up Period, the Representatives release or waive any prohibition set forth in this Lock-Up Agreement on the transfer of Shares held by any Significant Holder (as defined below), the same percentage of the total number of outstanding Shares held by the undersigned as the percentage of the total number of outstanding Shares held by such Significant Holder that are the subject of such waiver shall be immediately and fully released on the same terms from the applicable prohibition(s) set forth herein. For the purposes of the foregoing, a "Significant Holder" shall mean any person or entity that beneficially owns 5% or more of the total outstanding Shares as of the date hereof. Notwithstanding the foregoing, the provisions of this paragraph will not apply (1) if the release or waiver is effected solely to permit a transfer not involving a disposition for value and the transferee agrees in writing to be bound by the same terms described in this Lock-Up Agreement to the extent and for the duration that such terms remain in effect at the time of transfer or (2) in the case of any secondary underwritten public offering of Shares. The Representatives shall use commercially reasonable efforts to promptly notify the Company of each such release (provided that the failure to provide such notice shall not give rise to any claim or liability against the Representatives or the Underwriters). The undersigned further acknowledges that the Representatives are under no obligation to inquire into whether, or to ensure that, the Company notifies the undersigned of the delivery by the Representatives of any such notice, which is a matter between the undersigned and the Company.

For purposes of this Lock-Up Agreement, "immediate family" shall mean any relationship by blood, current or former marriage, domestic partnership or adoption, not more remote than first cousin. For purposes of this Lock-Up Agreement, "Change of Control" shall mean the transfer (whether by tender offer, merger, consolidation or other similar transaction) in one transaction or a series of related transactions, to a person or group of affiliated persons (other than an Underwriter pursuant to the Public Offering), of the Company's voting securities if, after such transfer such person or group of affiliated persons would hold a majority of the outstanding voting securities of the Company (or the surviving entity).

The undersigned also agrees and consents to the entry of stop transfer instructions with the Company's transfer agent and registrar against the transfer of the Undersigned's Shares except in compliance with the foregoing restrictions.

Notwithstanding anything to the contrary contained herein, this Lock-Up Agreement will automatically terminate and the undersigned shall automatically, and without any action on the part of any other party, be released from all obligations hereunder upon the earliest to occur, if any, of (i) the Company's advising the Representatives in writing prior to the execution of the Underwriting Agreement that it has determined not to proceed with the Public Offering, (ii) the withdrawal of the Registration Statement prior to the execution of the Underwriting Agreement, (iii) the termination of the Underwriting Agreement (other than the provisions thereof which survive termination) prior to payment for and delivery of the Shares to be sold thereunder, or (iv) December 31, 2018, in the event that the Underwriting Agreement has not been executed by such date.

In the event that any Representative withdraws from or declines to participate in the Public Offering, all references to the Representatives contained in this Lock-Up Agreement shall be deemed to refer to the remaining Representatives that continue to participate in the Public Offering (the "Remaining Representatives"), and, in such event, any written consent, waiver or notice given or delivered in connection with this Lock-Up Agreement by the Remaining Representatives shall be deemed to be sufficient and effective for all purposes under this Lock-Up Agreement.

The undersigned hereby consents to receipt of this Lock-Up Agreement in electronic form and understands and agrees that execution and delivery of this Lock-Up Agreement by facsimile transmission, electronic mail or other electronic transmission is legal, valid and binding for all purposes.

The undersigned understands that the Company and the Underwriters are relying upon this Lock-Up Agreement in proceeding toward consummation of the Public Offering. The undersigned further understands that this Lock-Up Agreement is irrevocable and shall be binding upon the undersigned's heirs, legal representatives, successors, and assigns.

Very truly yours,

Exact Name of Shareholder

Authorized Signature

Title

Exhibit 3.1

SECOND AMENDED AND RESTATED

CERTIFICATE OF INCORPORATION OF

ALLAKOS INC.

Allakos Inc., a corporation organized and existing under the laws of the State of Delaware (the "**Corporation**"), certifies that:

1. The name of the Corporation is Allakos Inc. The Corporation's original Certificate of Incorporation was filed with the Secretary of State of the State of Delaware (the "**SOS**") on March 9, 2012 (the "**Original Certificate**"). The Original Certificate was amended and restated in its entirety pursuant to the Amended and Restated Certificate of Incorporation filed with the SOS on December 6, 2012 (the "**Restated Certificate**"). The Restated Certificate was amended three times pursuant to Certificates of Amendment of the Amended and Restated Certificate filed with the SOS on August 14, 2014, March 12, 2015, and August 7, 2017.

2. This Second Amended and Restated Certificate of Incorporation was duly adopted in accordance with Sections 242 and 245 of the General Corporation Law of the State of Delaware, and has been duly approved by the written consent of the stockholders of the Corporation in accordance with Section 228 of the General Corporation Law of the State of Delaware.

3. The text of the Restated Certificate, as amended to date, is hereby amended and restated to read as set forth in Exhibit A attached hereto.

IN WITNESS WHEREOF, Allakos Inc. has caused this Second Amended and Restated Certificate of Incorporation to be signed by Robert Alexander, a duly authorized officer of the Corporation, on November 30, 2017.

/s/ Robert Alexander

Robert Alexander, Chief Executive Officer

EXHIBIT A

ARTICLE I

The name of the Corporation is Allakos Inc.

ARTICLE II

The purpose of this Corporation is to engage in any lawful act or activity for which corporations may be organized under the General Corporation Law of Delaware.

ARTICLE III

The address of the Corporation's registered office in the State of Delaware is Corporation Trust Center, 1209 Orange Street, Wilmington, New Castle County, DE 19801. The name of the registered agent at such address is The Corporation Trust Company.

ARTICLE IV

The total number of shares of stock that the Corporation shall have authority to issue is 93,714,587, consisting of 55,000,000 shares of Common Stock, $0.001 par value per share (the "**Common Stock**"), and 38,714,587 shares of Preferred Stock, $0.001 par value per share. The first series of Preferred Stock shall be designated "**Series A Preferred Stock**" and shall consist of 26,083,081 shares. The second series of Preferred Stock shall be designated "**Series B Preferred Stock**" and shall consist of 12,631,506 shares.

ARTICLE V

The terms and provisions of the Common Stock and Preferred Stock are as follows:

1. **Definitions**. For purposes of this ARTICLE V, the following definitions shall apply:

(a) "**Conversion Price**" means $1.80 per share for the Series A Preferred Stock and $7.9279 per share for the Series B Preferred Stock (subject in each case to adjustment from time to time for Recapitalizations and as otherwise set forth elsewhere herein).

(b) "**Convertible Securities**" means any evidences of indebtedness, shares or other securities convertible into or exchangeable for Common Stock.

(c) "**Corporation**" means Allakos Inc.

(d) "**Distribution**" means the transfer of cash or other property without consideration whether by way of dividend or otherwise, other than dividends on Common Stock payable in Common Stock, or the purchase or redemption of shares of the Corporation by the Corporation for cash or property other than: (i) repurchases of Common Stock issued to or held by employees, officers, Directors or consultants of the Corporation or its subsidiaries upon termination of their employment or services pursuant to agreements the form of which has been approved by the Required Director Approval (as defined in Section 4(d) of this ARTICLE V) providing for the right of said repurchase, (ii) repurchases of

Common Stock issued to or held by employees, officers, Directors or consultants of the Corporation or its subsidiaries pursuant to rights of first refusal contained in the Corporation's Bylaws or agreements the form of which has been approved by the Required Director Approval (as defined below) providing for such right, and (iii) repurchase of capital stock of the Corporation approved by the Required Director Approval (as defined below) in connection with the settlement of disputes with any stockholder.

(e) "**Dividend Rate**" means an annual rate of 8% of the Original Issue Price per share for the applicable series of Preferred Stock.

(f) "**Liquidation Preference**" means $1.80 per share for the Series A Preferred Stock and $7.9279 per share for the Series B Preferred Stock (subject in each case to adjustment from time to time for Recapitalizations and as otherwise set forth elsewhere herein).

(g) "**Options**" means rights, options or warrants to subscribe for, purchase or otherwise acquire Common Stock or Convertible Securities.

(h) "**Original Issue Price**" means $1.80 per share for the Series A Preferred Stock and $7.9279 per share for the Series B Preferred Stock (subject in each case to adjustment from time to time for Recapitalizations and as otherwise set forth elsewhere herein).

(i) "**Preferred Stock**" means the Series A Preferred Stock and the Series B Preferred Stock.

(j) "**Recapitalization**" means any stock dividend, stock split, combination of shares, reorganization, recapitalization, reclassification or other similar event.

2. **Dividends**.

(a) ***Preferred Stock***. In any calendar year, the holders of outstanding shares of Preferred Stock shall be entitled to receive dividends, when, as and if declared by the Corporation's Board of Directors (the "**Board of Directors**"), out of any assets at the time legally available therefor, at the applicable Dividend Rate payable in preference and priority to any declaration or payment of any Distribution on the Common Stock of the Corporation in such calendar year. No Distributions shall be made with respect to the Common Stock or any series of Preferred Stock unless dividends on all series of Preferred Stock have been declared in accordance with the preferences stated herein and all declared dividends on the Preferred Stock have been paid or set aside for payment to the Preferred Stock holders. The right to receive dividends on shares of Preferred Stock shall not be cumulative, and no right to dividends shall accrue to holders of Preferred Stock by reason of the fact that dividends on said shares are not declared or paid.

(b) ***Additional Dividends***. After the payment or setting aside for payment of the dividends described in Section 2(a) hereof, any additional dividends (other than dividends on Common Stock payable solely in Common Stock) set aside or paid in any fiscal year shall be set aside or paid among the holders of the Preferred Stock and Common Stock then outstanding in proportion to the greatest whole number of shares of Common Stock which would be held by each such holder if all shares of Preferred Stock were converted at the applicable, then-effective Conversion Rate (as defined in Section 4(a) hereof).

(c) ***Non-Cash Distributions***. Whenever a Distribution provided for in this Section 2 shall be payable in property other than cash, the value of such Distribution shall be deemed to be the fair market value of such property as determined in good faith by the Board of Directors.

(d) ***Consent to Certain Distributions***. To the extent the Corporation may be subject to Section 500 of the California Corporations Code or any successor provision, such section or any successor provision shall not apply to the Corporation's repurchase of shares of Common Stock issued to or held by employees, officers, Directors, consultants or other service providers (i) pursuant to agreements providing for such repurchase at the original purchase price, (ii) at a purchase price not exceeding the fair market value of such Common Stock, (iii) in connection with the exercise of a contractual right of first refusal entitling the Corporation to purchase the shares upon the terms offered by a third party, or (iv) pursuant to any agreement or arrangement between the Corporation and any employee, officer, Director, consultant or other service provider which is approved by the holders of at least a majority of the Preferred Stock then outstanding, voting together as a single class and on an as-converted to Common Stock basis. Any such repurchases of shares of Common Stock may be made by the Corporation without regard to the "preferential dividends arrears amount" or any "preferential rights amount," as such terms are defined in Section 500 of the California Corporations Code.

(e) ***Waiver of Dividends***. Any dividend preference of any Preferred Stock may be waived, in whole or in part, by the consent or vote of the holders of the majority of the outstanding shares of the Preferred Stock (voting as a single class on an as-converted to Common Stock basis).

3. **Liquidation Rights**.

(a) ***Preferred Liquidation Preference***.

(i) In the event of any Liquidation Event (as defined below), either voluntary or involuntary, the holders of the Series B Preferred Stock shall be entitled to receive, prior and in preference to any Distribution of any of the assets of the Corporation to the holders of the Series A Preferred Stock or Common Stock by reason of their ownership of such stock, an amount per share for each share of Series B Preferred Stock held by them equal to the sum of (i) the Liquidation Preference specified for such share of Series B Preferred Stock and (ii) all declared but unpaid dividends (if any) on such share of Series B Preferred Stock, or such lesser amount as may be approved by the holders of at least sixty percent (60%) of the outstanding shares of Series B Preferred Stock (the "**Series B Liquidation Preference**"). If upon a Liquidation Event, the assets of the Corporation legally available for distribution to the holders of the Series B Preferred Stock are insufficient to permit the payment to such holders of the full amounts specified in this Section 3(a)(i)then the entire assets of the Corporation legally available for distribution shall be distributed with equal priority and *pro rata* among the holders of the Series B Preferred Stock in proportion to the full amounts they would otherwise be entitled to receive pursuant to this Section 3(a)(i).

(ii) In the event of any Liquidation Event, either voluntary or involuntary, after the payment of the full Series B Liquidation Preference pursuant to Section 3(a)(i) above, the holders of the Series A Preferred Stock shall be entitled to receive, prior and in preference to any Distribution of any of the assets of the Corporation to the holders of the Common Stock by reason of their ownership of such stock, an amount per share for each share of Series A Preferred Stock held by them equal to the sum of (i) the Liquidation Preference specified for such share of Series A Preferred Stock and (ii) all declared but unpaid dividends (if any) on such share of Series A Preferred Stock, or such lesser

amount as may be approved by the holders of the majority of the outstanding shares of Series A Preferred Stock (the "**Series A Liquidation Preference**"). If, upon a Liquidation Event, after the payment of the full Series B Liquidation Preference pursuant to Section 3(a)(i) above, the assets of the Corporation legally available for distribution to the holders of the Series A Preferred Stock are insufficient to permit the payment to such holders of the full amounts specified in this Section 3(a)(ii) then the entire assets of the Corporation legally available for distribution shall be distributed with equal priority and *pro rata* among the holders of the Series A Preferred Stock in proportion to the full amounts they would otherwise be entitled to receive pursuant to this Section 3(a)(ii).

(b) ***Remaining Assets***. After the payment or setting aside for payment to the holders of Preferred Stock of the full Series B Liquidation Preference and full Series A Liquidation Preference specified in Sections 3(a)(i) and 3(a)(ii) hereof, respectively, the remaining assets of the Corporation legally available for distribution shall be distributed among the holders of the Common Stock, pro rata in proportion to the number of shares of Common Stock deemed held by them.

(c) ***Shares not Treated as Both Preferred Stock and Common Stock in any Distribution***. Shares of Preferred Stock shall not be entitled to be converted into shares of Common Stock in order to participate in any Distribution, or series of Distributions, as shares of Common Stock, without first foregoing participation in the Distribution, or series of Distributions, as shares of Preferred Stock.

(d) ***Liquidation Event***. For purposes of this Section 3, a Liquidation Event shall be deemed to be occasioned by, or to include, (i) the acquisition of the Corporation by another entity by means of any transaction or series of related transactions to which the Corporation is party (including, without limitation, any stock acquisition, reorganization, merger or consolidation but excluding any sale of stock for capital raising purposes or a merger effected exclusively to change the domicile of the Corporation) other than a transaction or series of related transactions in which the holders of the voting securities of the Corporation outstanding immediately prior to such transaction or series of related transactions retain, immediately after such transaction or series of related transactions, as a result of shares in the Corporation held by such holders prior to such transaction or series or related transactions, at least a majority of the total voting power represented by the outstanding voting securities of the Corporation or such other surviving or resulting entity (or if the Corporation or such other surviving or resulting entity is a wholly-owned subsidiary immediately following such acquisition, its parent); (ii) a sale, lease, exclusive license or other disposition of all or substantially all of the assets of the Corporation and its subsidiaries taken as a whole by means of any transaction or series of related transactions, except where such sale, lease, exclusive license or other disposition is to a wholly-owned subsidiary of the Corporation; or (iii) any liquidation, dissolution or winding up of the Corporation, whether voluntary or involuntary (collectively, a "**Liquidation Event**"). The treatment of any transaction or series of related transactions as a Liquidation Event may be waived by the consent or vote of (i) the holders of at least a majority of the outstanding Preferred Stock (voting as a single class and on an as-converted to Common Stock basis) and (ii) the holders of at least 60% of the outstanding Series B Preferred Stock (voting as a single class and on an as-converted to Common Stock basis).

(e) ***Valuation of Non-Cash Consideration***. If any assets of the Corporation distributed to stockholders in connection with any Liquidation Event are other than cash, then the value of such assets shall be their fair market value as determined in good faith by the Board of Directors with the Required Director Approval (as defined in Section 4(d) hereof), *except that* any publicly-traded securities to be distributed to stockholders in a Liquidation Event shall be valued as follows:

(i) if the securities are then traded on a national securities exchange, then the value of the securities shall be deemed to be the average of the closing prices of the securities on such exchange over the ten (10) trading day period ending five (5) trading days prior to the Distribution;

(ii) if the securities are actively traded over-the-counter, then the value of the securities shall be deemed to be the average of the closing bid prices of the securities over the ten (10) trading day period ending five (5) trading days prior to the Distribution.

In the event of a merger or other acquisition of the Corporation by another entity, the Distribution date shall be deemed to be the date such transaction closes.

For the purposes of this Section 3(e) "**trading day**" means any day which the exchange or system on which the securities to be distributed are traded is open and "**closing prices**" or "**closing bid prices**" shall be deemed to be: (A) for securities traded primarily on the New York Stock Exchange, the American Stock Exchange or a Nasdaq market, the last reported trade price or sale price, as the case may be, at 4:00 p.m., New York time, on that day and (B) for securities listed or traded on other exchanges, markets and systems, the market price as of the end of the regular hours trading period that is generally accepted as such for such exchange, market or system. If, after the date hereof, the benchmark times generally accepted in the securities industry for determining the market price of a stock as of a given trading day shall change from those set forth above, the fair market value shall be determined as of such other generally accepted benchmark times.

(f) ***Notional Conversion***. Notwithstanding the above, for purposes of determining the amount each holder of shares of Preferred Stock is entitled to receive with respect to a Liquidation Event, each such holder of shares of Preferred Stock shall be deemed to have converted (regardless of whether such holder actually converted) such holder's shares of Preferred Stock into shares of Common Stock immediately prior to the Liquidation Event if, as a result of an actual conversion, such holder would receive, in the aggregate, an amount greater than the amount that would be distributed to such holder if such holder did not convert such shares of Preferred Stock into shares of Common Stock. If any such holder shall be deemed to have converted shares of Preferred Stock into Common Stock pursuant to this Section, then such holder shall not be entitled to receive any distribution that would otherwise be made to holders of Preferred Stock that have not converted (or have not been deemed to have converted) into shares of Common Stock.

(g) ***Option to Purchase***. In the event (x) the Corporation enters into an agreement whereby (A) the Corporation grants any corporation or other entity or person (a "**Prospective Acquiror**") an option or other right to consummate a Liquidation Event with respect to the Corporation, or (B) the Corporation enters into any agreement whereby the Corporation has the option or other right to require a Prospective Acquiror to consummate a Liquidation Event with respect to the Corporation, and (y) the Board of Directors determines to distribute to the Corporation's stockholders any initial consideration paid by the Prospective Acquiror to the Corporation with respect to such option or right (the "**Upfront Stockholder Consideration**"), any Upfront Stockholder Consideration shall be distributed as proceeds from a Liquidation Event in accordance with Section 3(a) through (f) hereof and not as a dividend under Section 2 hereof.

(h) ***Escrows and Contingent Payments***. In the event of a Liquidation Event pursuant to Section 3(d)(i) hereof, if any portion of the consideration payable to the stockholders of the Corporation is placed into escrow and/or is payable to the stockholders of the Corporation subject to contingencies, the purchase agreement shall provide that (a) the portion of such consideration that is not placed in escrow and not subject to any contingencies (the "**Initial Consideration**") shall be allocated among the holders of capital stock of the Corporation in accordance with Section 3(a) through (f) hereof as if the Initial Consideration were the only consideration payable in connection with such Liquidation Event and (b) any additional consideration which becomes payable to the stockholders of the Corporation upon release from escrow or satisfaction of contingencies shall be allocated among the holders of capital stock of the Corporation in accordance with Sections 3(a) through (f) hereof after taking into account the previous payment of the Initial Consideration as part of the same transaction.

4. **Conversion**. The holders of the Preferred Stock shall have conversion rights as follows:

(a) ***Right to Convert***. Each share of Preferred Stock shall be convertible, at the option of the holder thereof, at any time into that number of fully-paid, nonassessable shares of Common Stock determined by dividing the applicable Original Issue Price by the Conversion Price for such series of Preferred Stock (the ratio of the number of shares of Common Stock into which each share of Preferred Stock may be converted is hereinafter referred to as the "**Conversion Rate**".) Upon any decrease or increase in the Conversion Price, as described in this Section 4, the Conversion Rate shall be appropriately increased or decreased.

(b) ***Automatic Conversion***. Each share of Preferred Stock shall automatically be converted into fully-paid, non-assessable shares of Common Stock at the then-effective Conversion Rate for such share (A) immediately prior to the closing of a firm commitment underwritten initial public offering pursuant to an effective registration statement filed under the Securities Act of 1933, as amended (the "**Securities Act**"), covering the offer and sale of the Corporation's Common Stock, *provided* that the offering price per share is not less than $7.9279 (as adjusted for Recapitalizations) and the aggregate gross proceeds to the Corporation in excess of $50,000,000 (before deduction of underwriter commissions and discounts) (a "**Qualified IPO**"), or (B) upon the receipt by the Corporation of a written request for such conversion from the holders of at least a majority of the Preferred Stock then outstanding (voting as a single class and on an as-converted to Common Stock basis), or, if later, the effective date for conversion specified *in* such requests. Each of the events referred to in Sections 4(b)(A) and (B) hereof are referred to herein as an "**Automatic Conversion Event**".

(c) ***Mechanics of Conversion***. No fractional shares of Common Stock shall be issued upon conversion of Preferred Stock. In lieu of any fractional shares to which the holder would otherwise be entitled, the Corporation shall pay cash equal to such fraction multiplied by the then fair market value of a share of Common Stock as determined by the Board of Directors. For such purpose, all shares of Preferred Stock held by each holder shall be aggregated, and any resulting fractional share of Common Stock shall be paid in cash. Before any holder of Preferred Stock shall be entitled to convert the same into full shares of Common Stock, and to receive certificates therefor, such holder shall either (A) surrender the certificate or certificates therefor, duly endorsed, at the office of the Corporation or of any transfer agent for the Preferred Stock or (B) notify the Corporation or its transfer agent that such certificates have been lost, stolen or destroyed and execute an agreement satisfactory to the Corporation to indemnify the Corporation from any loss incurred by it in connection with such certificates, and shall give written notice to the Corporation at such office that the holder elects to convert the same; *provided*, *however*, that on the date of an Automatic Conversion Event, the outstanding shares of Preferred Stock shall be converted automatically into Common Stock without any further action by the holders of such shares and whether or not the certificates representing such shares are surrendered to the Corporation or its transfer agent; *provided further*, however, that the Corporation shall not be obligated to issue

certificates evidencing the shares of Common Stock issuable upon such Automatic Conversion Event unless either the certificates evidencing such shares of Preferred Stock are delivered to the Corporation or its transfer agent as provided above, or the holder notifies the Corporation or its transfer agent that such certificates have been lost, stolen or destroyed and executes an agreement satisfactory to the Corporation to indemnify the Corporation from any loss incurred by it in connection with such certificates. On the date of the occurrence of an Automatic Conversion Event, each holder of record of shares of Preferred Stock shall be deemed to be the holder of record of the Common Stock issuable upon such conversion, notwithstanding that the certificates representing such shares of Preferred Stock shall not have been surrendered at the office of the Corporation, that notice from the Corporation shall not have been received by any holder of record of shares of Preferred Stock or that the certificates evidencing such shares of Common Stock shall not then be actually delivered to such holder.

The Corporation shall, as soon as practicable after such delivery, or after such agreement and indemnification, issue and deliver at such office to such holder of Preferred Stock a certificate or certificates for the number of shares of Common Stock to which the holder shall be entitled as aforesaid and a check payable to the holder in the amount of any cash amounts payable as the result of a conversion into fractional shares of Common Stock plus any declared and unpaid dividends on the converted Preferred Stock. Such conversion shall be deemed to have been made immediately prior to the close of business on the date of such surrender of the shares of Preferred Stock to be converted, and the person or persons entitled to receive the shares of Common Stock issuable upon such conversion shall be treated for all purposes as the record holder or holders of such shares of Common Stock on such date; *provided, however,* that if the conversion is in connection with an underwritten offer of securities registered pursuant to the Securities Act or a merger, sale, financing, equity financing except as otherwise provided in the case of a mandatory conversion pursuant to Section 4(l) hereof, or liquidation of the Corporation or other event, the conversion may, at the option of any holder tendering Preferred Stock for conversion, be conditioned upon the closing of such transaction or upon the occurrence of such event, in which case the person(s) entitled to receive the Common Stock issuable upon such conversion of the Preferred Stock shall not be deemed to have converted such Preferred Stock until immediately prior to the closing of such transaction or the occurrence of such event.

(d) ***Adjustments to Conversion Price for Diluting Issues***.

(i) ***Special Definition***. For purposes of this Section 4(d), "**Additional Shares of Common**" means all shares of Common Stock issued (or, pursuant to Section 4(d)(iii), deemed to be issued) by the Corporation after the date of the filing of this Second Amended and Restated Certificate of Incorporation (the "**Filing Date**"), other than issuances or deemed issuances of, in each case only as approved by a majority of the Board of Directors (the "**Required Director Approval**"):

(1) shares of Common Stock and options, warrants or other rights to purchase Common Stock issued or issuable to employees, officers or Directors of, or consultants or advisors to, the Corporation or any subsidiary pursuant to stock grants, restricted stock purchase agreements, option plans, purchase plans, incentive programs or similar arrangements;

(2) shares of Common Stock upon the exercise or conversion of Options or Convertible Securities;

(3) shares of Common Stock issued or issuable as a dividend or Distribution on Preferred Stock or pursuant to any event for which adjustment is made pursuant to Sections 4(e), 4(f) or 4(g) hereof;

(4) shares of Common Stock issued or issuable in a registered public offering under the Securities Act;

(5) shares of Common Stock issued or issuable pursuant to the acquisition of another corporation by the Corporation by merger, purchase of substantially all of the assets or other reorganization, or license of technology by the Corporation;

(6) shares of Common Stock issued or issuable to banks, equipment lessors or other financial institutions or venture lenders pursuant to a debt financing or commercial leasing transaction; and

(7) shares of Common Stock issued or issuable in connection with sponsored research, collaboration, technology license, development, OEM, marketing or other similar agreements or strategic partnerships.

(ii) ***No Adjustment of Conversion Price***. No adjustment in the Conversion Price of any series of Preferred Stock shall be made in respect of the issuance of Additional Shares of Common unless the consideration per share (as determined pursuant to Section 4(d)(v)) for an Additional Share of Common issued or deemed to be issued by the Corporation is less than the Conversion Price in effect on the date of, and immediately prior to such issue, for such Preferred Stock.

(iii) ***Deemed Issue of Additional Shares of Common***. In the event the Corporation at any time or from time to time after the Filing Date shall issue any Options or Convertible Securities or shall fix a record date for the determination of holders of any class of securities entitled to receive any such Options or Convertible Securities, then the maximum number of shares (as set forth in the instrument relating thereto without regard to any provisions contained therein for a subsequent adjustment of such number) of Common Stock issuable upon the exercise of such Options or, in the case of Convertible Securities, the conversion or exchange of such Convertible Securities or, in the case of Options for Convertible Securities, the exercise of such Options and the conversion or exchange of the underlying securities, shall be deemed to have been issued as of the time of such issue or, in case such a record date shall have been fixed, as of the close of business on such record date, *provided* that in any such case in which shares are deemed to be issued:

(1) no further adjustment in the Conversion Price of any Preferred Stock shall be made upon the subsequent issue of Convertible Securities or shares of Common Stock in connection with the exercise of such Options or conversion or exchange of such Convertible Securities;

(2) if such Options or Convertible Securities by their terms provide, with the passage of time or otherwise, for any change in the consideration payable to the Corporation or in the number of shares of Common Stock issuable upon the exercise, conversion or exchange thereof (other than a change pursuant to the anti-dilution provisions of such Options or Convertible Securities such as this Section 4(d) or pursuant to Recapitalization provisions of such Options or Convertible Securities such as Sections 4(e), 4(f) and 4(g) hereof), the Conversion Price of the Preferred Stock and any subsequent adjustments based thereon shall be recomputed to reflect such change as if such change had been in effect as of the original issue thereof (or upon the occurrence of the record date with respect thereto);

(3) no readjustment pursuant to clause (2) above shall have the effect of increasing the Conversion Price of the Preferred Stock to an amount above the Conversion Price that would have resulted from any other issuances of Additional Shares of Common and any other adjustments provided for herein between the original adjustment date and such readjustment date;

(4) upon the expiration of any such Options or any rights of conversion or exchange under such Convertible Securities which shall not have been exercised, the Conversion Price of each Series of Preferred Stock computed upon the original issue thereof (or upon the occurrence of a record date with respect thereto) and any subsequent adjustments based thereon shall, upon such expiration, be recomputed as if:

(a) in the case of Convertible Securities or Options for Common Stock, the only Additional Shares of Common issued were the shares of Common Stock, if any, actually issued upon the exercise of such Options or the conversion or exchange of such Convertible Securities and the consideration received therefor was the consideration actually received by the Corporation for the issue of such exercised Options plus the consideration actually received by the Corporation upon such exercise or for the issue of all such Convertible Securities which were actually converted or exchanged, plus the additional consideration, if any, actually received by the Corporation upon such conversion or exchange, and

(b) in the case of Options for Convertible Securities, only the Convertible Securities, if any, actually issued upon the exercise thereof were issued at the time of issue of such Options, and the consideration received by the Corporation for the Additional Shares of Common deemed to have been then issued was the consideration actually received by the Corporation for the issue of such exercised Options, plus the consideration deemed to have been received by the Corporation (determined pursuant to Section 4(d)(v) hereof) upon the issue of the Convertible Securities with respect to which such Options were actually exercised; and

(5) if such record date shall have been fixed and such Options or Convertible Securities are not issued on the date fixed therefor, the adjustment previously made in the Conversion Price which became effective on such record date shall be canceled as of the close of business on such record date, and thereafter the Conversion Price shall be adjusted pursuant to this Section 4(d)(iii) as of the actual date of their issuance.

(iv) ***Adjustment of Conversion Price Upon Issuance of Additional Shares of Common***. In the event this Corporation shall issue Additional Shares of Common (including Additional Shares of Common deemed to be issued pursuant to Section 4(d)(iii) hereof) without consideration or for a consideration per share less than the applicable Conversion Price of the Preferred Stock in effect on the date of and immediately prior to such issue, then, the Conversion Price of the affected Preferred Stock shall be reduced, concurrently with such issue, to a price (calculated to the nearest cent) determined by multiplying such Conversion Price by a fraction, the numerator of which shall be the number of shares of Common Stock outstanding immediately prior to such issue plus the number of shares which the aggregate consideration received by the Corporation for the total number of Additional Shares of Common so issued would purchase at such Conversion Price, and the denominator of which shall be the number of shares of Common Stock outstanding immediately prior to such issue

plus the number of such Additional Shares of Common so issued. Notwithstanding the foregoing, the Conversion Price shall not be reduced at such time if the amount of such reduction would be less than $0.01, but any such amount shall be carried forward, and a reduction will be made with respect to such amount at the time of, and together with, any subsequent reduction which, together with such amount and any other amounts so carried forward, equal $0.01 or more in the aggregate. For the purposes of this Subsection 4(d)(iv), all shares of Common Stock issuable upon conversion of all outstanding shares of Preferred Stock and the exercise and/or conversion of any other outstanding Convertible Securities and all outstanding Options and Options reserved for grant shall be deemed to be outstanding.

(v) ***Determination of Consideration***. For purposes of this Section 4(d), the consideration received by the Corporation for the issue (or deemed issue) of any Additional Shares of Common shall be computed as follows:

(1) ***Cash and Property***. Such consideration shall:

(A) insofar as it consists of cash, be computed at the aggregate amount of cash received by the Corporation before deducting any reasonable discounts, commissions or other expenses allowed, paid or incurred by the Corporation for any underwriting or otherwise in connection with such issuance;

(B) insofar as it consists of property other than cash, be computed at the fair market value thereof at the time of such issue, as determined in good faith by the Board of Directors; and

(C) in the event Additional Shares of Common are issued together with other shares or securities or other assets of the Corporation for consideration which covers both, be the proportion of such consideration so received, computed as provided in Sections 4(d)(vii)(1)(A) and (B) hereof, as reasonably determined in good faith by the Board of Directors.

(2) ***Options and Convertible Securities***. The consideration per share received by the Corporation for Additional Shares of Common deemed to have been issued pursuant Section 4(d)(iii) hereof shall be determined by dividing:

(x) the total amount, if any, received or receivable by the Corporation as consideration for the issue of such Options or Convertible Securities, plus the minimum aggregate amount of additional consideration (as set forth in the instruments relating thereto, without regard to any provision contained therein for a subsequent adjustment of such consideration) payable to the Corporation upon the exercise of such Options or the conversion or exchange of such Convertible Securities, or in the case of Options for Convertible Securities, the exercise of such Options for Convertible Securities and the conversion or exchange of such Convertible Securities by

(y) the maximum number of shares of Common Stock (as set forth in the instruments relating thereto, without regard to any provision contained therein for a subsequent adjustment of such number) issuable upon the exercise of such Options or the conversion or exchange of such Convertible Securities.

(e) ***Adjustments for Subdivisions or Combinations of Common Stock***. In the event the outstanding shares of Common Stock shall be subdivided (by stock split, by payment of a stock dividend or otherwise), into a greater number of shares of Common Stock, the Conversion Price of the Preferred Stock in effect immediately prior to such subdivision shall, concurrently with the effectiveness of such subdivision, be proportionately decreased. In the event the outstanding shares of Common Stock shall be combined (by reclassification or otherwise) into a lesser number of shares of Common Stock, the Conversion Prices in effect immediately prior to such combination shall, concurrently with the effectiveness of such combination, be proportionately increased.

(f) ***Adjustments for Subdivisions or Combinations of Preferred Stock***. In the event the outstanding shares of Preferred Stock shall be subdivided (by stock split, by payment of a stock dividend or otherwise), into a greater number of shares of Preferred Stock, the Original Issue Price and Liquidation Preference of the affected Preferred Stock (in each case in effect immediately prior to such subdivision) shall, concurrently with the effectiveness of such subdivision, be proportionately decreased. In the event the outstanding shares of Preferred Stock shall be combined (by reclassification or otherwise) into a lesser number of shares of Preferred Stock, the Original Issue Price and Liquidation Preference of the affected Preferred Stock (in each case in effect immediately prior to such combination) shall, concurrently with the effectiveness of such combination, be proportionately increased.

(g) ***Adjustments for Reclassification, Exchange and Substitution***. Subject to Section 3 hereof ("**Liquidation Rights**"), if the Common Stock issuable upon conversion of the Preferred Stock shall be changed into the same or a different number of shares of any other class or classes of stock, whether by capital reorganization, reclassification or otherwise (other than a subdivision or combination of shares provided for above), then, in any such event, in lieu of the number of shares of Common Stock which the holders would otherwise have been entitled to receive each holder of such Preferred Stock shall have the right thereafter to convert such shares of Preferred Stock into a number of shares of such other class or classes of stock which a holder of the number of shares of Common Stock deliverable upon conversion of such Preferred Stock immediately before that change would have been entitled to receive in such reorganization or reclassification, all subject to further adjustment as provided herein with respect to such other shares.

(h) ***Certificate as to Adjustments***. Upon the occurrence of each adjustment or readjustment of the Conversion Price pursuant to this Section 4 the Corporation at its expense shall promptly compute such adjustment or readjustment in accordance with the terms hereof and furnish to each holder of Preferred Stock a certificate setting forth such adjustment or readjustment and showing in detail the facts upon which such adjustment or readjustment is based. The Corporation shall, upon the written request at any time of any holder of Preferred Stock, furnish or cause to be furnished to such holder a like certificate setting forth (i) such adjustments and readjustments, (ii) the Conversion Price at the time in effect and (iii) the number of shares of Common Stock and the amount, if any, of other property which at the time would be received upon the conversion of Preferred Stock.

(i) ***Waiver of Adjustment of Conversion Price***. Notwithstanding anything herein to the contrary, any downward adjustment of the Conversion Price of (i) the Series A Preferred Stock may be waived by the written consent or vote of the holders of a majority of the outstanding shares of Series A Preferred Stock and (ii) the Series B Preferred Stock may be waived by the written consent or vote of the holders of at least 60% of the outstanding shares of Series B Preferred Stock, in each case voting as a separate class on an as-converted to Common Stock basis, either before or after the issuance causing the adjustment. Any such waiver shall bind all future holders of shares of such Preferred Stock.

(j) ***Notices of Record Date***. In the event that this Corporation shall propose at any time:

(i) to declare any Distribution upon its Common Stock, whether in cash, property, stock or other securities, whether or not a regular cash dividend and whether or not out of earnings or earned surplus;

(ii) to effect any reclassification or recapitalization of its Common Stock outstanding involving a change in the Common Stock; or

(iii) to voluntarily liquidate or dissolve or to enter into any transaction deemed to be a liquidation, dissolution or winding up of the Corporation pursuant to Section 3(e) hereof;

then, in connection with each such event, this Corporation shall send to the holders of the Preferred Stock prior written notice of the date on which a record shall be taken for such Distribution (and specifying the date on which the holders of Common Stock shall be entitled thereto and, if applicable, the amount and character of such Distribution) or for determining rights to vote in respect of the matters referred to in subparagraphs (ii) and (iii) of this Section 4(j).

Such written notice shall be given by express courier, delivery charges prepaid, addressed to the holders of Preferred Stock at the address for each such holder as shown on the books of the Corporation and shall be deemed given on the date such notice is mailed.

The notice provisions set forth in this Section 4(j) may be shortened or waived prospectively or retrospectively by the consent or vote of the holders of at least a majority of the Preferred Stock, voting as a single class and on an as-converted to Common Stock basis.

(k) ***Reservation of Stock Issuable Upon Conversion***. The Corporation shall at all times reserve and keep available out of its authorized but unissued shares of Common Stock solely for the purpose of effecting the conversion of the shares of the Preferred Stock, such number of its shares of Common Stock as shall from time to time be sufficient to effect the conversion of all then outstanding shares of the Preferred Stock; and if at any time the number of authorized but unissued shares of Common Stock shall not be sufficient to effect the conversion of all then outstanding shares of the Preferred Stock, the Corporation will take such corporate action as may, in the opinion of its counsel, be necessary to increase its authorized but unissued shares of Common Stock to such number of shares as shall be sufficient for such purpose.

5. **Voting**.

(a) ***Restricted Class Voting***. Except as otherwise expressly provided herein or as required by law, the holders of Preferred Stock and the holders of Common Stock shall vote together and not as separate classes.

(b) ***No Series Voting***. Other than as provided herein or required by law, there shall be no series voting.

(c) ***Preferred Stock***. Each holder of Preferred Stock shall be entitled to the number of votes equal to the number of shares of Common Stock into which the shares of Preferred Stock held by such holder could be converted as of the record date. Fractional votes shall not be permitted and any fractional voting rights resulting from the above formula (after aggregating all shares into which shares of Preferred Stock held by each holder could be converted) shall be disregarded. Except as otherwise expressly provided herein or as required by law, the holders of shares of the Preferred Stock shall be entitled to vote on all matters on which the Common Stock shall be entitled to vote. Holders of Preferred Stock shall be entitled to notice of any stockholders' meeting in accordance with the Bylaws of the Corporation.

(d) ***Election of Directors***.

(i) So long as at least 1,000,000 shares (as adjusted for Recapitalizations) of Series B Preferred Stock remain outstanding, the holders of Series B Preferred Stock, voting as a separate class, shall be entitled to elect one (1) member of the Corporation's Board of Directors (the "**Series B Director**"), at each meeting or pursuant to each consent of the Corporation's stockholders for the election of Directors, and to remove from office such Series B Director, and to fill any vacancy caused by the resignation, death or removal of such Series B Director.

(ii) So long as at least 1,000,000 shares (as adjusted for Recapitalizations) of Series A Preferred Stock remain outstanding, the holders of Series A Preferred Stock, voting as a separate class, shall be entitled to elect two (2) members of the Corporation's Board of Directors (the "**Series A Directors**"), at each meeting or pursuant to each consent of the Corporation's stockholders for the election of Directors, and to remove from office such Series A Directors, and to fill any vacancy caused by the resignation, death or removal of such Series A Directors.

(iii) The holders of Common Stock, voting as a separate class, shall be entitled to elect two (2) members of the Corporation's Board of Directors (the "**Common Directors**") at each meeting or pursuant to each consent of the Corporation's stockholders for the election of Directors, and to remove from office such Common Directors, and to fill any vacancy caused by the resignation, death or removal of any such Common Director.

(iv) Any remaining members of the Corporation's Board of Directors (the "**Remaining Directors**") shall be elected by a majority of the Common Stock and Preferred Stock, voting together as a single class and on an as-converted basis at each meeting or pursuant to each consent of the Corporation's stockholders for the election of Directors, and to remove from office such Remaining Directors, and to fill any vacancy caused by the resignation, death or removal of any such Remaining Director.

(v) If a vacancy on the Board of Directors is to be filled by the Board of Directors, only Directors elected by the same class or classes of stockholders as those who would be entitled to vote to fill such vacancy shall vote to fill such vacancy. If a vacancy on the Board of Directors is to be filled by the stockholders, such vacancy shall be filled by, and only by, the affirmative vote of the holders of the shares of the class or series of stock entitled to elect such Director, given either at a special meeting of such stockholders duly called for that purpose or pursuant to a written consent of such stockholders.

(vi) Any Director elected as provided in this subsection (d) hereof may be removed, either with or without cause, by, and only by, the affirmative vote of the holders of the shares of the class or series of stock entitled to elect such Director or Directors, given either at a special meeting of such stockholders duly called for that purpose or pursuant to a written consent of stockholders.

(e) ***Adjustment in Authorized Common Stock***. Subject to the protective provisions of Article V, Section 6 hereof and irrespective of any contrary provisions contained in Section 242(b)(2) of the General Corporation Law of the State of Delaware, the number of authorized shares of Common Stock may be increased or decreased (but not below the number of shares of Common Stock then outstanding) by an affirmative vote of the holders of at least a majority of the stock of the Corporation without regard to class or series.

(f) ***Common Stock***. Each holder of shares of Common Stock shall be entitled to one vote for each share thereof held.

(g) ***California Section 2115***. To the extent that Section 2115 of the California General Corporation Law makes Section 708 subdivisions (a), (b) and (c) of the California General Corporation Law applicable to the Corporation, the Corporation's stockholders shall have the right to cumulate their votes in connection with the election of Directors as provided by Section 708 subdivisions (a), (b) and (c) of the California General Corporation Law.

6. **Amendments and Changes**. So long as at least 1,000,000 shares of Preferred Stock remain outstanding, the Corporation shall not (by amendment, merger, reclassification or otherwise), without first obtaining the approval (by vote or written consent as provided by law) of the holders of more than fifty percent (50%) of the outstanding shares of the Preferred Stock, voting as a single class on an as-converted to Common Stock basis:

(a) authorize or create (by reclassification, merger or otherwise) any new class or series of equity security (including any security convertible into or exercisable for any equity security) having rights, preferences or privileges with respect to dividends, redemption or payments upon liquidation senior to or on a parity with the Preferred Stock, or any series thereof, or having voting rights other than those granted to the Preferred Stock generally;

(b) increase or decrease (other than by conversion pursuant to this Second Amended and Restated Certificate of Incorporation) the total number of authorized shares of Common Stock or Preferred Stock or the number of shares reserved for issuance under the Corporation's 2012 Equity Incentive Plan and/or any other equity incentive plan of the Corporation without the Required Director Approval;

(c) consummate a Liquidation Event;

(d) redeem, purchase or otherwise acquire (or pay into or set aside for a sinking fund for such purpose) any share or shares of Common Stock; *provided*, *however*, that this restriction shall not apply to the repurchase of shares of Common Stock from employees, officers, or Directors of, or consultants to, the Corporation or other persons performing services for this Corporation or any subsidiary pursuant to the Corporation's Bylaws or agreements the form of which has been approved by the Required Director Approval under which this Corporation has the option to repurchase such shares upon the occurrence of certain events, such as the termination of employment or service, or pursuant to a right of first refusal;

(e) change the authorized number of Directors of this Corporation or the authorized number of Preferred Directors;

(f) pay or declare any dividend on any shares of stock of this Corporation;

(g) amend, alter, repeal or waive any provision of this Corporation's Second Amended and Restated Certificate of Incorporation or Bylaws or otherwise alter or change the rights, preferences or privileges of any series of Preferred Stock in a manner that adversely affects the rights, preferences or privileges of such Preferred Stock; or

(h) any other vote of the Preferred Stock by class or series required by law.

7. **Series B Protective Provisions**. In addition to any approval required by the protective provisions of Article V, Section 6 hereof, so long as at least 1,000,000 shares of Series B Preferred Stock remain outstanding, the Corporation shall not (by amendment, merger, reclassification or otherwise), without first obtaining the approval (by vote or written consent as provided by law) of the holders of at least sixty percent (60%) of the outstanding shares of the Series B Preferred Stock, voting as a single class on an as-converted to Common Stock basis:

(a) increase or decrease (other than by conversion pursuant to this Second Amended and Restated Certificate of Incorporation) the total number of authorized shares of Series B Preferred Stock; or

(b) amend, alter, repeal or waive (i) this Article V, Section 7 or (ii) any other term of this Corporation's Second Amended and Restated Certificate of Incorporation that adversely affects the rights, powers, preferences and other terms of Series B Preferred Stock, but does not so affect the rights, powers, preferences and other terms of the Series A Preferred Stock.

8. **Notices**. Any notice required by the provisions of this ARTICLE V to be given to the holders of Preferred Stock or Common Stock shall be deemed given if deposited in the United States mail, postage prepaid, and addressed to each holder of record at such holder's address appearing on the books of the Corporation.

ARTICLE VI

The Corporation is to have perpetual existence.

ARTICLE VII

Elections of Directors need not be by written ballot unless the Bylaws of the Corporation shall so provide.

ARTICLE VIII

Unless otherwise set forth herein, the number of Directors that constitute the Board of Directors of the Corporation shall be fixed by, or in the manner provided in, the Bylaws of the Corporation.

ARTICLE IX

In furtherance and not in limitation of the powers conferred by statute, the Board of Directors of the Corporation is expressly authorized to adopt, amend or repeal the Bylaws of the Corporation.

ARTICLE X

1. To the fullest extent permitted by the Delaware General Corporation Law as the same exists or as may hereafter be amended, a Director of the Corporation shall not be personally liable to the Corporation or its stockholders for monetary damages for a breach of fiduciary duty as a Director. If the Delaware General Corporation Law is amended to authorize corporate action further eliminating or limiting the personal liability of Directors, then the liability of a Director of the Corporation shall be eliminated or limited to the fullest extent permitted by the Delaware General Corporation Law, as so amended.

2. The Corporation shall have the power to indemnify, to the extent permitted by the Delaware General Corporation Law, as it presently exists or may hereafter be amended from time to time, any person who was or is a party or is threatened to be made a party to any threatened, pending or completed action, suit or proceeding, whether civil, criminal, administrative or investigative (a "**Proceeding**") by reason of the fact that he or she is or was a Director, officer, employee or agent of the Corporation or is or was serving at the request of the Corporation as a Director, officer, employee or agent of another corporation, partnership, joint venture, trust or other enterprise, including service with respect to employee benefit plans, against expenses (including attorneys' fees), judgments, fines and amounts paid in settlement actually and reasonably incurred by such person in connection with any such Proceeding.

3. Neither any amendment nor repeal of this ARTICLE X hereof, nor the adoption of any provision of this Corporation's Second Certificate of Incorporation inconsistent with this ARTICLE X hereof, shall eliminate or reduce the effect of this ARTICLE X hereof, in respect of any matter occurring, or any action or proceeding accruing or arising or that, but for this ARTICLE X hereof, would accrue or arise, prior to such amendment, repeal or adoption of an inconsistent provision.

ARTICLE XI

Meetings of stockholders may be held within or without the State of Delaware, as the Bylaws may provide. The books of the Corporation may be kept (subject to any provision contained in the statutes) outside of the State of Delaware at such place or places as may be designated from time to time by the Board of Directors or in the Bylaws of the Corporation.

ARTICLE XII

In the event that a Director of the Corporation who is also a partner or employee of an entity that is a holder of Preferred Stock and that is in the business of investing and reinvesting in other entities, or an employee of an entity that manages such an entity (each, a "***Fund***"), acquires knowledge of a potential transaction or matter in such person's capacity as a partner or employee of the Fund or the manager or general partner of the Fund and that may be a corporate opportunity for both the Corporation and such Fund (a "***Corporate Opportunity***"), then (i) such Corporate Opportunity shall belong to such Fund, (ii) such Director shall, to the fullest extent permitted by law, have fully satisfied and fulfilled his fiduciary duty to the Corporation and its stockholders with respect to such Corporate Opportunity, and (iii) the Corporation, to the fullest extent permitted by law, waives any claim that such Corporate Opportunity constituted a corporate opportunity that should have been presented to the Corporation or any of its affiliates; *provided, however*, that such Director acts in good faith and such opportunity was not offered to, acquired, created or developed by, or otherwise came into possession of such person in his or her capacity as a Director of the Corporation; and *provided, further*, that nothing herein or otherwise shall limit the Corporation's right to pursue or consummate any transaction related to any Corporate Opportunity even if originated by any Director or any Fund.

CERTIFICATE OF AMENDMENT TO
THE SECOND AMENDED AND RESTATED
CERTIFICATE OF INCORPORATION
OF
ALLAKOS INC.

Allakos Inc., a corporation organized and existing under the laws of the State of Delaware (the "**Corporation**"), hereby certifies as follows:

1. The name of the Corporation is Allakos Inc. The Corporation's original Certificate of Incorporation was filed with the Secretary of State of the State of Delaware (the "**SOS**") on March 9, 2012 (the "**Original Certificate**"). The Original Certificate was amended and restated in its entirety pursuant to the Amended and Restated Certificate of Incorporation filed with the SOS on December 6, 2012 (the "**Restated Certificate**"). The Restated Certificate was amended three times pursuant to Certificates of Amendment of the Amended and Restated Certificate filed with the SOS on August 14, 2014, March 12, 2015, and August 7, 2017. The Restated Certificate was amended and restated in its entirety pursuant to the Second Amended and Restated Certificate of Incorporation filed with the SOS on November 30, 2017 (the "**Second Restated Certificate**").

2. This Certificate of Amendment to the Amended and Restated Certificate of Incorporation (the "**Certificate of Amendment**") has been duly adopted in accordance with Section 242 of the Delaware General Corporation Law (the "**DGCL**") and amends the provisions of the Second Restated Certificate.

3. The terms and provisions of this Certificate of Amendment have been duly approved by written consent of the required number of shares of outstanding stock of the Corporation pursuant to Subsection 228(a) of the DGCL and written notice pursuant to Subsection 228(e) of the General Corporation Law of the State of Delaware has been or will be given to those stockholders whose written consent has not been obtained.

4. ARTICLE IV of the Restated Certificate is hereby amended and restated in its entirety to read as follows:

"Immediately upon the filing of this Certificate of Amendment, each one and one-quarter (1.25) outstanding shares of Common Stock, each one and one-quarter (1.25) outstanding shares of Series A Preferred Stock and each one and one-quarter (1.25) outstanding shares of Series B Preferred Stock will be exchanged and combined, automatically and without further action, into one (1) share of Common Stock, one (1) share of Series A Preferred Stock and one (1) share of Series B Preferred Stock, respectively (the "**Reverse Stock Split**"). The Reverse Stock Split shall also apply to any outstanding securities or rights convertible into, or exchangeable or exercisable for, Common Stock or Preferred Stock of the Corporation. The Reverse Stock Split shall be effected on a certificate-by-certificate basis and each certificate share number will then be rounded down to the nearest whole number. No fractional shares shall be issued upon the exchange and combination. In lieu of any fractional shares to which the holder would otherwise be entitled, the Corporation shall pay an amount of cash equal to the product of (i) the fractional share to which the holder would otherwise be entitled and (ii) the then fair value of a share as determined in good faith by the Board of Directors of the Corporation.

The total number of shares of all classes of stock which the Corporation shall have authority to issue is (i) 55,000,000 shares of Common Stock, $0.001 par value per share ("**Common Stock**"), and (ii) 38,714,587 shares of Preferred Stock, $0.001 par value per share ("**Preferred Stock**"). The first series of Preferred Stock shall be designated "**Series A Preferred Stock**" and shall consist of 26,083,081 shares. The second series of Preferred Stock shall be designated "**Series B Preferred Stock**" and shall consist of 12,631,506 shares."

* * *

IN WITNESS WHEREOF, ALLAKOS INC. has caused this Certificate of Amendment to be signed by its President and Chief Executive Officer this 6th day of July, 2018.

ALLAKOS INC.

By: /s/ Robert Alexander
Robert Alexander, Ph.D.
President and Chief Executive Officer

Exhibit 3.2

AMENDED AND RESTATED

CERTIFICATE OF INCORPORATION OF

ALLAKOS INC.

Allakos Inc., a corporation organized and existing under the laws of the State of Delaware (the "Corporation"), does hereby certify as follows:

A. The name of the Corporation is Allakos Inc. The original Certificate of Incorporation of the Corporation was filed with the Secretary of State of the State of Delaware on March 9, 2012.

B. This Amended and Restated Certificate of Incorporation (this "Amended and Restated Certificate of Incorporation") was duly adopted by the Board of Directors of the Corporation (the "Board of Directors") in accordance with Sections 242 and 245 of the General Corporation Law of the State of Delaware "DGCL"), and has been duly approved by the written consent of the stockholders of the Corporation in accordance with Section 228 of the DGCL.

C. The text of the Amended and Restated Certificate of Incorporation is hereby amended and restated in its entirety to read as follows:

ARTICLE I

The name of the Corporation is Allakos Inc.

ARTICLE II

The address of the Corporation's registered office in the State of Delaware is 1209 Orange Street, City of Wilmington, County of New Castle, Delaware 19801. The name of its registered agent at such address is The Corporation Trust Company.

ARTICLE III

The nature of the business or purposes to be conducted or promoted by the Corporation is to engage in any lawful act or activity for which corporations may be organized under the General Corporation Law of the State of Delaware ("DGCL").

ARTICLE IV

Section 1. This Corporation is authorized to issue two classes of stock, to be designated, respectively, Common Stock and Preferred Stock. The total number of shares of stock that the Corporation shall have authority to issue is two hundred and twenty million (220,000,000) shares, of which two hundred million (200,000,000) shares are Common Stock, $0.001 par value, and twenty million (20,000,000) shares are Preferred Stock, $0.001 par value.

Section 2. Each share of Common Stock shall entitle the holder thereof to one (1) vote on any matter submitted to a vote at a meeting of stockholders.

Section 3. The Preferred Stock may be issued from time to time in one or more series pursuant to a resolution or resolutions providing for such issue duly adopted by the Board of Directors (authority to do so being hereby expressly vested in the Board of Directors). The Board of Directors is further authorized, subject to limitations prescribed by law, to fix by resolution or resolutions the designations, powers, preferences and rights, and the qualifications, limitations or restrictions thereof, of any wholly unissued series of Preferred Stock, including, without limitation, authority to fix by resolution or resolutions the dividend rights, dividend rate, conversion rights, voting rights, rights and terms of redemption (including sinking fund provisions), redemption price or prices, and liquidation preferences of any such series, and the number of shares constituting any such series and the designation thereof, or any of the foregoing. The Board of Directors is further authorized to increase (but not above the total number of authorized shares of the class) or decrease (but not below the number of shares of any such series then outstanding) the number of shares of any series, the number of which was fixed by it, subsequent to the issuance of shares of such series then outstanding, subject to the powers, preferences and rights, and the qualifications, limitations and restrictions thereof stated in this Amended and Restated Certificate of Incorporation or the resolution of the Board of Directors originally fixing the number of shares of such series. If the number of shares of any series is so decreased, then the Corporation shall take all such steps as are necessary to cause the shares constituting such decrease to resume the status which they had prior to the adoption of the resolution originally fixing the number of shares of such series.

Section 4. Except as otherwise required by law, holders of Common Stock shall not be entitled to vote on any amendment to this Amended and Restated Certificate of Incorporation (including any certificate of designation filed with respect to any series of Preferred Stock) that relates solely to the terms of one or more outstanding series of Preferred Stock if the holders of such affected series are entitled, either separately or together as a class with the holders of one or more other such series, to vote thereon by law or pursuant to this Amended and Restated Certificate of Incorporation (including any certificate of designation filed with respect to any series of Preferred Stock).

ARTICLE V

Section 1. The number of directors that constitutes the entire Board of Directors of the Corporation shall be determined in the manner set forth in the Bylaws of the Corporation. At each annual meeting of stockholders, directors of the Corporation shall be elected to hold office until the expiration of the term for which they are elected and until their successors have been duly elected and qualified or until their earlier resignation or removal; except that if any such meeting shall not be so held, such election shall take place at a stockholders' meeting called and held in accordance with the DGCL.

Section 2. From and after the effectiveness of this Amended and Restated Certificate of Incorporation, the directors of the Corporation (other than any who may be elected by holders of Preferred Stock under specified circumstances) shall be divided into three classes as nearly equal in size as is practicable, hereby designated Class I, Class II and Class III. Directors already in office shall be assigned to each class at the time such classification becomes effective in accordance with a

resolution or resolutions adopted by the Board of Directors. At the first annual meeting of stockholders following the date hereof, the term of office of the Class I directors shall expire and Class I directors shall be elected for a full term of three years. At the second annual meeting of stockholders following the date hereof, the term of office of the Class II directors shall expire and Class II directors shall be elected for a full term of three years. At the third annual meeting of stockholders following the date hereof, the term of office of the Class III directors shall expire and Class III directors shall be elected for a full term of three years. At each succeeding annual meeting of stockholders, directors shall be elected for a full term of three years to succeed the directors of the class whose terms expire at such annual meeting. If the number of directors is changed, any newly created directorships or decrease in directorships shall be so apportioned hereafter among the classes as to make all classes as nearly equal in number as is practicable, *provided that* no decrease in the number of directors constituting the Board of Directors shall shorten the term of any incumbent director.

ARTICLE VI

Section 1. Any director or the entire Board of Directors may be removed from office at any time, but only for cause, and only by the affirmative vote of the holders of at least a majority of the voting power of the issued and outstanding capital stock of the Corporation entitled to vote in the election of directors.

Section 2. Except as otherwise provided for or fixed by or pursuant to the provisions of Article IV hereof in relation to the rights of the holders of Preferred Stock to elect directors under specified circumstances, newly created directorships resulting from any increase in the number of directors, created in accordance with the Bylaws of the Corporation, and any vacancies on the Board of Directors resulting from death, resignation, disqualification, removal or other cause shall be filled only by the affirmative vote of a majority of the remaining directors then in office, even though less than a quorum of the Board of Directors, or by a sole remaining director, and not by the stockholders. A person so elected by the Board of Directors to fill a vacancy or newly created directorship shall hold office until the next election of the class for which such director shall have been chosen until his or her successor shall have been duly elected and qualified, or until such director’s earlier death, resignation or removal. No decrease in the number of directors constituting the Board of Directors shall shorten the term of any incumbent director.

ARTICLE VII

Section 1. The Corporation is to have perpetual existence.

Section 2. The business and affairs of the Corporation shall be managed by or under the direction of the Board of Directors. In addition to the powers and authority expressly conferred upon them by statute or by this Amended and Restated Certificate of Incorporation or the Bylaws of the Corporation, the directors are hereby empowered to exercise all such powers and do all such acts and things as may be exercised or done by the Corporation.

Section 3. In furtherance and not in limitation of the powers conferred by statute, the Board of Directors is expressly authorized to adopt, alter, amend or repeal the Bylaws of the Corporation. The affirmative vote of at least a majority of the Board of Directors then in office shall

be required in order for the Board of Directors to adopt, amend, alter or repeal the Corporation's Bylaws. The Corporation's Bylaws may also be adopted, amended, altered or repealed by the stockholders of the Corporation. Notwithstanding the above or any other provision of this Amended and Restated Certificate of Incorporation, the Bylaws of the Corporation may not be amended, altered or repealed except in accordance with Article X of the Bylaws. No Bylaw hereafter legally adopted, amended, altered or repealed shall invalidate any prior act of the directors or officers of the Corporation that would have been valid if such Bylaw had not been adopted, amended, altered or repealed.

Section 4. The election of directors need not be by written ballot unless the Bylaws of the Corporation shall so provide.

Section 5. No stockholder will be permitted to cumulate votes at any election of directors.

ARTICLE VIII

Section 1. Any action required or permitted to be taken by the stockholders of the Corporation must be effected at a duly called annual or special meeting of stockholders of the Corporation and may not be effected by any consent in writing by such stockholders.

Section 2. Special meetings of stockholders of the Corporation may be called only by the Chairperson of the Board of Directors, the Chief Executive Officer, the President or the Board of Directors acting pursuant to a resolution adopted by a majority of the Board of Directors, and any power of stockholders to call a special meeting of stockholders is specifically denied. Only such business shall be considered at a special meeting of stockholders as shall have been stated in the notice for such meeting.

Section 3. Advance notice of stockholder nominations for the election of directors and of business to be brought by stockholders before any meeting of the stockholders of the Corporation shall be given in the manner and to the extent provided in the Bylaws of the Corporation.

ARTICLE IX

Section 1. To the fullest extent permitted by the DGCL as the same exists or as may hereafter be amended from time to time, a director of the Corporation shall not be personally liable to the Corporation or its stockholders for monetary damages for breach of fiduciary duty as a director. If the DGCL is amended to authorize corporate action further eliminating or limiting the personal liability of directors, then the liability of a director of the Corporation shall be eliminated or limited to the fullest extent permitted by the DGCL, as so amended.

Section 2. The Corporation shall indemnify, to the fullest extent permitted by applicable law, any director or officer of the Corporation who was or is a party or is threatened to be made a party to any threatened, pending or completed action, suit or proceeding, whether civil, criminal, administrative or investigative (a "Proceeding") by reason of the fact that he or she is or was a director, officer, employee or agent of the Corporation or is or was serving at the request of the Corporation as a director, officer, employee or agent of another corporation, partnership, joint venture, trust or other enterprise, including service with respect to employee benefit plans, against expenses (including

attorneys' fees), judgments, fines and amounts paid in settlement actually and reasonably incurred by such person in connection with any such Proceeding. The Corporation shall be required to indemnify a person in connection with a Proceeding initiated by such person only if the Proceeding was authorized by the Board of Directors.

Section 3. The Corporation shall have the power to indemnify, to the extent permitted by applicable law, any employee or agent of the Corporation who was or is a party or is threatened to be made a party to any Proceeding by reason of the fact that he or she is or was a director, officer, employee or agent of the Corporation or is or was serving at the request of the Corporation as a director, officer, employee or agent of another corporation, partnership, joint venture, trust or other enterprise, including service with respect to employee benefit plans, against expenses (including attorneys' fees), judgments, fines and amounts paid in settlement actually and reasonably incurred by such person in connection with any such Proceeding.

Section 4. Neither any amendment nor repeal of any Section of this Article IX, nor the adoption of any provision of this Amended and Restated Certificate of Incorporation or the Bylaws of the Corporation inconsistent with this Article IX, shall eliminate or reduce the effect of this Article IX in respect of any matter occurring, or any cause of action, suit, claim or proceeding accruing or arising or that, but for this Article IX, would accrue or arise, prior to such amendment, repeal or adoption of an inconsistent provision.

ARTICLE X

Meetings of stockholders may be held within or outside of the State of Delaware, as the Bylaws may provide. The books of the Corporation may be kept (subject to any provision contained in the statutes) outside of the State of Delaware at such place or places as may be designated from time to time by the Board of Directors or in the Bylaws of the Corporation.

ARTICLE XI

Unless the Corporation consents in writing to the selection of an alternative forum, the Court of Chancery of the State of Delaware shall be the sole and exclusive forum for (A) any derivative action or proceeding brought on behalf of the Corporation, (B) any action or proceeding asserting a claim of breach of a fiduciary duty owed by any director, officer or other employee of the Corporation to the Corporation or the Corporation's stockholders, (C) any action or proceeding asserting a claim arising pursuant to any provision of the DGCL or the Corporation's Certificate of Incorporation or Bylaws, or (D) any action or proceeding asserting a claim governed by the internal affairs doctrine.

Unless the Corporation consents in writing to the selection of an alternative forum, the federal district courts of the United States of America shall be the exclusive forum for the resolution of any complaint asserting a cause of action arising under the Securities Act of 1933, as amended.

ARTICLE XII

The Corporation reserves the right to amend or repeal any provision contained in this Amended and Restated Certificate of Incorporation in the manner prescribed by the laws of the State of Delaware and all rights conferred upon stockholders are granted subject to this reservation; *provided, however*,

that notwithstanding any other provision of this Amended and Restated Certificate of Incorporation or any provision of law that might otherwise permit a lesser vote or no vote, the Board of Directors acting pursuant to a resolution adopted by a majority of the Board of Directors and the affirmative vote of sixty-six and two-thirds percent (66 2/3%) of the then outstanding voting securities of the Corporation, voting together as a single class, shall be required for the amendment, repeal or modification of the provisions of Section 3 of Article IV, Section 2 of Article V, Article VI, Section 5 of Article VII, Article VIII, Article XI or Article XII of this Amended and Restated Certificate of Incorporation.

***

IN WITNESS WHEREOF, Allakos Inc. has caused this Amended and Restated Certificate of Incorporation to be signed by Robert Alexander, a duly authorized officer of the Corporation, on this day of , 2018.

Robert Alexander, Ph.D.
President and Chief Executive Officer

Exhibit 3.4

AMENDED AND RESTATED BYLAWS OF

ALLAKOS INC.

(as amended and restated on June 19, 2018, and effective immediately as of the closing of the corporation's initial public offering)

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AMENDED AND RESTATED BYLAWS OF ALLAKOS INC.

ARTICLE I — CORPORATE OFFICES

1.1 REGISTERED OFFICE

The registered office of Allakos Inc. shall be fixed in the corporation's certificate of incorporation. References in these bylaws to the certificate of incorporation shall mean the certificate of incorporation of the corporation, as amended from time to time, including the terms of any certificate of designations of any series of Preferred Stock.

1.2 OTHER OFFICES

The corporation's board of directors may at any time establish other offices at any place or places where the corporation is qualified to do business.

ARTICLE II — MEETINGS OF STOCKHOLDERS

2.1 PLACE OF MEETINGS

Meetings of stockholders shall be held at any place, within or outside the State of Delaware, designated by the board of directors. The board of directors may, in its sole discretion, determine that a meeting of stockholders shall not be held at any place, but may instead be held solely by means of remote communication as authorized by Section 211(a)(2) of the General Corporation Law of the State of Delaware (the "DGCL"). In the absence of any such designation or determination, stockholders' meetings shall be held at the corporation's principal executive office.

2.2 ANNUAL MEETING

The annual meeting of stockholders shall be held on such date, at such time, and at such place (if any) within or without the State of Delaware as shall be designated from time to time by the board of directors and stated in the corporation's notice of the meeting. At the annual meeting, directors shall be elected and any other proper business may be transacted.

2.3 SPECIAL MEETING

(i) A special meeting of the stockholders, other than those required by statute, may be called at any time only by (A) the board of directors, (B) the chairperson of the board of directors, (C) the chief executive officer or (D) the president (in the absence of a chief executive officer). A special meeting of the stockholders may not be called by any other person or persons. The board of directors may cancel, postpone or reschedule any previously scheduled special meeting at any time, before or after the notice for such meeting has been sent to the stockholders.

(ii) The notice of a special meeting shall include the purpose for which the meeting is called. Only such business shall be conducted at a special meeting of stockholders as shall have been brought before the meeting by or at the direction of the board of directors, the chairperson of the board of directors, the chief executive officer or the president (in the absence of a chief executive officer). Nothing contained in this Section 2.3(ii) shall be construed as limiting, fixing or affecting the time when a meeting of stockholders called by action of the board of directors may be held.

2.4 ADVANCE NOTICE PROCEDURES

(i) *Advance Notice of Stockholder Business.* At an annual meeting of the stockholders, only such business shall be conducted as shall have been properly brought before the meeting. To be properly brought before an annual meeting, business must be brought: (A) pursuant to the corporation's proxy materials with respect to such meeting, (B) by or at the direction of the board of directors, or (C) by a stockholder of the corporation who (1) is a stockholder of record at the time of the giving of the notice required by this Section 2.4(i) and on the record date for the determination of stockholders entitled to vote at the annual meeting and (2) has timely complied in proper written form with the notice procedures set forth in this Section 2.4(i). In addition, for business to be properly brought before an annual meeting by a stockholder, such business must be a proper matter for stockholder action pursuant to these bylaws and applicable law. Except for proposals properly made in accordance with Rule 14a-8 under the Securities Exchange Act of 1934, as amended (the "1934 Act") and the rules and regulations thereunder (as so amended and inclusive of such rules and regulations), and included in the notice of meeting given by or at the direction of the board of directors, for the avoidance of doubt, clause (C) above shall be the exclusive means for a stockholder to bring business before an annual meeting of stockholders.

(a) To comply with clause (C) of Section 2.4(i) above, a stockholder's notice must set forth all information required under this Section 2.4(i) and must be timely received by the secretary of the corporation. To be timely, a stockholder's notice must be received by the secretary at the principal executive offices of the corporation not later than the 45th day nor earlier than the 75th day before the one-year anniversary of the date on which the corporation first mailed its proxy materials or a notice of availability of proxy materials (whichever is earlier) for the preceding year's annual meeting; *provided*, *however*, that in the event that no annual meeting was held in the previous year or if the date of the annual meeting is advanced by more than 30 days prior to or delayed by more than 60 days after the one-year anniversary of the date of the previous year's annual meeting, then, for notice by the stockholder to be timely, it must be so received by the secretary not earlier than the close of business on the 120th day prior to such annual meeting and not later than the close of business on the later of (i) the 90th day prior to such annual meeting, or (ii) the tenth day following the day on which Public Announcement (as defined below) of the date of such annual meeting is first made. In no event shall any adjournment or postponement of an annual meeting or the announcement thereof commence a new time period for the giving of a stockholder's notice as described in this Section 2.4(i)(a). "Public Announcement" shall mean disclosure in a press release reported by the Dow Jones News Service, Associated Press or a comparable national news service or in a document publicly filed by the corporation with the Securities and Exchange Commission pursuant to Section 13, 14 or 15(d) of the 1934 Act.

(b) To be in proper written form, a stockholder's notice to the secretary must set forth as to each matter of business the stockholder intends to bring before the annual meeting: (1) a brief description of the business intended to be brought before the annual meeting and the reasons for conducting such

business at the annual meeting, (2) the name and address, as they appear on the corporation's books, of the stockholder proposing such business and any Stockholder Associated Person (as defined below), (3) the class and number of shares of the corporation that are held of record or are beneficially owned by the stockholder or any Stockholder Associated Person and any derivative positions held or beneficially held by the stockholder or any Stockholder Associated Person, (4) whether and the extent to which any hedging or other transaction or series of transactions has been entered into by or on behalf of such stockholder or any Stockholder Associated Person with respect to any securities of the corporation, and a description of any other agreement, arrangement or understanding (including any short position or any borrowing or lending of shares), the effect or intent of which is to mitigate loss to, or to manage the risk or benefit from share price changes for, or to increase or decrease the voting power of, such stockholder or any Stockholder Associated Person with respect to any securities of the corporation, (5) any material interest of the stockholder or a Stockholder Associated Person in such business, and (6) a statement whether either such stockholder or any Stockholder Associated Person will deliver a proxy statement and form of proxy to holders of at least the percentage of the corporation's voting shares required under applicable law to carry the proposal (such information provided and statements made as required by clauses (1) through (6), a "Business Solicitation Statement"). In addition, to be in proper written form, a stockholder's notice to the secretary must be supplemented not later than ten days following the record date for notice of the meeting to disclose the information contained in clauses (3) and (4) above as of the record date for notice of the meeting. For purposes of this Section 2.4, a "Stockholder Associated Person" of any stockholder shall mean (i) any person controlling, directly or indirectly, or acting in concert with, such stockholder, (ii) any beneficial owner of shares of stock of the corporation owned of record or beneficially by such stockholder and on whose behalf the proposal or nomination, as the case may be, is being made, or (iii) any person controlling, controlled by or under common control with such person referred to in the preceding clauses (i) and (ii).

(c) Without exception, no business shall be conducted at any annual meeting except in accordance with the provisions set forth in this Section 2.4(i) and, if applicable, Section 2.4(ii). In addition, business proposed to be brought by a stockholder may not be brought before the annual meeting if such stockholder or a Stockholder Associated Person, as applicable, takes action contrary to the representations made in the Business Solicitation Statement applicable to such business or if the Business Solicitation Statement applicable to such business contains an untrue statement of a material fact or omits to state a material fact necessary to make the statements therein not misleading. The chairperson of the annual meeting shall, if the facts warrant, determine and declare at the annual meeting that business was not properly brought before the annual meeting and in accordance with the provisions of this Section 2.4(i), and, if the chairperson should so determine, he or she shall so declare at the annual meeting that any such business not properly brought before the annual meeting shall not be conducted.

(ii) *Advance Notice of Director Nominations at Annual Meetings.* Notwithstanding anything in these bylaws to the contrary, only persons who are nominated in accordance with the procedures set forth in this Section 2.4(ii) shall be eligible for election or re-election as directors at an annual meeting of stockholders. Nominations of persons for election or re-election to the board of directors of the corporation shall be made at an annual meeting of stockholders only (A) by or at the direction of the board of directors or (B) by a stockholder of the corporation who (1) was a stockholder of record at the time of the giving of the notice required by this Section 2.4(ii) and on the record date for the determination of stockholders entitled to vote at the annual meeting and (2) has complied with the notice procedures set forth in this Section 2.4(ii). In addition to any other applicable requirements, for a nomination to be made by a stockholder, the stockholder must have given timely notice thereof in proper written form to the secretary of the corporation.

(a) To comply with clause (B) of Section 2.4(ii) above, a nomination to be made by a stockholder must set forth all information required under this Section 2.4(ii) and must be received by the secretary of the corporation at the principal executive offices of the corporation at the time set forth in, and in accordance with, the final three sentences of Section 2.4(i)(a) above.

(b) To be in proper written form, such stockholder's notice to the secretary must set forth:

(1) as to each person (a "nominee") whom the stockholder proposes to nominate for election or re-election as a director: (A) the name, age, business address and residence address of the nominee, (B) the principal occupation or employment of the nominee, (C) the class and number of shares of the corporation that are held of record or are beneficially owned by the nominee and any derivative positions held or beneficially held by the nominee, (D) whether and the extent to which any hedging or other transaction or series of transactions has been entered into by or on behalf of the nominee with respect to any securities of the corporation, and a description of any other agreement, arrangement or understanding (including any short position or any borrowing or lending of shares), the effect or intent of which is to mitigate loss to, or to manage the risk or benefit of share price changes for, or to increase or decrease the voting power of the nominee, (E) a description of all arrangements or understandings between the stockholder and each nominee and any other person or persons (naming such person or persons) pursuant to which the nominations are to be made by the stockholder, (F) a written statement executed by the nominee acknowledging that as a director of the corporation, the nominee will owe a fiduciary duty under Delaware law with respect to the corporation and its stockholders, and (G) any other information relating to the nominee that would be required to be disclosed about such nominee if proxies were being solicited for the election or re-election of the nominee as a director, or that is otherwise required, in each case pursuant to Regulation 14A under the 1934 Act (including without limitation the nominee's written consent to being named in the proxy statement, if any, as a nominee and to serving as a director if elected or re-elected, as the case may be); and

(2) as to such stockholder giving notice, (A) the information required to be provided pursuant to clauses (2) through (5) of Section 2.4(i)(b) above, and the supplement referenced in the second sentence of Section 2.4(i)(b) above (except that the references to "business" in such clauses shall instead refer to nominations of directors for purposes of this paragraph), and (B) a statement whether either such stockholder or Stockholder Associated Person will deliver a proxy statement and form of proxy to holders of a number of the corporation's voting shares reasonably believed by such stockholder or Stockholder Associated Person to be necessary to elect or re-elect such nominee(s) (such information provided and statements made as required by clauses (A) and (B) above, a "Nominee Solicitation Statement").

(c) At the request of the board of directors, any person nominated by a stockholder for election or re-election as a director must furnish to the secretary of the corporation (1) that information required to be set forth in the stockholder's notice of nomination of such person as a director as of a date subsequent to the date on which the notice of such person's nomination was given and (2) such other information as may reasonably be required by the corporation to determine the eligibility of such proposed nominee to serve as an independent director or audit committee financial expert of the corporation under applicable law, securities

exchange rule or regulation, or any publicly-disclosed corporate governance guideline or committee charter of the corporation and (3) that could be material to a reasonable stockholder's understanding of the independence, or lack thereof, of such nominee; in the absence of the furnishing of such information if requested, such stockholder's nomination shall not be considered in proper form pursuant to this Section 2.4(ii).

(d) Without exception, no person shall be eligible for election or re-election as a director of the corporation at an annual meeting of stockholders unless nominated in accordance with the provisions set forth in this Section 2.4(ii). In addition, a nominee shall not be eligible for election or re-election if a stockholder or Stockholder Associated Person, as applicable, takes action contrary to the representations made in the Nominee Solicitation Statement applicable to such nominee or if the Nominee Solicitation Statement applicable to such nominee contains an untrue statement of a material fact or omits to state a material fact necessary to make the statements therein not misleading. The chairperson of the annual meeting shall, if the facts warrant, determine and declare at the annual meeting that a nomination was not made in accordance with the provisions prescribed by these bylaws, and if the chairperson should so determine, he or she shall so declare at the annual meeting, and the defective nomination shall be disregarded.

(iii) Advance Notice of Director Nominations for Special Meetings.

(a) For a special meeting of stockholders at which directors are to be elected or re-elected, nominations of persons for election or re-election to the board of directors shall be made only (1) by or at the direction of the board of directors or (2) by any stockholder of the corporation who (A) is a stockholder of record at the time of the giving of the notice required by this Section 2.4(iii) and on the record date for the determination of stockholders entitled to vote at the special meeting and (B) delivers a timely written notice of the nomination to the secretary of the corporation that includes the information set forth in Sections 2.4(ii)(b) and (ii)(c) above. To be timely, such notice must be received by the secretary at the principal executive offices of the corporation not later than the close of business on the later of the 90th day prior to such special meeting or the tenth day following the day on which Public Announcement is first made of the date of the special meeting and of the nominees proposed by the board of directors to be elected or re-elected at such meeting. A person shall not be eligible for election or re-election as a director at a special meeting unless the person is nominated (i) by or at the direction of the board of directors or (ii) by a stockholder in accordance with the notice procedures set forth in this Section 2.4(iii). In addition, a nominee shall not be eligible for election or re-election if a stockholder or Stockholder Associated Person, as applicable, takes action contrary to the representations made in the Nominee Solicitation Statement applicable to such nominee or if the Nominee Solicitation Statement applicable to such nominee contains an untrue statement of a material fact or omits to state a material fact necessary to make the statements therein not misleading.

(b) The chairperson of the special meeting shall, if the facts warrant, determine and declare at the meeting that a nomination or business was not made in accordance with the procedures prescribed by these bylaws, and if the chairperson should so determine, he or she shall so declare at the meeting, and the defective nomination or business shall be disregarded.

(iv) Other Requirements and Rights. In addition to the foregoing provisions of this Section 2.4, a stockholder must also comply with all applicable requirements of state law and of the 1934 Act and the rules and regulations thereunder with respect to the matters set forth in this Section 2.4. Nothing in this Section 2.4 shall be deemed to affect any rights of:

(a) a stockholder to request inclusion of proposals in the corporation's proxy statement pursuant to Rule 14a-8 (or any successor provision) under the 1934 Act; or

(b) the corporation to omit a proposal from the corporation's proxy statement pursuant to Rule 14a-8 (or any successor provision) under the 1934 Act.

2.5 NOTICE OF STOCKHOLDERS' MEETINGS

Whenever stockholders are required or permitted to take any action at a meeting, a written notice of the meeting shall be given which shall state the place, if any, date and hour of the meeting, the means of remote communications, if any, by which stockholders and proxy holders may be deemed to be present in person and vote at such meeting, the record date for determining the stockholders entitled to vote at the meeting, if such date is different from the record date for determining stockholders entitled to notice of the meeting, and, in the case of a special meeting, the purpose or purposes for which the meeting is called. Except as otherwise provided in the DGCL, the certificate of incorporation or these bylaws, the written notice of any meeting of stockholders shall be given not less than 10 nor more than 60 days before the date of the meeting to each stockholder entitled to vote at such meeting as of the record date for determining the stockholders entitled to notice of the meeting.

2.6 QUORUM

The holders of a majority of the stock issued and outstanding and entitled to vote, present in person or represented by proxy, shall constitute a quorum for the transaction of business at all meetings of the stockholders. Where a separate vote by a class or series or classes or series is required, a majority of the outstanding shares of such class or series or classes or series, present in person or represented by proxy, shall constitute a quorum entitled to take action with respect to that vote on that matter, except as otherwise provided by law, the certificate of incorporation or these bylaws

If a quorum is not present or represented at any meeting of the stockholders, then either (i) the chairperson of the meeting, or (ii) the stockholders entitled to vote at the meeting, present in person or represented by proxy, shall have power to adjourn the meeting from time to time, without notice other than announcement at the meeting, until a quorum is present or represented. At such adjourned meeting at which a quorum is present or represented, any business may be transacted that might have been transacted at the meeting as originally noticed.

2.7 ADJOURNED MEETING; NOTICE

When a meeting is adjourned to another time or place, unless these bylaws otherwise require, notice need not be given of the adjourned meeting if the time, place, if any, thereof, and the means of remote communications, if any, by which stockholders and proxy holders may be deemed to be present in person and vote at such adjourned meeting are announced at the meeting at which the adjournment is taken. At the adjourned meeting, the corporation may transact any business which might have been transacted at the original meeting. If the adjournment is for more than 30 days, a notice of the adjourned meeting shall be given to each stockholder of record entitled to vote at the meeting. If after the adjournment a new record date for stockholders entitled to vote is fixed for the adjourned meeting, the board of directors shall fix a new record date for notice of such adjourned meeting in accordance with Section 213(a) of the DGCL and Section 2.11of these bylaws, and shall give notice of the adjourned meeting to each stockholder of record entitled to vote at such adjourned meeting as of the record date fixed for notice of such adjourned meeting.

2.8 CONDUCT OF BUSINESS

The chairperson of any meeting of stockholders shall determine the order of business and the procedure at the meeting, including such regulation of the manner of voting and the conduct of business. The chairperson of any meeting of stockholders shall be designated by the board of directors; in the absence of such designation, the chairperson of the board, if any, the chief executive officer (in the absence of the chairperson) or the president (in the absence of the chairperson of the board and the chief executive officer), or in their absence any other executive officer of the corporation, shall serve as chairperson of the stockholder meeting.

2.9 VOTING

The stockholders entitled to vote at any meeting of stockholders shall be determined in accordance with the provisions of Section 2.11 of these bylaws, subject to Section 217 (relating to voting rights of fiduciaries, pledgors and joint owners of stock) and Section 218 (relating to voting trusts and other voting agreements) of the DGCL.

Except as may be otherwise provided in the certificate of incorporation or these bylaws, each stockholder shall be entitled to one vote for each share of capital stock held by such stockholder.

Except as otherwise required by law, the certificate of incorporation or these bylaws, in all matters other than the election of directors, the affirmative vote of a majority of the voting power of the shares present in person or represented by proxy at the meeting and entitled to vote on the subject matter shall be the act of the stockholders. Except as otherwise required by law, the certificate of incorporation or these bylaws, directors shall be elected by a plurality of the voting power of the shares present in person or represented by proxy at the meeting and entitled to vote on the election of directors. Where a separate vote by a class or series or classes or series is required, in all matters other than the election of directors, the affirmative vote of the majority of shares of such class or series or classes or series present in person or represented by proxy at the meeting shall be the act of such class or series or classes or series, except as otherwise provided by law, the certificate of incorporation or these bylaws.

2.10 STOCKHOLDER ACTION BY WRITTEN CONSENT WITHOUT A MEETING

Subject to the rights of the holders of the shares of any series of Preferred Stock or any other class of stock or series thereof that have been expressly granted the right to take action by written consent, any action required or permitted to be taken by the stockholders of the corporation must be effected at a duly called annual or special meeting of stockholders of the corporation and may not be effected by any consent in writing by such stockholders.

2.11 RECORD DATES

In order that the corporation may determine the stockholders entitled to notice of any meeting of stockholders or any adjournment thereof, the board of directors may fix a record date, which record date shall not

precede the date upon which the resolution fixing the record date is adopted by the board of directors and which record date shall not be more than 60 nor less than 10 days before the date of such meeting. If the board of directors so fixes a date, such date shall also be the record date for determining the stockholders entitled to vote at such meeting unless the board of directors determines, at the time it fixes such record date, that a later date on or before the date of the meeting shall be the date for making such determination.

If no record date is fixed by the board of directors, the record date for determining stockholders entitled to notice of and to vote at a meeting of stockholders shall be at the close of business on the day next preceding the day on which notice is given, or, if notice is waived, at the close of business on the day next preceding the day on which the meeting is held.

A determination of stockholders of record entitled to notice of or to vote at a meeting of stockholders shall apply to any adjournment of the meeting; *provided, however,* that the board of directors may fix a new record date for determination of stockholders entitled to vote at the adjourned meeting, and in such case shall also fix as the record date for stockholders entitled to notice of such adjourned meeting the same or an earlier date as that fixed for determination of stockholders entitled to vote in accordance with the provisions of Section 213 of the DGCL and this Section 2.11 at the adjourned meeting.

In order that the corporation may determine the stockholders entitled to receive payment of any dividend or other distribution or allotment of any rights or the stockholders entitled to exercise any rights in respect of any change, conversion or exchange of stock, or for the purpose of any other lawful action, the board of directors may fix a record date, which record date shall not precede the date upon which the resolution fixing the record date is adopted, and which record date shall be not more than 60 days prior to such action. If no record date is fixed, the record date for determining stockholders for any such purpose shall be at the close of business on the day on which the board of directors adopts the resolution relating thereto.

2.12 PROXIES

Each stockholder entitled to vote at a meeting of stockholders may authorize another person or persons to act for such stockholder by proxy authorized by an instrument in writing or by a transmission permitted by law filed in accordance with the procedure established for the meeting, but no such proxy shall be voted or acted upon after three years from its date, unless the proxy provides for a longer period. The revocability of a proxy that states on its face that it is irrevocable shall be governed by the provisions of Section 212 of the DGCL. A written proxy may be in the form of a telegram, cablegram, or other means of electronic transmission which sets forth or is submitted with information from which it can be determined that the telegram, cablegram, or other means of electronic transmission was authorized by the person.

2.13 LIST OF STOCKHOLDERS ENTITLED TO VOTE

The officer who has charge of the stock ledger of the corporation shall prepare and make, at least 10 days before every meeting of stockholders, a complete list of the stockholders entitled to vote at the meeting; *provided, however,* if the record date for determining the stockholders entitled to vote is less than 10 days before the meeting date, the list shall reflect the stockholders entitled to vote as of the tenth day before the meeting date. The stockholder list shall be arranged in alphabetical order and show the address of each stockholder and the number of shares registered in the name of each stockholder. The corporation shall not be required to include electronic

mail addresses or other electronic contact information on such list. Such list shall be open to the examination of any stockholder for any purpose germane to the meeting for a period of at least 10 days prior to the meeting (i) on a reasonably accessible electronic network, provided that the information required to gain access to such list is provided with the notice of the meeting, or (ii) during ordinary business hours, at the corporation's principal place of business. In the event that the corporation determines to make the list available on an electronic network, the corporation may take reasonable steps to ensure that such information is available only to stockholders of the corporation. If the meeting is to be held at a place, then the list shall be produced and kept at the time and place of the meeting during the whole time thereof, and may be examined by any stockholder who is present. If the meeting is to be held solely by means of remote communication, then the list shall also be open to the examination of any stockholder during the whole time of the meeting on a reasonably accessible electronic network, and the information required to access such list shall be provided with the notice of the meeting. Such list shall presumptively determine the identity of the stockholders entitled to vote at the meeting and the number of shares held by each of them.

2.14 INSPECTORS OF ELECTION

Before any meeting of stockholders, the board of directors shall appoint an inspector or inspectors of election to act at the meeting or its adjournment. The number of inspectors shall be either one (1) or three (3). If any person appointed as inspector fails to appear or fails or refuses to act, then the chairperson of the meeting may, and upon the request of any stockholder or a stockholder's proxy shall, appoint a person to fill that vacancy.

Each inspector, before entering upon the discharge of his or her duties, shall take and sign an oath to execute faithfully the duties of inspector with strict impartiality and according to the best of his or her ability. The inspector or inspectors so appointed and designated shall (i) ascertain the number of shares of capital stock of the corporation outstanding and the voting power of each share, (ii) determine the shares of capital stock of the corporation represented at the meeting and the validity of proxies and ballots, (iii) count all votes and ballots, (iv) determine and retain for a reasonable period a record of the disposition of any challenges made to any determination by the inspectors, and (v) certify their determination of the number of shares of capital stock of the corporation represented at the meeting and such inspector or inspectors' count of all votes and ballots.

In determining the validity and counting of proxies and ballots cast at any meeting of stockholders of the corporation, the inspector or inspectors may consider such information as is permitted by applicable law. If there are three (3) inspectors of election, the decision, act or certificate of a majority is effective in all respects as the decision, act or certificate of all.

ARTICLE III — DIRECTORS

3.1 POWERS

The business and affairs of the corporation shall be managed by or under the direction of the board of directors, except as may be otherwise provided in the DGCL or the certificate of incorporation.

3.2 NUMBER OF DIRECTORS

The board of directors shall consist of one or more members, each of whom shall be a natural person. Unless the certificate of incorporation fixes the number of directors, the number of directors shall be determined from time to time solely by resolution of the board of directors. No reduction of the authorized number of directors shall have the effect of removing any director before that director's term of office expires.

3.3 ELECTION, QUALIFICATION AND TERM OF OFFICE OF DIRECTORS

Except as provided in Section 3.4 of these bylaws, each director, including a director elected to fill a vacancy, shall hold office until the expiration of the term for which elected and until such director's successor is elected and qualified or until such director's earlier death, resignation or removal. Directors need not be stockholders unless so required by the certificate of incorporation or these bylaws. The certificate of incorporation or these bylaws may prescribe other qualifications for directors.

3.4 RESIGNATION AND VACANCIES

Any director may resign at any time upon notice given in writing or by electronic transmission to the corporation; *provided, however*, that if such notice is given by electronic transmission, such electronic transmission must either set forth or be submitted with information from which it can be determined that the electronic transmission was authorized by the director. A resignation is effective when the resignation is delivered unless the resignation specifies a later effective date or an effective date determined upon the happening of an event or events. Acceptance of such resignation shall not be necessary to make it effective. A resignation which is conditioned upon the director failing to receive a specified vote for reelection as a director may provide that it is irrevocable. Unless otherwise provided in the certificate of incorporation or these bylaws, when one or more directors resign from the board of directors, effective at a future date, a majority of the directors then in office, including those who have so resigned, shall have power to fill such vacancy or vacancies, the vote thereon to take effect when such resignation or resignations shall become effective.

Unless otherwise provided in the certificate of incorporation or these bylaws, vacancies and newly created directorships resulting from any increase in the authorized number of directors elected by all of the stockholders having the right to vote as a single class shall be filled only by a majority of the directors then in office, although less than a quorum, or by a sole remaining director. If the directors are divided into classes, a person so elected by the directors then in office to fill a vacancy or newly created directorship shall hold office until the next election of the class for which such director shall have been chosen and until his or her successor shall have been duly elected and qualified.

If, at the time of filling any vacancy or any newly created directorship, the directors then in office constitute less than a majority of the whole board of directors (as constituted immediately prior to any such increase), the Court of Chancery may, upon application of any stockholder or stockholders holding at least 10% of the voting stock at the time outstanding having the right to vote for such directors, summarily order an election to be held to fill any such vacancies or newly created directorships, or to replace the directors chosen by the directors then in office as aforesaid, which election shall be governed by the provisions of Section 211 of the DGCL as far as applicable.

3.5 PLACE OF MEETINGS; MEETINGS BY TELEPHONE

The board of directors may hold meetings, both regular and special, either within or outside the State of Delaware.

Unless otherwise restricted by the certificate of incorporation or these bylaws, members of the board of directors, or any committee designated by the board of directors, may participate in a meeting of the board of directors, or any committee, by means of conference telephone or other communications equipment by means of which all persons participating in the meeting can hear each other, and such participation in a meeting shall constitute presence in person at the meeting.

3.6 REGULAR MEETINGS

Regular meetings of the board of directors may be held without notice at such time and at such place as shall from time to time be determined by the board of directors.

3.7 SPECIAL MEETINGS; NOTICE

Special meetings of the board of directors for any purpose or purposes may be called at any time by the chairperson of the board of directors, the chief executive officer, the president, the secretary or a majority of the authorized number of directors, at such times and places as he or she or they shall designate.

Notice of the time and place of special meetings shall be:

(i) delivered personally by hand, by courier or by telephone;

(ii) sent by United States first-class mail, postage prepaid;

(iii) sent by facsimile; or

(iv) sent by electronic mail,

directed to each director at that director’s address, telephone number, facsimile number or electronic mail address, as the case may be, as shown on the corporation’s records.

If the notice is (i) delivered personally by hand, by courier or by telephone, (ii) sent by facsimile or (iii) sent by electronic mail, it shall be delivered or sent at least 24 hours before the time of the holding of the meeting. If the notice is sent by United States mail, it shall be deposited in the United States mail at least four days before the time of the holding of the meeting. Any oral notice may be communicated to the director. The notice need not specify the place of the meeting (if the meeting is to be held at the corporation’s principal executive office) nor the purpose of the meeting.

3.8 QUORUM; VOTING

At all meetings of the board of directors, a majority of the total authorized number of directors shall constitute a quorum for the transaction of business. If a quorum is not present at any meeting of the board of directors, then the directors present thereat may adjourn the meeting from time to time, without notice other than announcement at the meeting, until a quorum is present. A meeting at which a quorum is initially present may continue to transact business notwithstanding the withdrawal of directors, if any action taken is approved by at least a majority of the required quorum for that meeting.

The vote of a majority of the directors present at any meeting at which a quorum is present shall be the act of the board of directors, except as may be otherwise specifically provided by statute, the certificate of incorporation or these bylaws.

If the certificate of incorporation provides that one or more directors shall have more or less than one vote per director on any matter, every reference in these bylaws to a majority or other proportion of the directors shall refer to a majority or other proportion of the votes of the directors.

3.9 BOARD ACTION BY WRITTEN CONSENT WITHOUT A MEETING

Unless otherwise restricted by the certificate of incorporation or these bylaws, any action required or permitted to be taken at any meeting of the board of directors, or of any committee thereof, may be taken without a meeting if all members of the board of directors or committee, as the case may be, consent thereto in writing or by electronic transmission and the writing or writings or electronic transmission or transmissions are filed with the minutes of proceedings of the board of directors or committee. Such filing shall be in paper form if the minutes are maintained in paper form and shall be in electronic form if the minutes are maintained in electronic form.

3.10 FEES AND COMPENSATION OF DIRECTORS

Unless otherwise restricted by the certificate of incorporation or these bylaws, the board of directors shall have the authority to fix the compensation of directors.

3.11 REMOVAL OF DIRECTORS

A director may be removed from office by the stockholders of the corporation only for cause.

No reduction of the authorized number of directors shall have the effect of removing any director prior to the expiration of such director’s term of office.

ARTICLE IV — COMMITTEES

4.1 COMMITTEES OF DIRECTORS

The board of directors may designate one or more committees, each committee to consist of one or more of the directors of the corporation. The board of directors may designate one or more directors as alternate

members of any committee, who may replace any absent or disqualified member at any meeting of the committee. In the absence or disqualification of a member of a committee, the member or members thereof present at any meeting and not disqualified from voting, whether or not such member or members constitute a quorum, may unanimously appoint another member of the board of directors to act at the meeting in the place of any such absent or disqualified member. Any such committee, to the extent provided in the resolution of the board of directors or in these bylaws, shall have and may exercise all the powers and authority of the board of directors in the management of the business and affairs of the corporation, and may authorize the seal of the corporation to be affixed to all papers that may require it; but no such committee shall have the power or authority to (i) approve or adopt, or recommend to the stockholders, any action or matter (other than the election or removal of directors) expressly required by the DGCL to be submitted to stockholders for approval, or (ii) adopt, amend or repeal any bylaw of the corporation.

4.2 COMMITTEE MINUTES

Each committee shall keep regular minutes of its meetings and report the same to the board of directors when required.

4.3 MEETINGS AND ACTION OF COMMITTEES

Meetings and actions of committees shall be governed by, and held and taken in accordance with, the provisions of:

(i) Section 3.5 (place of meetings; meetings by telephone);

(ii) Section 3.6 (regular meetings);

(iii) Section 3.7 (special meetings; notice);

(iv) Section 3.8 (quorum; voting);

(v) Section 3.9 (action by written consent without a meeting); and

(vi) Section 7.5 (waiver of notice)

with such changes in the context of those bylaws as are necessary to substitute the committee and its members for the board of directors and its members. *However*:

(i) the time of regular meetings of committees may be determined by resolution of the committee;

(ii) special meetings of committees may also be called by resolution of the committee; and

(iii) notice of special meetings of committees shall also be given to all alternate members, who shall have the right to attend all meetings of the committee. The board of directors may adopt rules for the government of any committee not inconsistent with the provisions of these bylaws.

Any provision in the certificate of incorporation providing that one or more directors shall have more or less than one vote per director on any matter shall apply to voting in any committee or subcommittee, unless otherwise provided in the certificate of incorporation or these bylaws.

4.4 SUBCOMMITTEES

Unless otherwise provided in the certificate of incorporation, these bylaws or the resolutions of the board of directors designating the committee, a committee may create one or more subcommittees, each subcommittee to consist of one or more members of the committee, and delegate to a subcommittee any or all of the powers and authority of the committee.

ARTICLE V — OFFICERS

5.1 OFFICERS

The officers of the corporation shall be a president and a secretary. The corporation may also have, at the discretion of the board of directors, a chairperson of the board of directors, a vice chairperson of the board of directors, a chief executive officer, a chief financial officer or treasurer, one or more vice presidents, one or more assistant vice presidents, one or more assistant treasurers, one or more assistant secretaries, and any such other officers as may be appointed in accordance with the provisions of these bylaws. Any number of offices may be held by the same person.

5.2 APPOINTMENT OF OFFICERS

The board of directors shall appoint the officers of the corporation, except such officers as may be appointed in accordance with the provisions of Section 5.3 of these bylaws, subject to the rights, if any, of an officer under any contract of employment. A vacancy in any office because of death, resignation, removal, disqualification or any other cause shall be filled in the manner prescribed in this Section 5 for the regular election to such office.

5.3 SUBORDINATE OFFICERS

The board of directors may appoint, or empower the chief executive officer or, in the absence of a chief executive officer, the president, to appoint, such other officers and agents as the business of the corporation may require. Each of such officers and agents shall hold office for such period, have such authority, and perform such duties as are provided in these bylaws or as the board of directors may from time to time determine.

5.4 REMOVAL AND RESIGNATION OF OFFICERS

Subject to the rights, if any, of an officer under any contract of employment, any officer may be removed, either with or without cause, by an affirmative vote of the majority of the board of directors at any regular or special meeting of the board of directors or, except in the case of an officer chosen by the board of directors, by any officer upon whom such power of removal may be conferred by the board of directors.

Any officer may resign at any time by giving written or electronic notice to the corporation; *provided, however*, that if such notice is given by electronic transmission, such electronic transmission must either set forth or be submitted with information from which it can be determined that the electronic transmission was authorized by the officer. Any resignation shall take effect at the date of the receipt of that notice or at any later time specified in that notice. Unless otherwise specified in the notice of resignation, the acceptance of the resignation shall not be necessary to make it effective. Any resignation is without prejudice to the rights, if any, of the corporation under any contract to which the officer is a party.

5.5 VACANCIES IN OFFICES

Any vacancy occurring in any office of the corporation shall be filled by the board of directors or as provided in Section 5.3.

5.6 REPRESENTATION OF SHARES OF OTHER CORPORATIONS

The chairperson of the board of directors, the president, any vice president, the treasurer, the secretary or assistant secretary of this corporation, or any other person authorized by the board of directors or the president or a vice president, is authorized to vote, represent, and exercise on behalf of this corporation all rights incident to any and all shares of any other corporation or corporations standing in the name of this corporation. The authority granted herein may be exercised either by such person directly or by any other person authorized to do so by proxy or power of attorney duly executed by such person having the authority.

5.7 AUTHORITY AND DUTIES OF OFFICERS

All officers of the corporation shall respectively have such authority and perform such duties in the management of the business of the corporation as may be designated from time to time by the board of directors and, to the extent not so provided, as generally pertain to their respective offices, subject to the control of the board of directors.

ARTICLE VI — STOCK

6.1 STOCK CERTIFICATES; PARTLY PAID SHARES

The shares of the corporation shall be represented by certificates, provided that the board of directors may provide by resolution or resolutions that some or all of any or all classes or series of its stock shall be uncertificated shares. Any such resolution shall not apply to shares represented by a certificate until such certificate is surrendered to the corporation. Every holder of stock represented by certificates shall be entitled to have a certificate signed by, or in the name of the corporation by the chairperson of the board of directors or vice-chairperson of the board of directors, or the president or a vice-president, and by the treasurer or an assistant treasurer, or the secretary or an assistant secretary of the corporation representing the number of shares registered in certificate form. Any or all of the signatures on the certificate may be a facsimile. In case any officer, transfer agent or registrar who has signed or whose facsimile signature has been placed upon a certificate has ceased to be such officer, transfer agent or registrar before such certificate is issued, it may be issued by the corporation with the same effect as if such person were such officer, transfer agent or registrar at the date of issue. The corporation shall not have power to issue a certificate in bearer form.

The corporation may issue the whole or any part of its shares as partly paid and subject to call for the remainder of the consideration to be paid therefor. Upon the face or back of each stock certificate issued to represent any such partly-paid shares, or upon the books and records of the corporation in the case of uncertificated partly-paid shares, the total amount of the consideration to be paid therefor and the amount paid thereon shall be stated. Upon the declaration of any dividend on fully-paid shares, the corporation shall declare a dividend upon partly-paid shares of the same class, but only upon the basis of the percentage of the consideration actually paid thereon.

6.2 SPECIAL DESIGNATION ON CERTIFICATES

If the corporation is authorized to issue more than one class of stock or more than one series of any class, then the powers, the designations, the preferences, and the relative, participating, optional or other special rights of each class of stock or series thereof and the qualifications, limitations or restrictions of such preferences and/or rights shall be set forth in full or summarized on the face or back of the certificate that the corporation shall issue to represent such class or series of stock; *provided*, *however*, that, except as otherwise provided in Section 202 of the DGCL, in lieu of the foregoing requirements there may be set forth on the face or back of the certificate that the corporation shall issue to represent such class or series of stock, a statement that the corporation will furnish without charge to each stockholder who so requests the powers, designations, preferences and relative, participating, optional or other special rights of each class of stock or series thereof and the qualifications, limitations or restrictions of such preferences and/or rights. Within a reasonable time after the issuance or transfer of uncertificated stock, the corporation shall send to the registered owner thereof a written notice containing the information required to be set forth or stated on certificates pursuant to this Section 6.2 or Sections 156, 202(a) or 218(a) of the DGCL or with respect to this Section 6.2 a statement that the corporation will furnish without charge to each stockholder who so requests the powers, designations, preferences and relative, participating, optional or other special rights of each class of stock or series thereof and the qualifications, limitations or restrictions of such preferences and/or rights. Except as otherwise expressly provided by law, the rights and obligations of the holders of uncertificated stock and the rights and obligations of the holders of certificates representing stock of the same class and series shall be identical.

6.3 LOST, STOLEN OR DESTROYED CERTIFICATES

Except as provided in this Section 6.3, no new certificates for shares shall be issued to replace a previously issued certificate unless the latter is surrendered to the corporation and cancelled at the same time. The corporation may issue a new certificate of stock or uncertificated shares in the place of any certificate theretofore issued by it, alleged to have been lost, stolen or destroyed, and the corporation may require the owner of the lost, stolen or destroyed certificate, or such owner’s legal representative, to give the corporation a bond sufficient to indemnify it against any claim that may be made against it on account of the alleged loss, theft or destruction of any such certificate or the issuance of such new certificate or uncertificated shares.

6.4 DIVIDENDS

The board of directors, subject to any restrictions contained in the certificate of incorporation or applicable law, may declare and pay dividends upon the shares of the corporation's capital stock. Dividends may be paid in cash, in property, or in shares of the corporation's capital stock, subject to the provisions of the certificate of incorporation.

The board of directors may set apart out of any of the funds of the corporation available for dividends a reserve or reserves for any proper purpose and may abolish any such reserve. Such purposes shall include but not be limited to equalizing dividends, repairing or maintaining any property of the corporation, and meeting contingencies.

6.5 TRANSFER OF STOCK

Transfers of record of shares of stock of the corporation shall be made only upon its books by the holders thereof, in person or by an attorney duly authorized, and, if such stock is certificated, upon the surrender of a certificate or certificates for a like number of shares, properly endorsed or accompanied by proper evidence of succession, assignation or authority to transfer; *provided, however,* that such succession, assignment or authority to transfer is not prohibited by the certificate of incorporation, these bylaws, applicable law or contract.

6.6 STOCK TRANSFER AGREEMENTS

The corporation shall have power to enter into and perform any agreement with any number of stockholders of any one or more classes of stock of the corporation to restrict the transfer of shares of stock of the corporation of any one or more classes owned by such stockholders in any manner not prohibited by the DGCL.

6.7 REGISTERED STOCKHOLDERS

The corporation:

(i) shall be entitled to recognize the exclusive right of a person registered on its books as the owner of shares to receive dividends and to vote as such owner;

(ii) shall be entitled to hold liable for calls and assessments the person registered on its books as the owner of shares; and

(iii) shall not be bound to recognize any equitable or other claim to or interest in such share or shares on the part of another person, whether or not it shall have express or other notice thereof, except as otherwise provided by the laws of Delaware.

ARTICLE VII — MANNER OF GIVING NOTICE AND WAIVER

7.1 NOTICE OF STOCKHOLDERS' MEETINGS

Notice of any meeting of stockholders, if mailed, is given when deposited in the United States mail, postage prepaid, directed to the stockholder at such stockholder's address as it appears on the corporation's records. An affidavit of the secretary or an assistant secretary of the corporation or of the transfer agent or other agent of the corporation that the notice has been given shall, in the absence of fraud, be *prima facie* evidence of the facts stated therein.

7.2 NOTICE BY ELECTRONIC TRANSMISSION

Without limiting the manner by which notice otherwise may be given effectively to stockholders pursuant to the DGCL, the certificate of incorporation or these bylaws, any notice to stockholders given by the corporation under any provision of the DGCL, the certificate of incorporation or these bylaws shall be effective if given by a form of electronic transmission consented to by the stockholder to whom the notice is given. Any such consent shall be revocable by the stockholder by written notice to the corporation. Any such consent shall be deemed revoked if:

(i) the corporation is unable to deliver by electronic transmission two consecutive notices given by the corporation in accordance with such consent; and

(ii) such inability becomes known to the secretary or an assistant secretary of the corporation or to the transfer agent, or other person responsible for the giving of notice.

However, the inadvertent failure to treat such inability as a revocation shall not invalidate any meeting or other action.

Any notice given pursuant to the preceding paragraph shall be deemed given:

(i) if by facsimile telecommunication, when directed to a number at which the stockholder has consented to receive notice;

(ii) if by electronic mail, when directed to an electronic mail address at which the stockholder has consented to receive notice;

(iii) if by a posting on an electronic network together with separate notice to the stockholder of such specific posting, upon the later of (A) such posting and (B) the giving of such separate notice; and

(iv) if by any other form of electronic transmission, when directed to the stockholder.

An affidavit of the secretary or an assistant secretary or of the transfer agent or other agent of the corporation that the notice has been given by a form of electronic transmission shall, in the absence of fraud, be *prima facie* evidence of the facts stated therein.

An "electronic transmission" means any form of communication, not directly involving the physical transmission of paper, that creates a record that may be retained, retrieved, and reviewed by a recipient thereof, and that may be directly reproduced in paper form by such a recipient through an automated process.

7.3 NOTICE TO STOCKHOLDERS SHARING AN ADDRESS

Except as otherwise prohibited under the DGCL, without limiting the manner by which notice otherwise may be given effectively to stockholders, any notice to stockholders given by the corporation under the provisions of the DGCL, the certificate of incorporation or these bylaws shall be effective if given by a single written notice to stockholders who share an address if consented to by the stockholders at that address to whom such notice is given. Any such consent shall be revocable by the stockholder by written notice to the corporation. Any stockholder who fails to object in writing to the corporation, within 60 days of having been given written notice by the corporation of its intention to send the single notice, shall be deemed to have consented to receiving such single written notice.

7.4 NOTICE TO PERSON WITH WHOM COMMUNICATION IS UNLAWFUL

Whenever notice is required to be given, under the DGCL, the certificate of incorporation or these bylaws, to any person with whom communication is unlawful, the giving of such notice to such person shall not be required and there shall be no duty to apply to any governmental authority or agency for a license or permit to give such notice to such person. Any action or meeting which shall be taken or held without notice to any such person with whom communication is unlawful shall have the same force and effect as if such notice had been duly given. In the event that the action taken by the corporation is such as to require the filing of a certificate under the DGCL, the certificate shall state, if such is the fact and if notice is required, that notice was given to all persons entitled to receive notice except such persons with whom communication is unlawful.

7.5 WAIVER OF NOTICE

Whenever notice is required to be given to stockholders, directors or other persons under any provision of the DGCL, the certificate of incorporation or these bylaws, a written waiver, signed by the person entitled to notice, or a waiver by electronic transmission by the person entitled to notice, whether before or after the time of the event for which notice is to be given, shall be deemed equivalent to notice. Attendance of a person at a meeting shall constitute a waiver of notice of such meeting, except when the person attends a meeting for the express purpose of objecting at the beginning of the meeting, to the transaction of any business because the meeting is not lawfully called or convened. Neither the business to be transacted at, nor the purpose of, any regular or special meeting of the stockholders or the board of directors, as the case may be, need be specified in any written waiver of notice or any waiver by electronic transmission unless so required by the certificate of incorporation or these bylaws.

ARTICLE VIII — INDEMNIFICATION

8.1 INDEMNIFICATION OF DIRECTORS AND OFFICERS IN THIRD PARTY PROCEEDINGS

Subject to the other provisions of this Article VIII, the corporation shall indemnify, to the fullest extent permitted by the DGCL, as now or hereinafter in effect, any person who was or is a party or is threatened to be made a party to any threatened, pending or completed action, suit or proceeding, whether civil, criminal, administrative or investigative (a "Proceeding") (other than an action by or in the right of the corporation) by reason of the fact that such person is or was a director of the corporation or an officer of the corporation, or while a director of the corporation or officer of the corporation is or was serving at the request of the corporation as a director, officer, employee or agent of another corporation, partnership, joint venture, trust or other enterprise, against expenses (including attorneys' fees), judgments, fines and amounts paid in settlement actually and reasonably incurred by such person in connection with such Proceeding if such person acted in good faith and in a manner such person reasonably believed to be in or not opposed to the best interests of the corporation, and, with respect to any criminal action or proceeding, had no reasonable cause to believe such person's conduct was unlawful. The termination of any Proceeding by judgment, order, settlement, conviction, or upon a plea of *nolo contendere* or its equivalent, shall not, of itself, create a presumption that the person did not act in good faith and in a manner which such person reasonably believed to be in or not opposed to the best interests of the corporation, and, with respect to any criminal action or proceeding, had reasonable cause to believe that such person's conduct was unlawful.

8.2 INDEMNIFICATION OF DIRECTORS AND OFFICERS IN ACTIONS BY OR IN THE RIGHT OF THE CORPORATION

Subject to the other provisions of this Article VIII, the corporation shall indemnify, to the fullest extent permitted by the DGCL, as now or hereinafter in effect, any person who was or is a party or is threatened to be made a party to any threatened, pending or completed action or suit by or in the right of the corporation to procure a judgment in its favor by reason of the fact that such person is or was a director or officer of the corporation, or while a director or officer of the corporation is or was serving at the request of the corporation as a director, officer, employee or agent of another corporation, partnership, joint venture, trust or other enterprise against expenses (including attorneys' fees) actually and reasonably incurred by such person in connection with the defense or settlement of such action or suit if such person acted in good faith and in a manner such person reasonably believed to be in or not opposed to the best interests of the corporation; except that no indemnification shall be made in respect of any claim, issue or matter as to which such person shall have been adjudged to be liable to the corporation unless and only to the extent that the Court of Chancery or the court in which such action or suit was brought shall determine upon application that, despite the adjudication of liability but in view of all the circumstances of the case, such person is fairly and reasonably entitled to indemnity for such expenses which the Court of Chancery or such other court shall deem proper.

8.3 SUCCESSFUL DEFENSE

To the extent that a present or former director or officer of the corporation has been successful on the merits or otherwise in defense of any action, suit or proceeding described in Section 8.1 or Section 8.2, or in defense of any claim, issue or matter therein, such person shall be indemnified against expenses (including attorneys' fees) actually and reasonably incurred by such person in connection therewith.

8.4 INDEMNIFICATION OF OTHERS

Subject to the other provisions of this Article VIII, the corporation shall have power to indemnify its employees and its agents to the extent not prohibited by the DGCL or other applicable law. The board of directors shall have the power to delegate the determination of whether employees or agents shall be indemnified to such person or persons as the board of determines.

8.5 ADVANCED PAYMENT OF EXPENSES

Expenses (including attorneys' fees) incurred by an officer or director of the corporation in defending any Proceeding shall be paid by the corporation in advance of the final disposition of such Proceeding upon receipt of a written request therefor (together with documentation reasonably evidencing such expenses) and an undertaking by or on behalf of the person to repay such amounts if it shall ultimately be determined that the person is not entitled to be indemnified under this Article VIII or the DGCL. Such expenses (including attorneys' fees) incurred by former directors and officers or other employees and agents may be so paid upon such terms and conditions, if any, as the corporation deems reasonably appropriate and shall be subject to the corporation's expense guidelines. The right to advancement of expenses shall not apply to any claim for which indemnity is excluded pursuant to these bylaws, but shall apply to any Proceeding referenced in Section 8.6(ii) or 8.6(iii) prior to a determination that the person is not entitled to be indemnified by the corporation.

8.6 LIMITATION ON INDEMNIFICATION

Subject to the requirements in Section 8.3 and the DGCL, the corporation shall not be obligated to indemnify any person pursuant to this Article VIII in connection with any Proceeding (or any part of any Proceeding):

(i) for which payment has actually been made to or on behalf of such person under any statute, insurance policy, indemnity provision, vote or otherwise, except with respect to any excess beyond the amount paid;

(ii) for an accounting or disgorgement of profits pursuant to Section 16(b) of the 1934 Act, or similar provisions of federal, state or local statutory law or common law, if such person is held liable therefor (including pursuant to any settlement arrangements);

(iii) for any reimbursement of the corporation by such person of any bonus or other incentive-based or equity-based compensation or of any profits realized by such person from the sale of securities of the corporation, as required in each case under the 1934 Act (including any such reimbursements that arise from an accounting restatement of the corporation pursuant to Section 304 of the Sarbanes-Oxley Act of 2002 (the "Sarbanes-Oxley Act"), or the payment to the corporation of profits arising from the purchase and sale by such person of securities in violation of Section 306 of the Sarbanes-Oxley Act), if such person is held liable therefor (including pursuant to any settlement arrangements);

(iv) initiated by such person against the corporation or its directors, officers, employees, agents or other indemnitees, unless (a) the board of directors authorized the Proceeding (or the relevant part of the Proceeding) prior to its initiation, (b) the corporation provides the indemnification, in its sole discretion, pursuant to the powers vested in the corporation under applicable law, (c) otherwise required to be made under Section 8.7 or (d) otherwise required by applicable law; or

(v) if prohibited by applicable law; *provided, however*, that if any provision or provisions of this Article VIII shall be held to be invalid, illegal or unenforceable for any reason whatsoever: (1) the validity, legality and enforceability of the remaining provisions of this Article VIII (including, without limitation, each portion of any paragraph or clause containing any such provision held to be invalid, illegal or unenforceable, that is not itself held to be invalid, illegal or unenforceable) shall not in any way be affected or impaired thereby; and (2) to the fullest extent possible, the provisions of this Article VIII (including, without limitation, each such portion of any paragraph or clause containing any such provision held to be invalid, illegal or unenforceable) shall be construed so as to give effect to the intent manifested by the provision held invalid, illegal or unenforcebable.

8.7 DETERMINATION; CLAIM

If a claim for indemnification or advancement of expenses under this Article VIII is not paid in full within 90 days after receipt by the corporation of the written request therefor, the claimant shall be entitled to an adjudication by a court of competent jurisdiction of his or her entitlement to such indemnification or advancement of expenses. The corporation shall indemnify such person against any and all expenses that are incurred by such person in connection with any action for indemnification or advancement of expenses from the corporation under this Article VIII, to the extent such person is successful in such action, and to the extent not prohibited by law. In any such suit, the corporation shall, to the fullest extent not prohibited by law, have the burden of proving that the claimant is not entitled to the requested indemnification or advancement of expenses.

8.8 NON-EXCLUSIVITY OF RIGHTS

The indemnification and advancement of expenses provided by, or granted pursuant to, this Article VIII shall not be deemed exclusive of any other rights to which those seeking indemnification or advancement of expenses may be entitled under the certificate of incorporation or any statute, bylaw, agreement, vote of stockholders or disinterested directors or otherwise, both as to action in such person's official capacity and as to action in another capacity while holding such office. The corporation is specifically authorized to enter into individual contracts with any or all of its directors, officers, employees or agents respecting indemnification and advancement of expenses, to the fullest extent not prohibited by the DGCL or other applicable law.

8.9 INSURANCE

The corporation may purchase and maintain insurance on behalf of any person who is or was a director, officer, employee or agent of the corporation, or is or was serving at the request of the corporation as a director, officer, employee or agent of another corporation, partnership, joint venture, trust or other enterprise against any liability asserted against such person and incurred by such person in any such capacity, or arising out of such person's status as such, whether or not the corporation would have the power to indemnify such person against such liability under the provisions of the DGCL.

8.10 SURVIVAL

The rights to indemnification and advancement of expenses conferred by this Article VIII shall continue as to a person who has ceased to be a director, officer, employee or agent and shall inure to the benefit of the heirs, executors and administrators of such a person.

8.11 EFFECT OF REPEAL OR MODIFICATION

Any amendment, alteration or repeal of this Article VIII shall not adversely affect any right or protection hereunder of any person in respect of any act or omission occurring prior to such amendment, alteration or repeal.

8.12 CERTAIN DEFINITIONS

For purposes of this Article VIII, references to the "corporation" shall include, in addition to the resulting corporation, any constituent corporation (including any constituent of a constituent) absorbed in a consolidation or merger which, if its separate existence had continued, would have had power and authority to indemnify its directors, officers, employees or agents, so that any person who is or was a director, officer, employee or agent of such constituent corporation, or is or was serving at the request of such constituent corporation as a director, officer, employee or agent of another corporation, partnership, joint venture, trust or other enterprise, shall stand in the same position under the provisions of this Article VIII with respect to the resulting or surviving corporation as such person would have with respect to such constituent corporation if its separate existence had continued. For purposes of this Article VIII, references to "other enterprises" shall include employee benefit plans; references to "fines" shall include any excise taxes assessed on a person with respect to an employee benefit plan (excluding any "parachute payments" within the meanings of Sections 280G and 4999 of the Internal Revenue Code of 1986, as amended); and references to "serving at the request of the corporation" shall include any service as a director, officer, employee or agent of the corporation which imposes duties on, or involves services by, such director, officer, employee or agent with respect to an employee benefit plan, its participants or beneficiaries; and a person who acted in good faith and in a manner such person reasonably believed to be in the interest of the participants and beneficiaries of an employee benefit plan shall be deemed to have acted in a manner "not opposed to the best interests of the corporation" as referred to in this Article VIII.

ARTICLE IX — GENERAL MATTERS

9.1 EXECUTION OF CORPORATE CONTRACTS AND INSTRUMENTS

Except as otherwise provided by law, the certificate of incorporation or these bylaws, the board of directors may authorize any officer or officers, or agent or agents, to enter into any contract or execute any document or instrument in the name of and on behalf of the corporation; such authority may be general or confined to specific instances. Unless so authorized or ratified by the board of directors or within the agency power of an officer, no officer, agent or employee shall have any power or authority to bind the corporation by any contract or engagement or to pledge its credit or to render it liable for any purpose or for any amount.

9.2 FISCAL YEAR

The fiscal year of the corporation shall be fixed by resolution of the board of directors and may be changed by the board of directors.

9.3 SEAL

The corporation may adopt a corporate seal, which shall be adopted and which may be altered by the board of directors. The corporation may use the corporate seal by causing it or a facsimile thereof to be impressed or affixed or in any other manner reproduced.

9.4 CONSTRUCTION; DEFINITIONS

Unless the context requires otherwise, the general provisions, rules of construction, and definitions in the DGCL shall govern the construction of these bylaws. Without limiting the generality of this provision, the singular number includes the plural, the plural number includes the singular, and the term "person" includes both an entity and a natural person.

ARTICLE X — AMENDMENTS

These bylaws may be adopted, amended or repealed by the stockholders entitled to vote; *provided, however*, that the affirmative vote of the holders of at least 66 2/3% of the total voting power of outstanding voting securities, voting together as a single class, shall be required for the stockholders of the corporation to alter, amend or repeal, or adopt any bylaw inconsistent with, the following provisions of these bylaws: Article II, Sections 3.1, 3.2, 3.4 and 3.11 of Article III, Article VIII and this Article X (including, without limitation, any such Article or Section as renumbered as a result of any amendment, alteration, change, repeal, or adoption of any other Bylaw). The board of directors shall also have the power to adopt, amend or repeal bylaws; *provided, however*, that a bylaw amendment adopted by stockholders which specifies the votes that shall be necessary for the election of directors shall not be further amended or repealed by the board of directors.

ALLAKOS INC.

AMENDED AND RESTATED INVESTORS' RIGHTS AGREEMENT

November 30, 2017

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ALLAKOS INC.
AMENDED AND RESTATED INVESTORS' RIGHTS AGREEMENT

This Amended and Restated Investors' Rights Agreement (this "**Agreement**") made as of November 30, 2017, by and among Allakos Inc., a Delaware corporation (the "**Company**"), and the persons and entities listed on Exhibit A (each, an "**Investor**" and collectively, the "**Investors**").

RECITALS

WHEREAS, the Company and certain of the Investors (the "**Existing Investors**") are party to that certain Investors' Rights Agreement, dated as of December 7, 2012 (the "**Prior Agreement**").

WHEREAS, the undersigned Existing Investors are holders of a majority of the Registrable Securities of the Company (as defined in the Prior Agreement), and desire to amend and restate the Prior Agreement in its entirety and to accept the rights created pursuant to this Agreement in lieu of the rights granted to them under the Prior Agreement.

WHEREAS, certain of the Investors are parties to the Series B Preferred Stock Purchase Agreement of even date herewith, by and among the Company and the Investors listed on the Schedule of Investors thereto (the "**Stock Purchase Agreement**"), and it is a condition to the Closing, as defined in the Stock Purchase Agreement, of the sale of the Series B Preferred Stock to the Investors listed on the Schedule of Investors thereto that the undersigned Investors and the Company execute and deliver this Agreement.

NOW, THEREFORE, in consideration of the mutual promises and covenants set forth herein, and other consideration, the receipt and adequacy of which is hereby acknowledged, the undersigned Existing Investors hereby agree that the Prior Agreement shall be amended and restated in its entirety by this Agreement, and the parties hereto further agree as follows:

SECTION 1

DEFINITIONS

1.1 **Certain Definitions**. As used in this Agreement, the following terms shall have the meanings set forth below:

(a) "**Affiliate**" means with respect to any person, any other person which directly or indirectly through one or more intermediaries Controls, or is Controlled by, or is under common Control with, such first person, including without limitation, any general partner, managing member, officer or director of such person or any venture capital fund now or hereafter existing that is controlled by one or more general partners or managing members of, or shares the same management company with, such person.

(b) "**Board of Directors**" means the Company's Board of Directors.

(c) "**Commission**" means the Securities and Exchange Commission or any other federal agency at the time administering the Securities Act.

(d) "**Common Stock**" means the Common Stock of the Company.

(e) "**Control**" means the possession, directly or indirectly, of the power to direct or cause the direction of the management or policies of a person, whether through the ownership of voting securities, by contract or otherwise, and the terms "Controlling" and "Controlled" shall have meanings correlative thereto.

(f) "**Conversion Stock**" means shares of Common Stock issued upon conversion of the Preferred Stock.

(g) "**Exchange Act**" means the Securities Exchange Act of 1934, as amended, or any similar successor federal statute and the rules and regulations thereunder, all as the same shall be in effect from time to time.

(h) "**Holder**" means any Investor who holds Registrable Securities and any holder of Registrable Securities to whom the registration rights conferred by this Agreement have been duly and validly transferred in accordance with Section 2.12 of this Agreement.

(i) "**Indemnified Party**" shall have the meaning set forth in Section 2.6(c) hereof.

(j) "**Indemnifying Party**" shall have the meaning set forth in Section 2.6(c) hereof.

(k) "**Initial Public Offering**" means the closing of the Company's first firm commitment underwritten public offering of the Company's Common Stock registered under the Securities Act.

(l) "**Initiating Holders**" means any Holder or Holders who in the aggregate hold not less than fifty percent (50%) of the outstanding Registrable Securities.

(m) "**Liquidation Event**" shall have the meaning set forth in the Company's Restated Certificate.

(n) "**New Securities**" shall have the meaning set forth in Section 4.1(a) hereof.

(o) "**Other Selling Stockholders**" means persons other than Holders who, by virtue of agreements with the Company, are entitled to include their Other Shares in certain registrations hereunder.

(p) "**Other Shares**" means shares of Common Stock, other than Registrable Securities (as defined below), with respect to which registration rights have been granted.

(q) "**Qualified IPO**" shall have the meaning set forth in the Company's Restated Certificate.

(r) "**Preferred Stock**" means the Series A Preferred Stock and Series B Preferred Stock.

(s) "**Registrable Securities**" means (i) shares of Common Stock issued or issuable pursuant to the conversion of the Preferred Stock and (ii) any Common Stock issued as a dividend or other distribution with respect to or in exchange for or in replacement of the shares referenced in (i) above; *provided, however*, that Registrable Securities shall not include any shares of Common Stock described in clause (i) or (ii) above which have previously been registered or which have been sold to the public either pursuant to a registration statement or Rule 144, or which have been sold in a private transaction in which the transferor's rights under this Agreement are not validly assigned in accordance with this Agreement.

(t) The terms "**register**," "**registered**" and "**registration**" shall refer to a registration effected by preparing and filing a registration statement in compliance with the Securities Act and applicable rules and regulations thereunder, and the declaration or ordering of the effectiveness of such registration statement.

(u) "**Registration Expenses**" means all expenses incurred in effecting any registration pursuant to this Agreement, including, without limitation, all registration, qualification, and filing fees, printing expenses, escrow fees, fees and disbursements not to exceed $25,000 of one special counsel to the Holders, fees and disbursements of counsel for the Company, blue sky fees and expenses, and expenses of any regular or special audits incident to or required by any such registration, but shall not include Selling Expenses, fees and disbursements of counsel for the Holders and the compensation of regular employees of the Company, which shall be paid in any event by the Company.

(v) "**Required Director Approval**" means the approval, in a duly called and held meeting, or by a unanimous written consent, or by other lawful decision or action by the Board of Directors, of at least a majority of the total number of then-serving directors.

(w) "**Restated Certificate**" means the Company's Second Amended and Restated Certificate of Incorporation, as may be amended from time to time.

(x) "**Restricted Securities**" means any Registrable Securities required to bear the first legend set forth in Section 2.8(b) hereof.

(y) "**Rule 144**" means Rule 144 as promulgated by the Commission under the Securities Act, as such Rule may be amended from time to time, or any similar successor rule that may be promulgated by the Commission.

(z) "**Rule 145**" means Rule 145 as promulgated by the Commission under the Securities Act, as such Rule may be amended from time to time, or any similar successor rule that may be promulgated by the Commission.

(aa) "**Rule 415**" means Rule 415 as promulgated by the Commission under the Securities Act, as such Rule may be amended from time to time, or any similar successor rule that may be promulgated by the Commission.

(bb) "**Securities Act**" means the Securities Act of 1933, as amended, or any similar successor federal statute and the rules and regulations thereunder, all as the same shall be in effect from time to time.

(cc) "**Selling Expenses**" means all underwriting discounts, selling commissions and stock transfer taxes applicable to the sale of Registrable Securities and fees and disbursements of counsel for any Holder (other than the fees and disbursements of one special counsel to the Holders included in Registration Expenses).

(dd) "**Series A Director**" shall have the meaning set forth in the Company's Restated Certificate.

(ee) "**Series B Director**" shall have the meaning set forth in the Company's Restated Certificate.

(ff) "**Series A Preferred Stock**" means the shares of the Company's Series A Preferred Stock.

(gg) "**Series B Preferred Stock**" means the shares of Series B Preferred Stock issued pursuant to the Stock Purchase Agreement.

(hh) "**Significant Holders**" shall have the meaning set forth in Section 3.1(a) hereof.

(ii) "**Stock Purchase Agreement**" shall have the meaning set forth in the Recitals hereof.

(jj) "**Withdrawn Registration**" means a forfeited demand registration under Section 2.1 hereof in accordance with the terms and conditions of Section 2.4 hereof.

SECTION 2

REGISTRATION RIGHTS

2.1 **Requested Registration**.

(a) ***Request for Registration***. Subject to the conditions set forth in this Section 2.1, if the Company shall receive from Initiating Holders a written request signed by such Initiating Holders that the Company effect any registration with respect to all or a part of the Registrable Securities (such request shall state the number of shares of Registrable Securities to proposed to be registered by such Initiating Holders), the Company will:

(i) promptly give written notice of the proposed registration to all other Holders; and

(ii) as soon as practicable, file and use its commercially reasonable efforts to effect such registration (including, without limitation, filing post-effective amendments, appropriate qualifications under applicable blue sky or other state securities laws, and appropriate compliance with the Securities Act) and to permit or facilitate the sale and distribution of all or such portion of such Registrable Securities as are specified in such request, together with all or such portion of the Registrable Securities of any Holder or Holders joining in such request as are specified in a written request received by the Company within twenty (20) days after such written notice from the Company is mailed or delivered.

(b) ***Limitations on Requested Registration***. The Company shall not be obligated to effect, or to take any action to effect, any such registration pursuant to this Section 2.1:

(i) Prior to the earlier of (A) the five (5) year anniversary of the date of this Agreement or (B) one hundred eighty (180) days following the effective date of the first registration statement filed by the Company covering an Initial Public Offering (or the subsequent date on which all market stand-off agreements applicable to the offering have terminated);

(ii) If the Initiating Holders, together with the holders of any other securities of the Company entitled to inclusion in such registration statement, propose to sell Registrable Securities and such other securities (if any) the aggregate proceeds of which (after deduction for underwriter's discounts and expenses related to the issuance) are less than $10,000,000;

(iii) In any particular jurisdiction in which the Company would be required to execute a general consent to service of process in effecting such registration, qualification, or compliance, unless the Company is already subject to service in such jurisdiction and except as may be required by the Securities Act;

(iv) After the Company has initiated two (2) such registrations pursuant to this Section 2.1 (counting for these purposes only (x) registrations which have been declared or ordered effective and pursuant to which securities have been sold, and (y) Withdrawn Registrations);

(v) During the period starting with the date ninety (90) days prior to the Company's good faith estimate of the date of filing of and ending on a date ninety (90) days after the effective date of, a Company-initiated registration (or ending on the subsequent date on which all market stand-off agreements applicable to the offering have terminated); *provided* that if such registration is an Initial Public Offering the period shall end a date one hundred eighty (180) days after the effective date of such Initial Public Offering; *provided* further that the Company is actively employing in good faith commercially reasonable efforts to cause such registration statement to become effective, and *provided further*, that in the case of an Initial Public Offering, the Company delivers notice to the Holders of its intent to file a registration statement covering an Initial Public Offering within thirty (30) days of any request for registration made pursuant to Section 2.1(a) hereof;

(vi) If the Initiating Holders propose to dispose of shares of Registrable Securities that may be registered on Form S-3 pursuant to a request made under Section 2.3 hereof;

(vii) If the Initiating Holders do not request that such offering be firmly underwritten by underwriters selected by the Initiating Holders (subject to the consent of the Company); or

(viii) If the Company and the Initiating Holders are unable to obtain the commitment of the underwriter described in clause (b)(vii) above to firmly underwrite the offer.

(c) ***Deferral***. If (i) in the good faith judgment of the Board of Directors, the filing of a registration statement covering the Registrable Securities would be detrimental to the Company and the Board of Directors concludes, as a result, that it is in the best interests of the Company to defer the filing of such registration statement at such time, and (ii) the Company shall furnish to such Holders a certificate signed by the Chief Executive Officer of the Company stating that in the good faith judgment of the Board of Directors, it would be detrimental to the Company for such registration statement to be filed in the near future and that it is, therefore, in the best interests of the Company to defer the filing of such registration statement, then (in addition to the limitations set forth in Section 2.1(b)(v) hereof) the Company shall have the right to defer such filing for a period of not more than one hundred and twenty (120) days after receipt of the request of the Initiating Holders, and, *provided further*, that the Company shall not defer its obligation in this manner more than two (2) times in any twelve-month period.

(d) ***Other Shares***. The registration statement filed pursuant to the request of the Initiating Holders may, subject to the provisions of Section 2.1(e) hereof, include Other Shares, and may include securities of the Company being sold for the account of the Company.

(e) ***Underwriting***. The right of any Holder to include all or any portion of its Registrable Securities in a registration pursuant to this Section 2.1 shall be conditioned upon such Holder's participation in an underwriting and the inclusion of such Holder's Registrable Securities to the extent provided herein. If the Company shall request inclusion in any registration pursuant to Section 2.1 hereof of securities being sold for its own account, or if other persons shall request inclusion in any registration pursuant to Section 2.1 hereof, the Initiating Holders shall, on behalf of all Holders, offer to include such securities in the underwriting and such offer shall be conditioned upon the participation of the Company or such other persons in such underwriting and the inclusion of the Company's and such person's other securities of the Company and their acceptance of the further applicable provisions of this Section 2 (including Section 2.10 hereof). The Company shall (together with all Holders and other persons proposing to distribute their securities through such underwriting) enter into an underwriting agreement in customary form with the representative of the underwriter or underwriters selected for such underwriting by the Company, which underwriters are reasonably acceptable to a majority-in-interest of the Initiating Holders.

Notwithstanding any other provision of this Section 2.1, if the underwriters advise the Initiating Holders in writing that marketing factors require a limitation on the number of shares to be underwritten, the number of Registrable Securities and Other Shares that may be so included shall be allocated as follows: (i) first, among all Holders requesting to include Registrable Securities in such registration statement based on the *pro rata* percentage of Registrable Securities held by such Holders, assuming conversion; (ii) second, to the Other Selling Stockholders; and (iii) third, to the Company, which the Company may allocate, at its discretion, for its own account, or for the account of other holders or employees of the Company.

If a person who has requested inclusion in such registration as provided above does not agree to the terms of any such underwriting, such person shall be excluded therefrom by written notice from the Company, the underwriter or the Initiating Holders. The securities so excluded shall also be withdrawn from registration. Any Registrable Securities or other securities excluded or withdrawn from such underwriting shall also be withdrawn from such registration. If shares are so withdrawn from the registration and if the number of shares to be included in such registration was previously reduced as a result of marketing factors pursuant to this Section 2.1(e), then the Company shall then offer to all Holders and Other Selling Stockholders who have retained rights to include securities in the registration the right to include additional Registrable Securities or Other Shares in the registration in an aggregate amount equal to the number of shares so withdrawn, with such shares to be allocated among such Holders and Other Selling Stockholders requesting additional inclusion, as set forth above.

2.2 **Company Registration**.

(a) ***Company Registration***. If the Company shall determine to register any of its securities either for its own account or the account of a security holder or holders, other than a registration pursuant to Section 2.1 or 2.3 hereof, a registration relating solely to employee benefit plans, a registration relating to the offer and sale of debt securities, a registration relating to a corporate reorganization or other Rule 145 transaction, or a registration on any registration form that does not permit secondary sales, the Company will:

(i) promptly give written notice of the proposed registration to all Holders; and

(ii) use its commercially reasonable efforts to include in such registration (and any related qualification under blue sky laws or other compliance), except as set forth in Section 2.2(b) hereof, and in any underwriting involved therein, all of such Registrable Securities as are specified in a written request or requests made by any Holder or Holders received by the Company within ten (10) days after such written notice from the Company is mailed or delivered. Such written request may specify all or a part of a Holder's Registrable Securities.

(b) ***Underwriting***. If the registration of which the Company gives notice is for a registered public offering involving an underwriting, the Company shall so advise the Holders as a part of the written notice given pursuant to Section 2.2(a)(i) hereof. In such event, the right of any Holder to registration pursuant to this Section 2.2 shall be conditioned upon such Holder's participation in such underwriting and the inclusion of such Holder's Registrable Securities in the underwriting to the extent provided herein. All Holders proposing to distribute their securities through such underwriting shall (together with the Company, the Other Selling Stockholders and other holders of securities of the Company with registration rights to participate therein distributing their securities through such underwriting) enter into an underwriting agreement in customary form with the representative of the underwriter or underwriters selected by the Company.

Notwithstanding any other provision of this Section 2.2, if the underwriters advise the Company in writing that marketing factors require a limitation on the number of shares to be underwritten, the underwriters may (subject to the limitations set forth below) exclude all Registrable Securities from, or limit the number of Registrable Securities to be included in, the registration and underwriting. The Company shall so advise all holders of securities requesting registration, and the number of shares of securities that are entitled to be included in the registration and underwriting shall be allocated, as follows: (i) first, to the Company for securities being sold for its own account, (ii) second, to the Holders requesting to include Registrable Securities in such registration statement based on the *pro rata* percentage of Registrable Securities held by such Holders, assuming conversion, and (iii) third, to the Other Selling Stockholders requesting to include Other Shares in such registration statement based on *pro rata* percentage of Other Shares held by such Other Selling Stockholders, assuming conversion. Notwithstanding the foregoing, no such reduction shall reduce the value of the Registrable Securities of the Holders included in such registration below twenty five percent (25%) of the total value of securities included in such registration, unless such offering is the Company's Initial Public Offering and such registration does not include shares of any Other Selling Stockholders (excluding shares registered for the account of the Company), in which event any or all of the Registrable Securities of the Holders may be excluded.

If a person who has requested inclusion in such registration as provided above does not agree to the terms of any such underwriting, such person shall also be excluded therefrom by written notice from the Company or the underwriter. The Registrable Securities or other securities so excluded shall also be withdrawn from such registration. Any Registrable Securities or other securities excluded or withdrawn from such underwriting shall be withdrawn from such registration.

(c) ***Right to Terminate Registration***. The Company shall have the right to terminate or withdraw any registration initiated by it under this Section 2.2 prior to the effectiveness of such registration whether or not any Holder has elected to include securities in such registration.

2.3 **Registration on Form S-3**.

(a) ***Request for Form S-3 Registration***. After its initial public offering, the Company shall use its commercially reasonable efforts to qualify for registration on Form S-3 or any comparable or successor form or forms. After the Company has qualified for the use of Form S-3, in addition to the rights contained in the foregoing provisions of Section 2 hereof and subject to the conditions set forth in this Section 2.3, if the Company shall receive from a Holder or Holders of Registrable Securities a written request that the Company effect any registration on Form S-3 or any similar short form registration statement with respect to all or part of the Registrable Securities (such request shall state the number of shares of Registrable Securities to be disposed of and the intended methods of disposition of such shares by such Holder or Holders), the Company will take all such action with respect to such Registrable Securities as required by Sections 2.1(a)(i) and (ii) hereof.

(b) ***Limitations on Form S-3 Registration***. The Company shall not be obligated to effect, or take any action to effect, any such registration pursuant to this Section 2.3:

(i) In the circumstances described in either Sections 2.1(b)(i) hereof, 2.1(b)(iii) hereof, or 2.1(b)(v) hereof;

(ii) If the Holders, together with the holders of any other securities of the Company entitled to inclusion in such registration, propose to sell Registrable Securities and such other securities (if any) on Form S-3 at an aggregate price to the public of less than $1,000,000; or

(iii) If, in a given twelve-month period, the Company has effected two (2) such registrations in such period.

(c) ***Deferral***. The provisions of Section 2.1(c) hereof shall apply to any registration pursuant to this Section 2.3

(d) ***Underwriting***. If the Holders of Registrable Securities requesting registration under this Section 2.3 hereof intend to distribute the Registrable Securities covered by their request by means of an underwriting, the provisions of Section 2.1(e) hereof shall apply to such registration. Notwithstanding anything contained herein to the contrary, registrations effected pursuant to this Section 2.3 shall not be counted as requests for registration or registrations effected pursuant to Section 2.1 hereof.

2.4 **Expenses of Registration**. All Registration Expenses incurred in connection with registrations pursuant to Sections 2.1, 2.2 and 2.3 hereof shall be borne by the Company; *provided*, *however*, that the Company shall not be required to pay for any expenses of any registration proceeding begun pursuant to Sections 2.1 and 2.3 hereof if the registration request is subsequently withdrawn at the request of the Holders of a majority of the Registrable Securities to be registered or because a sufficient number of Holders shall have withdrawn so that the minimum offering conditions set forth in Sections 2.1 and 2.3 hereof are no longer satisfied (in which case all participating Holders shall bear such expenses *pro rata* among each other based on the number of Registrable Securities requested to be so registered), unless the Holders of a majority of the Registrable Securities agree to forfeit their right to a demand registration pursuant to Section 2.1 hereof; *provided*, *however*, in the event that a withdrawal by the Holders is based upon material adverse information relating to the Company that is different from the information known or available (upon request from the Company or otherwise) to the Holders requesting registration at the time of their request for registration under Section 2.1 hereof, such registration shall not be treated as a counted registration for purposes of Section 2.1 hereof, even though the Holders do not bear the Registration Expenses for such registration. All Selling Expenses relating to securities registered on behalf of the Holders shall be borne by the holders of securities included in such registration *pro rata* among each other on the basis of the number of Registrable Securities so registered.

2.5 **Registration Procedures**. In the case of each registration effected by the Company pursuant to Section 2 hereof, the Company will keep each Holder advised in writing as to the initiation of each registration and as to the completion thereof. At its expense, the Company will use its commercially reasonable efforts to:

(a) Keep such registration effective for a period of up to one hundred twenty (120) days or, if earlier, until the distribution contemplated in the registration statement has been completed; provided, however, that (i) such one hundred twenty (120) day period shall be extended for a period of time equal to the period the Holder refrains, at the request of an underwriter of Common Stock (or other securities) of the Company, from selling any securities included in such registration, and (ii) in the case of any registration of Registrable Securities on Form S-3 that are intended to be offered on a continuous or delayed basis, subject to compliance with applicable SEC rules, such one hundred twenty (120) day period shall be extended for up to one hundred eighty (180) days, if necessary, to keep the registration statement effective until all such Registrable Securities are sold;

(b) Prepare and file with the Commission such amendments and supplements to such registration statement and the prospectus used in connection with such registration statement as may be necessary to comply with the provisions of the Securities Act with respect to the disposition of all securities covered by such registration statement for the period set forth in Section 2.5(a) hereof;

(c) Furnish such number of prospectuses, including any preliminary prospectuses, and other documents incident thereto, including any amendment of or supplement to the prospectus, as a Holder from time to time may reasonably request;

(d) Register and qualify the securities covered by such registration statement under such other securities or Blue Sky laws of such jurisdiction as shall be reasonably requested by the Holders; *provided*, that the Company shall not be required in connection therewith or as a condition thereto to qualify to do business or to file a general consent to service of process in any such states or jurisdictions;

(e) Notify each seller of Registrable Securities covered by such registration statement at any time when a prospectus relating thereto is required to be delivered under the Securities Act of the happening of any event as a result of which the prospectus included in such registration statement, as then in effect, includes an untrue statement of a material fact or omits to state a material fact required to be stated therein or necessary to make the statements therein not misleading or incomplete in light of the circumstances then existing, and following such notification promptly prepare and furnish to such seller a reasonable number of copies of a supplement to or an amendment of such prospectus as may be necessary so that, as thereafter delivered to the purchasers of such shares, such prospectus shall not include an untrue statement of a material fact or omit to state a material fact required to be stated therein or necessary to make the statements therein not misleading or incomplete in light of the circumstances then existing;

(f) Provide a transfer agent and registrar for all Registrable Securities registered pursuant to such registration statement and a CUSIP number for all such Registrable Securities, in each case not later than the effective date of such registration;

(g) Cause all such Registrable Securities registered pursuant hereunder to be listed on each securities exchange on which similar securities issued by the Company are then listed; and

(h) In connection with any underwritten offering pursuant to a registration statement filed pursuant to Section 2.1 hereof, enter into an underwriting agreement in form reasonably necessary to effect the offer and sale of Common Stock, *provided* such underwriting agreement contains reasonable and customary provisions, and *provided further*, that each Holder participating in such underwriting shall also enter into and perform its obligations under such an agreement.

2.6 **Indemnification**.

(a) To the extent permitted by law, the Company will indemnify and hold harmless each Holder, each of its officers, Directors and partners, legal counsel and accountants and each person controlling such Holder within the meaning of Section 15 of the Securities Act, with respect to which registration, qualification or compliance has been effected pursuant to Section 2 hereof, and each underwriter, if any, and each person who controls within the meaning of Section 15 of the Securities Act any underwriter, against all expenses, claims, losses, damages and liabilities (or actions, proceedings or settlements in respect thereof) arising out of or based on: (i) any untrue statement (or alleged untrue statement) of a material fact contained or incorporated by reference in any registration statement, any prospectus included in the registration statement, any issuer free writing prospectus (as defined in Rule 433 of the Securities Act), any issuer information (as defined in Rule 433 of the Securities Act) filed or required to be filed pursuant to Rule 433(d) under the Securities Act or any other document incident to any such registration, qualification or compliance prepared by or on behalf of the Company or used or referred to by the Company, (ii) any omission (or alleged omission) to state therein a material fact required to be stated therein or necessary to make the statements therein not misleading, or (iii) any violation (or alleged violation) by the Company of the Securities Act, any state securities laws or any rule or regulation thereunder applicable to the Company and relating to action or inaction required of the Company in connection with any offering covered by such registration, qualification or compliance, and the Company will reimburse each such Holder, each of its officers, Directors, partners, legal counsel and accountants and each person controlling such Holder, each such underwriter and each person who controls any such underwriter, for any legal and any other expenses reasonably incurred in connection with investigating and defending or settling any such claim, loss, damage, liability or action; *provided* that the Company will not be liable in any such case to the extent that any such claim, loss, damage, liability, or action arises out of or is based on any untrue statement or omission based upon written information furnished to the Company by such Holder, any of such Holder's officers, Directors, partners, legal counsel or accountants, any person controlling such Holder, such underwriter or any person who controls any such underwriter, and stated to be specifically for use therein; and *provided*, *further* that, the indemnity agreement contained in this Section 2.6(a)shall not apply to amounts paid in settlement of any such loss, claim, damage, liability or action if such settlement is effected without the consent of the Company (which consent shall not be unreasonably withheld).

(b) To the extent permitted by law, each Holder will, if Registrable Securities held by such Holder are included in the securities as to which such registration, qualification or compliance is being effected, indemnify and hold harmless the Company, each of its Directors, officers, partners, legal counsel and accountants and each underwriter, if any, of the Company's securities covered by such a registration statement, each person who controls the Company or such underwriter within the meaning of Section 15 of the Securities Act, each other such Holder, and each of their officers, Directors and partners, and each person controlling each other such Holder, against all claims, losses, damages and liabilities (or actions in respect thereof) arising out of or based on: (i) any untrue statement (or alleged untrue statement) of a material fact contained or incorporated by reference in any prospectus, offering circular or other document (including any related registration statement, notification, or the like) incident to any such registration, qualification or compliance, or (ii) any omission (or alleged omission) to state therein a material fact required to be stated therein or necessary to make the statements therein not misleading, and will reimburse the Company and such Holders, Directors, officers, partners, legal counsel and accountants, persons, underwriters, or control persons for any legal or any other expenses reasonably incurred in connection with investigating or defending any such claim, loss, damage, liability or action, in each case to the extent, but only to the extent, that such untrue statement (or alleged untrue statement) or omission (or alleged omission) is made in such registration statement, prospectus, offering circular or other document in reliance upon and in conformity with written information furnished to the Company by such Holder and stated to be specifically for use therein; *provided*, *however*, that the obligations of such Holder hereunder shall not apply to amounts paid in settlement of any such claims, losses, damages or liabilities (or actions in respect thereof) if such settlement is effected without the consent of such Holder (which consent shall not be unreasonably withheld); and provided that in no event shall any indemnity under this Section 2.6 exceed the net proceeds from the offering received by such Holder, except in the case of fraud or willful misconduct by such Holder.

(c) Each party entitled to indemnification under this Section 2.6 (the "**Indemnified Party**") shall give notice to the party required to provide indemnification (the "**Indemnifying Party**") promptly after such Indemnified Party has actual knowledge of any claim as to which indemnity may be sought, and shall permit the Indemnifying Party to assume the defense of such claim or any litigation resulting therefrom; *provided* that counsel for the Indemnifying Party, who shall conduct the defense of such claim or any litigation resulting therefrom, shall be approved by the Indemnified Party (whose approval shall not be unreasonably withheld), and the Indemnified Party may participate in such defense at such party's expense; and *provided further* that the failure of any Indemnified Party to give notice as provided herein shall not relieve the Indemnifying Party of its obligations under this Section 2.6, to the extent such failure is not prejudicial. No Indemnifying Party, in the defense of any such claim or litigation, shall, except with the consent of each Indemnified Party, consent to entry of any judgment or enter into any settlement that does not include as an unconditional term thereof the giving by the claimant or plaintiff to such Indemnified Party of a release from all liability in respect to such claim or litigation. Each Indemnified Party shall furnish such information regarding itself or the claim in question as an Indemnifying Party may reasonably request in writing and as shall be reasonably required in connection with defense of such claim and litigation resulting therefrom.

(d) If the indemnification provided for in this Section 2.6 is held by a court of competent jurisdiction to be unavailable to an Indemnified Party with respect to any loss, liability, claim, damage, or expense referred to herein, then the Indemnifying Party, in lieu of indemnifying such Indemnified Party hereunder, shall contribute to the amount paid or payable by such Indemnified Party as a result of such loss, liability, claim, damage, or expense in such proportion as is appropriate to reflect the relative fault of the Indemnifying Party on the one hand and of the Indemnified Party on the other in connection with the statements or omissions that resulted in such loss, liability, claim, damage, or expense as well as any other relevant equitable considerations. The relative fault of the Indemnifying Party and of the Indemnified Party shall be determined by reference to, among other things, whether the untrue or alleged untrue statement of a material fact or the omission to state a material fact relates to information supplied by the Indemnifying Party or by the Indemnified Party and the parties' relative intent, knowledge, access to information, and opportunity to correct or prevent such statement or omission. No person or entity will be required under this Section 2.6(d) to contribute any amount in excess of the net proceeds from the offering received by such person or entity, except in the case of fraud or willful misconduct by such person or entity. No person or entity guilty of fraudulent misrepresentation (within the meaning of Section 11 (f) of the Securities Act) will be entitled to contribution from any person or entity who was not guilty of such fraudulent misrepresentation.

(e) Notwithstanding the foregoing, to the extent that the provisions on indemnification and contribution contained in the underwriting agreement entered into in connection with the underwritten public offering are in conflict with the foregoing provisions, the provisions in the underwriting agreement shall control.

2.7 **Information by Holder**. Each Holder of Registrable Securities shall furnish to the Company such information regarding such Holder and the distribution proposed by such Holder as the Company may reasonably request in writing and as shall be reasonably required in connection with any registration, qualification, or compliance referred to in Section 2 hereof.

2.8 **Restrictions on Transfer**.

(a) The holder of each certificate representing Registrable Securities by acceptance thereof shall comply in all respects with the provisions of this Section 2.8. Each Holder agrees not to make any sale, assignment, transfer, pledge or other disposition of all or any portion of the Restricted Securities, or any beneficial interest therein, unless and until the transferee thereof has agreed in writing for the benefit of the Company to take and hold such Restricted Securities subject to, and to be bound by, the terms and conditions set forth in this Agreement, including, without limitation, this Section 2.8 and Section 2.10 hereof, and:

(i) There is then in effect a registration statement under the Securities Act covering such proposed disposition and the disposition is made in accordance with the registration statement; or

(ii) The Holder shall have given prior written notice to the Company of the Holder's intention to make such disposition and shall have furnished the Company with a detailed description of the manner and circumstances of the proposed disposition, and the Holder shall have furnished the Company, at the Holder's expense, with (i) an opinion of counsel (which, for the avoidance of doubt, may include such Holder's in-house legal counsel), reasonably satisfactory to the Company, to the effect that such disposition will not require registration of such Restricted Securities under the Securities Act or (ii) a "no action" letter from the Commission to the effect that the transfer of such securities without registration will not result in a recommendation by the staff of the Commission that action be taken with respect thereto, whereupon the holder of such Restricted Securities shall be entitled to transfer such Restricted Securities in accordance with the terms of the notice delivered by the Holder to the Company.

(b) Each certificate representing Registrable Securities shall (unless otherwise permitted by the provisions of this Agreement) be stamped or otherwise imprinted with a legend substantially similar to the following (in addition to any legend required under applicable state securities laws):

> THE SECURITIES REPRESENTED HEREBY HAVE NOT BEEN REGISTERED UNDER THE SECURITIES ACT OF 1933, AS AMENDED (THE "**ACT**"), OR UNDER THE SECURITIES LAWS OF CERTAIN STATES. THESE SECURITIES MAY NOT BE OFFERED, SOLD OR OTHERWISE TRANSFERRED, PLEDGED OR HYPOTHECATED EXCEPT AS PERMITTED UNDER THE ACT AND APPLICABLE STATE SECURITIES LAWS PURSUANT TO REGISTRATION OR AN EXEMPTION THEREFROM. THE ISSUER OF THESE SECURITIES MAY REQUIRE AN OPINION OF COUNSEL REASONABLY SATISFACTORY TO THE ISSUER THAT SUCH OFFER, SALE OR TRANSFER, PLEDGE OR HYPOTHECATION OTHERWISE COMPLIES WITH THE ACT AND ANY APPLICABLE STATE SECURITIES LAWS.
>
> THE SHARES REPRESENTED BY THIS CERTIFICATE ARE SUBJECT TO RESTRICTIONS ON TRANSFERABILITY AND RESALE, INCLUDING A LOCK-UP PERIOD IN THE EVENT OF A PUBLIC OFFERING, AS SET FORTH IN AN INVESTORS' RIGHTS AGREEMENT AMONG THE COMPANY AND THE ORIGINAL HOLDERS OF THESE SHARES, COPIES OF WHICH MAY BE OBTAINED AT THE PRINCIPAL OFFICE OF THE COMPANY.

The Holders consent to the Company making a notation on its records and giving instructions to any transfer agent of the Restricted Securities in order to implement the restrictions on transfer established in this Section 2.8.

(c) The first legend referring to federal and state securities laws identified in Section 2.8(b) hereof stamped on a certificate evidencing the Restricted Securities and the stock transfer instructions and record notations with respect to the Restricted Securities shall be removed and the Company shall issue a certificate without such legend to the holder of Restricted Securities if (i) those securities are registered under the Securities Act, or (ii) the holder provides the Company with an opinion of counsel reasonably acceptable to the Company to the effect that a sale or transfer of those securities may be made without registration or qualification.

2.9 **Rule 144 Reporting**. With a view to making available the benefits of certain rules and regulations of the Commission that may permit the sale of the Restricted Securities to the public without registration, the Company shall use its commercially reasonable efforts to:

(a) Make and keep adequate current public information with respect to the Company available in accordance with Rule 144 under the Securities Act, at all times from and after ninety (90) days following the effective date of the first registration under the Securities Act filed by the Company for an offering of its securities to the general public;

(b) File with the Commission in a timely manner all reports and other documents required of the Company under the Securities Act and the Exchange Act at any time after it has become subject to such reporting requirements; and

(c) So long as a Holder owns any Restricted Securities, furnish to the Holder forthwith upon written request a written statement by the Company as to its compliance with the reporting requirements of Rule 144 (at any time from and after ninety (90) days following the effective date of the first registration statement filed by the Company for an offering of its securities to the general public), and of the Securities Act and the Exchange Act (at any time after it has become subject to such reporting requirements), a copy of the most recent annual or quarterly report of the Company, and such other reports and documents so filed as a Holder may reasonably request in availing itself of any rule or regulation of the Commission allowing a Holder to sell any such securities without registration.

2.10 **Market Stand-Off Agreement**. Each Holder shall not sell or otherwise transfer, make any short sale of, grant any option for the purchase of, or enter into any hedging or similar transaction with the same economic effect as a sale, of any Common Stock (or other securities) of the Company held by such Holder (other than those included in the registration) during the one hundred and eighty (180) day period following the effective date of a registration statement of the Company filed under the Securities Act for its Initial Public Offering (or such other period as may be requested by the Company or an underwriter to accommodate regulatory restrictions on (i) the publication or other distribution of research reports and (ii) analyst recommendations and opinions, including, but not limited to, the restrictions contained in NASD Rule 2711(f)(4) or NYSE Rule 472(f)(4), or any successor provisions or amendments thereto), *provided* that all officers and Directors of the Company and all holders (other than the Holders) of at least one percent (1%) of the Company's voting securities are bound by and have entered into similar agreements. The obligations described in this Section 2.10 shall not apply to (a) a registration relating solely to employee benefit plans on Form S-1 or Form S-8 or similar forms that may be promulgated in the future, (b) a registration relating solely to a transaction on Form S-4 or

similar forms that may be promulgated in the future or (c) Common Stock (or other securities) of the Company acquired in the Initial Public Offering or in open market transactions on or after the public offering date set forth on the final prospectus used to sell shares of the Company's Common Stock in its Initial Public Offering. The Company may impose stop-transfer instructions and may stamp each such certificate with the second legend set forth in Section 2.8(b) hereof with respect to the shares of Common Stock (or other securities) subject to the foregoing restriction until the end of such one hundred and eighty (180) day, or other period. Each Holder shall execute a market standoff agreement with said underwriters in customary form consistent with the provisions of this Section 2.10.

2.11 **Delay of Registration**. No Holder shall have any right to take any action to restrain, enjoin, or otherwise delay any registration as the result of any controversy that might arise with respect to the interpretation or implementation of Section 2 hereof.

2.12 **Transfer or Assignment of Registration Rights**. The rights to cause the Company to register securities granted to a Holder by the Company under Section 2 hereof may be transferred or assigned by a Holder only to (i) a transferee or assignee of not less than 250,000 shares of Registrable Securities (as presently constituted and subject to subsequent adjustments for stock splits, stock dividends, reverse stock splits, and the like), (ii) a constituent partner or a retired partner, or the estate of any such partner, of a Holder that is a partnership; (iii) a member or a retired member, or the estate of any such member, of a Holder that is a limited liability company; (iv) a spouse, ex-spouse, domestic partner, lineal descendant or antecedent, brother or sister, the adopted child or adopted grandchild, or the spouse or domestic partner of any child, adopted child, grandchild or adopted grandchild of a Holder that is an individual, or to a trust or trusts for the exclusive benefit of such Holder or Holder's family, or (v) any Affiliate of a Holder; *provided* that (x) such transfer or assignment of Registrable Securities is effected in accordance with the terms of Section 2.8 hereof, the Amended and Restated Co-Sale Agreement of even date herewith between the Company and its stockholders party thereto, and applicable securities laws, (y) the Company is given written notice prior to said transfer or assignment, stating the name and address of the transferee or assignee and identifying the securities with respect to which such registration rights are intended to be transferred or assigned, and (iii) the transferee or assignee of such rights assumes in writing the obligations of such Holder under this Agreement, including without limitation the obligations set forth in Section 2.10 hereof.

2.13 **Limitations on Subsequent Registration Rights**. From and after the date of this Agreement, the Company shall not, without the prior written consent of Holders holding a majority of the Registrable Securities, enter into any agreement with any holder or prospective holder of any securities of the Company giving such holder or prospective holder any registration rights the terms of which are senior to the registration rights granted to the Holders hereunder.

2.14 **Termination of Registration Rights**. The right of any Holder to request registration or inclusion in any registration pursuant to Sections 2.1, 2.2 or 2.3 hereof shall terminate on the earlier of (i) such date, on or after the closing of the Company's first registered public offering of Common Stock, on which all shares of Registrable Securities held or entitled to be held upon conversion by such Holder may immediately be sold under Rule 144 during any ninety (90) day period and (ii) three (3) years after the closing of the Company's Initial Public Offering.

SECTION 3

COVENANTS OF THE COMPANY

The Company hereby covenants and agrees, as follows:

3.1 **Basic Financial Information and Inspection Rights**.

(a) ***Annual Financial Information***. The Company will furnish the following reports to each Holder:

(i) As soon as practicable after the end of each fiscal year of the Company, and in any event within one hundred and eighty (180) days after the end of each fiscal year of the Company, (a) audited consolidated balance sheets and audited consolidated statements of income, stockholders' equity and cash flows of the Company as of the end of such fiscal year, prepared in accordance with generally accepted accounting principles consistently applied and certified by independent public accountants of regionally recognized standing selected by the Company and (b) as soon as practicable after the end of the fiscal year of the Company, and in any event within thirty (30) days after the end of each fiscal year of the Company, an unaudited consolidated balance sheet of the Company and its subsidiaries, if any, as at the end of such fiscal year, and unaudited consolidated statements of income, stockholders' equity and cash flows of the Company and its subsidiaries, if any, for such year, prepared in accordance with U.S. generally accepted accounting principles consistently applied;

(b) ***Interim Financial Information***. The Company will furnish the following reports to each Holder who at the time of such furnishing holds Registrable Securities representing at least two and a half percent (2.5%) of the capitalization of the Company on a fully-diluted and as converted to Common Stock basis (the "**Significant Holders**"):

(i) As soon as practicable after the end of the first, second and third quarterly accounting periods in each fiscal year of the Company, and in any event within thirty (30) days after the end of the first, second, and third quarterly accounting periods in each fiscal year of the Company, an unaudited consolidated balance sheet of the Company and its subsidiaries, if any, as of the end of each such quarterly period, and unaudited consolidated statements of income and cash flows of the Company and its subsidiaries, if any, for such period, prepared in accordance with U.S. generally accepted accounting principles consistently applied, subject to changes resulting from normal year-end audit adjustments; and

(ii) As soon as practicable after the end of each calendar month, and in any event within thirty (30) days thereafter, unaudited consolidated balance sheets of the Company as of the end of each calendar month, and consolidated statements of income and cash flow for such period.

3.2 **Inspection**. The Company shall permit each Significant Holder (except for a Significant Holder deemed by a majority of the disinterested then-serving Directors, in good faith to be a then-current competitor of the Company), at such Holder's expense, to visit and inspect the Company's properties, to examine its books of account and records and to discuss the

Company's affairs, finances and accounts with its officers, all at such reasonable times as may be requested by the Holder. The Company shall not be obligated to provide information to any Holder, whether in written or other form, relating to a specified matter or document if (a) the Company receives advice from its legal counsel that there is a substantial risk that providing such specific documentation to, or discussing such specific matter or document in the presence of, a person who is not a member of the Board of Directors, could result in the Company's loss of attorney-client privilege with respect to such matter or documents, or (b) the Board of Directors, by a decision in good faith by at least a majority of the disinterested then-serving Directors, after reasonable consultation as to such matter by the Chief Executive Officer with such Holder, reasonably believes that such specified matter relates directly and substantially to any matter in which both the Company and the Holder have a material business or financial interest (as to Holder, other than solely by reason of the Holder's interest as a stockholder of the Company), or (c) the Board of Directors, by a decision in good faith by at least a majority of the disinterested then-serving Directors, after consultation by the Chief Executive Officer with the Company's legal counsel, believes that such specified matter involves confidential or sensitive information related to the business of the Company the disclosure of which by the Company to such Holder would or could be adverse to the interests of the Company and its stockholders.

3.3 **Confidentiality**. Each Investor will keep confidential and will not disclose, divulge, or use for any purpose (other than to monitor its investment in the Company) any confidential information obtained from the Company pursuant to the terms of this Agreement (including notice of the Company's intention to file a registration statement), unless such confidential information (a) is known or becomes known to the public in general (other than as a result of a breach of this Section 3.3 by such Investor), (b) is or has been independently developed or conceived by the Investor without use of the Company's confidential information as shown by the Investor's contemporaneous records, or (c) is or has been made known or disclosed to the Investor by a third party without a breach of any obligation of confidentiality to the Company; provided, however, that an Investor may disclose confidential information (i) to its attorneys, accountants, consultants, and other professionals to the extent necessary to obtain their services in connection with monitoring such Investor's investment in the Company; (ii) to any prospective purchaser of any Registrable Securities from such Investor, if such prospective purchaser is determined, by a decision in good faith by at least a majority of the disinterested then-serving Directors, to not be a then-current competitor of the Company, and such prospective purchaser agrees as a condition of such purchase of Registrable Securities to be bound by the provisions of this Section 3.3 hereof; (iii) to any existing or prospective Affiliate, partner, member, stockholder, or wholly owned subsidiary of such Investor who has not been determined by the Board of Directors, as set forth under clause (ii) of this Section 3.3, to be a competitor to the Company, provided that such Investor informs such person that such information is confidential and directs such person to maintain the confidentiality of such information; or (iv) as may otherwise be required by law, provided that before such required disclosure, the Investor promptly shall notify the Company in writing of the nature and timing of any such required disclosure prior to such disclosure, and shall take reasonable steps to minimize the extent of any such required disclosure.

3.4 **Invention Assignment Agreements**. The Company shall require each employee of the Company to execute a customary confidential information and invention assignment agreement as a condition of employment, and each consulting agreement by the Company shall contain customary provisions as to consultant invention assignment and confidentiality, unless in each case otherwise approved by the Required Director Approval.

3.5 **[RESERVED]**.

3.6 **[RESERVED].**

3.7 **Stock Vesting; Repurchase Price**. Unless otherwise approved by the Required Director Approval, the exercisability schedule for options granted under the Company's Amended and Restated 2012 Equity Incentive Plan (the "**Equity Incentive Plan**") which are not immediately exercisable shall be, or the vesting schedule for ratable lapsing of the Company's right of repurchase of shares from the optionee or awardee thereof on termination of services, shall be as follows, (with "vest" meaning to become exercisable, as to options that become exercisable over time, or to become no longer subject to repurchase by the Company as to immediately exercisable options, or stock awards, in each case with a lapsing vesting right of the Company to repurchase shares thereunder on such termination):

(a) 25% of the total number of shares initially under such option or award, rounded downward to the nearest whole share to account for vesting, at the rate of 1/48th per month (2.0833%), will vest on the 12-month anniversary of the vesting start (or "commencement") date of such option or grant as approved by the Board of Directors, or Committee thereof delegated by the Board of Directors the authority to grant stock options and awards under the Equity Incentive Plan, and

(b) The remaining shares under such option or award shall vest as to 2.0833% (1/48th) of the total number of shares initially under such option or award at each of the 36 monthly anniversaries occurring sequentially after such 12-month anniversary, rounded downward to the nearest whole share as to the relevant monthly anniversary as may be necessary to avoid fractional shares, for the first 35 such monthly anniversaries succeeding such twelvemonth anniversary, and for the balance of such shares under such option at the 48th monthly anniversary of such relevant vesting start date, provided at such 12-month anniversary, and at each succeeding monthly anniversary, such optionee still is then employed by, or is acting as a consultant to, the Company, as determined under the Equity Incentive Plan, and provided that all stock options and stock awards to full-time level of Vice President and above that are subject to vesting will also be subject to acceleration provisions to provide for acceleration of vesting upon a termination without cause within six (6) months following a change of control transaction, as "change of control" will be defined in the Equity Incentive Plan.

Except as may be otherwise approved by a Required Director Approval, each immediately exercisable option or award granted under the Equity Incentive Plan will provide that unvested shares will be purchasable by the Company upon the optionee's termination of service at the lower of (a) for immediately exercisable options, the exercise price of the option, or for awards, the original purchase price of such shares, and (b) the fair market value of such shares at such termination date as is determined by the Board of Directors or a Committee thereof.

3.8 **Board Meetings; Committees**. The Board of Directors shall hold at least six (6) meetings each calendar year, unless otherwise agreed by a majority of the Board of Directors. The Company shall promptly reimburse in full each Director of the Company who is not an employee of the Company for all of his or her reasonable out-of-pocket expense incurred in attending each meeting of the Board of Directors or any committee thereof, or otherwise supporting the activities of the Company, in accordance with the Company's travel policy approved by the Board of Directors. Each committee of the Board of Directors shall include at least one Series A Director and, at the election of the Series B Director, the Series B Director. One Series A Director and the Series B Director shall have the right to serve on any and all committees of the Board of Directors and each Director shall have the right to attend, as an observer, all meetings of the Company's Scientific Advisory Board and any other similar advisory boards.

3.9 **Board Observer Rights**. So long as Alta Partners VIII, LP or an Affiliate thereof ("**Alta**") holds at least 250,000 shares of Preferred Stock (as adjusted for stock splits, combinations, reorganizations and the like) the Company shall allow Alta to designate one (1) observer (the "**Alta Observer**") to attend all regular meetings of the Board of Directors and committees thereof in a nonvoting capacity. So long as RiverVest Venture Fund II, L.P. or an Affiliate thereof ("**RiverVest**") holds at least 250,000 shares of Preferred Stock (as adjusted for stock splits, combinations, reorganizations and the like) the Company shall allow RiverVest to designate one (1) observer (the "**RiverVest Observer**") to attend all regular meetings of the Board of Directors and committees thereof in a nonvoting capacity. So long as Roche Finance Ltd or an Affiliate thereof ("**Roche**") holds at least 250,000 shares of Preferred Stock (as adjusted for stock splits, combinations, reorganizations and the like) the Company shall allow Roche to designate one (1) observer (the "**Roche Observer**") to attend all regular meetings of the Board of Directors and committees thereof in a nonvoting capacity. In connection with the observer rights set forth in this Section 3.9, the Company shall give the Alta Observer, the RiverVest Observer and the Roche Observer copies of all notices, minutes, consents and other materials, financial or otherwise, which the Company provides to the Board of Directors, all of which information shall be deemed by the recipient thereof to be confidential information of the Company unless such information is otherwise confirmed in writing by the Company to such recipient to not be confidential to the Company; provided, however that the Company reserves the right to exclude the Alta Observer, and/or the RiverVest Observer and/or the Roche Observer from access to any material or meeting or portion thereof if the Board of Directors determines (a) by a decision in good faith by at least a majority of the then-serving Directors, and upon advice from its legal counsel, that there is a substantial risk that such individual observer's presence during such portion of the relevant meeting could result in the Company's loss of attorney-client privilege with respect to such matter or documents, (b) by a decision in good faith by at least a majority of the then-serving Directors, after reasonable consultation as to such matter by the Chief Executive Officer with such observer, reasonably believes that such specified matter relates directly and substantially to any matter in which both the Company and the observer entity have a material business or financial interest (as to such observer entity, other than solely by reason of the observer entity's interest as a stockholder of the Company) or such matter creates a conflict of interest for such observer entity, or (c) by a decision in good faith by at least a majority of the then-serving Directors, after consultation by the Chief Executive Officer with the Company's legal counsel, that such specified matter involves confidential or sensitive information related to the business of the Company the disclosure of which by the Company to such observer entity would or could be adverse to the interests of the Company and its stockholders.

3.10 **Directors and Officers Insurance**. To the extent such coverage remains available on commercially reasonable terms, the Company shall maintain from financially sound and reputable insurers, customary Directors and officers insurance covering the Directors and their affiliated funds and the officers of the Company, in the amount of at least $2,000,000 and subject to further approval by the Board of Directors, the Company shall increase such coverage immediately prior to the Initial Public Offering to at least $5,000,000.

3.11 **Additional Covenants of the Company**. The Company shall not (whether by amendment, merger or otherwise) take any of the following actions without the Required Director Approval:

(a) take any action set forth in Article V, Section 6 of the Restated Certificate;

(b) approve all budgets and operating plans of the Company;

(c) approve all preclinical trial and clinical trial plans;

(d) amend the Equity Incentive Plan or increase or decrease the authorized number of shares reserved under the Equity Incentive Plan or create, amend or reserve any shares under all other equity incentive plans of the Company, including any change to the normal vesting schedule for stock options or stock awards as set forth in Section 3.5 hereof;

(e) issue any securities listed in Article V, Section 4(d)(i) of the Restated Certificate;

(f) exclude any securities from any offering by the Company which the Right of First Refusal as set forth in Section 4 hereof would apply;

(g) license all or substantially all of the assets of the Company;

(h) make any loan or advance to, or own any stock or other securities of, any subsidiary or other corporation, partnership, or other entity unless it is wholly owned by the Company;

(i) make any loan or advance to any person, including any employee or Director, except advances and similar expenditures in the ordinary course of business or under the terms of an employee stock or option plan approved by the Board of Directors;

(j) guarantee any indebtedness except for trade accounts of the Company or any subsidiary arising in the ordinary course of business;

(k) make any investment other than in accordance with the investment policy approved by the Board of Directors;

(l) make any single expenditure that is not included in the budget and is in excess of a threshold amount determined by the Board of Directors;

(m) incur any aggregate indebtedness note already included in a budget that has been approved by the Required Director Approval that is in excess of a threshold amount to be determined by the Board of Directors;

(n) exceed the expenses contemplated in the budget approved by the Board of Directors for such year that is in excess of a threshold amount to be determined by the Board of Directors;

(o) approve any material revisions to the then current business plan of the Company;

(p) enter into or be a party to any material transaction with any Affiliate of the Company or any Director, officer or employee of the Company or any "associate" (as defined in Rule 12b-2 promulgated under the Exchange Act) of any such person;

(q) hire, fire or change the compensation of any executive officer of the Company (vice president level and above);

(r) change the principal business of the Company;

(s) make any material change in the Company's then-current line(s) of business or business model, or enter any new lines(s) of business, or exit any then-current line of business;

(t) sell, transfer, license, pledge or encumber technology or intellectual property, other than licenses granted in the ordinary course of business;

(u) make any material investments into, or enter into any joint venture with, or acquire any third party or acquire all of substantially all of any third party's assets; or

(v) prepare or file for an Initial Public Offering.

3.12 **Termination of Covenants**. The covenants set forth in Section 3 hereof shall terminate and be of no further force and effect upon the earlier of the closing of the Company's Qualified IPO or a Liquidation Event.

SECTION 4

RIGHT OF FIRST REFUSAL

4.1 **Right of First Refusal to Holders**. The Company hereby grants to each Holder the right of first refusal (the "**Right of First Refusal**") to purchase its Pro Rata Share of New Securities (as defined in Section 4.1(a) hereof) which the Company may, from time to time, propose to sell and issue after the date of this Agreement. A Holder's "**Pro Rata Share**", for purposes of this Right of First Refusal, is equal to the ratio of (i) the number of shares of

Common Stock owned by such Holder immediately prior to the issuance of New Securities (assuming full conversion of the Preferred Stock and full conversion or exercise of all outstanding convertible securities, rights, options and warrants held by such Holder) to (ii) the total number of shares of Common Stock outstanding immediately prior to the issuance of New Securities (assuming full conversion of the Preferred Stock and full conversion or exercise of all outstanding convertible securities, rights, options and warrants and all securities reserved for issuance under the Company's stock plans). This Right of First Refusal shall be subject to the following provisions:

(a) "***New Securities***" means any capital stock (including Common Stock and/or Preferred Stock) of the Company whether now authorized or not, and rights, convertible securities, options or warrants to purchase such capital stock, and securities of any type whatsoever that are, or may become, exercisable or convertible into capital stock; *provided* that the term "**New Securities**" does not include (i) any securities that are not deemed to be "Additional Shares of Common" pursuant to Article V, Section 4(d)(i) of the Restated Certificate, (ii) any shares of Series B Preferred Stock issued pursuant to the Stock Purchase Agreement (iii) or any shares excluded by the Required Director Approval.

(b) In the event the Company proposes to undertake an issuance of New Securities, it shall give each Holder written notice of its intention, describing the type of New Securities, and their price and the general terms upon which the Company proposes to issue the same. Each Holder shall have twenty (20) days after any such notice is mailed or delivered to agree to purchase such Holder's Pro Rata Share of such New Securities for the price and upon the terms specified in the notice by giving written notice to the Company, in substantially the form attached as Schedule I, and stating therein the quantity of New Securities to be purchased.

(c) In the event that following the exercise of the Right of First Refusal by the Holders described in Section 4.1(b) hereof there are any New Securities which have not been subscribed for within such ten- (10-) day period, the Company shall promptly, in writing, inform each Holder which purchases all the shares available to it ("**Fully-Exercising Holder**") of any other Holder's failure to do likewise or that all such New Securities have been subscribed for. During the ten (10) day period commencing after receipt by the Fully-Exercising Holder of such information, each Fully-Exercising Holder shall be entitled to subscribe for and purchase that portion of the New Securities for which Holders were entitled to subscribe but which were not subscribed for by the Holders, which is equal to the ratio of (a) the number of shares of Common Stock owned by such Fully-Exercising Holder immediately prior to the issuance of New Securities (assuming full conversion of the Preferred Stock to Common Stock and full conversion or exercise, as relevant, of all outstanding convertible securities, rights, options and warrants held by such Fully-Exercising Holder) to (b) the total number of shares of Common Stock owned by all such Fully-Exercising Holders immediately prior to the issuance of New Securities (assuming full conversion of the Preferred Stock and full conversion or exercise, as relevant, of all outstanding convertible securities, rights, options and warrants held by such Fully-Exercising Holder) who desire to purchase any or all of such unsubscribed New Securities.

(d) In the event the Holders fail to exercise fully the Right of First Refusal within said twenty (20) day period (the "**Election Period**"), the Company shall have ninety (90) days thereafter to sell or enter into an agreement (pursuant to which the sale of New Securities covered thereby shall be closed, if at all, within ninety (90) days from the date of said agreement) to sell that portion of the New Securities with respect to which the Holders' Right of First Refusal option set forth in this Section 4.1 was not exercised, at a price and upon terms no more favorable to the purchasers thereof than specified in the Company's notice to Holders delivered pursuant to Section 4.1(b) hereof. In the event the Company has not sold within such ninety (90) day period following the Election Period, or such ninety (90) day period following the date of said agreement, the Company shall not thereafter issue or sell any New Securities, without first again offering such securities to the Holders in the manner provided in this Section 4.1.

(e) The Right of First Refusal shall expire upon, and shall not be applicable to the Company's Qualified IPO or a Liquidation Event.

(f) Notwithstanding anything herein to the contrary, if (a) (i) any sale of the Company's securities is excluded from the Right of First Refusal pursuant to Section 4.1(a)(iii) or as a result of any amendment to the definition of New Securities or Article V, Section 4(d)(i) of the Restated Certificate, or (ii) the Right of First Refusal is waived with respect to any sale of the Company's securities pursuant to Section 5.1, and (b) any Holder purchases securities of the Company in such sale transaction (a "**Participating Holder**"), then each other Holder shall have a Right of First Refusal with respect to such transaction to purchase its Pro Rata Share of such securities based on the number of shares of such securities purchased by each Participating Holder and the relative Pro Rata Share(s) of such Participating Holder(s) as compared to such other Holder. If there is more than one Participating Holder, the Pro Rata Share of each other Holder shall be determined in accordance with the foregoing in the manner that results in the largest number of securities purchasable by other Holders. For example, if a Participating Holder purchases 1,000 shares of New Securities in such a sale transaction, and such Participating Holder's Pro Rata Share is ten percent (10%), then another holder with a Pro Rata Share of five percent (5%) would have the right to purchase 500 shares of New Securities in such sale transaction. The other provisions of this Section 4 shall apply *mutatis mutandis* to such transaction.

SECTION 5

MISCELLANEOUS

5.1 **Amendment**. Except as expressly provided herein, neither this Agreement nor any tern' hereof may be amended, waived, discharged or terminated other than by a written instrument referencing this Agreement and signed by the Company and the Holders holding a majority of the Registrable Securities (excluding any of such shares that have been sold to the public or pursuant to Rule 144, and excluding, with respect to Section 2 hereof (other than Sections 2.8, 2.9 and 2.10 hereof), any of such shares held by any Holders whose rights to request registration or inclusion in any registration statement pursuant to Section 2 hereof have terminated in accordance with Section 2.14 hereof); *provided*, *however*, that if any amendment, waiver, discharge or termination operates in a manner that treats any Holder different from other Holders, the consent of such Holder shall also be required for such amendment, waiver, discharge or termination. Any such amendment, waiver, discharge or termination effected in accordance with this paragraph shall be binding upon each Holder and each future holder of all such securities of Holder. Each Holder acknowledges that by the operation of this paragraph, the

holders of a majority of the Registrable Securities (excluding any of such shares that have been sold to the public or pursuant to Rule 144, and excluding, with respect to Section 2 hereof (other than Sections 2.8, 2.9 and 2.10 hereof), any of such shares held by any Holders whose rights to request registration or inclusion in any registration statement pursuant to Section 2 hereof have terminated in accordance with Section 2.14 hereof) will have the right and power to diminish or eliminate all rights of such Holder under this Agreement. Notwithstanding the foregoing or anything herein to the contrary, the rights of each Holder under Section 4.1(f) may be amended, waived, discharged or terminated, other than in connection with the termination of this Agreement as a whole, only by a written instrument signed by such Holder.

5.2 **Notices, Etc**. All notices, requests, consents and other communications hereunder to any party will be deemed to be sufficient if contained in a written instrument delivered in person, including delivery by recognized express courier such as FedEx or UPS, fees prepaid, or sent by facsimile transmission, in each case addressed as set forth below such party's signature below, or to such other address as may hereinafter be designated in writing by the recipient to the sender pursuant to this Section 5.2. Notices hereunder may not be sent by mail or by email All such notices, requests, consents and other communications will be deemed to have been received in the case of personal delivery, including delivery by express courier, on the date of such delivery, or, in the case of facsimile transmission, upon transmission without notification of failure of transmission.

5.3 **Governing Law**. This Agreement shall be governed by the laws of the State of California without regard to choice of laws or conflict of laws provisions thereof.

5.4 **Successors and Assigns**. Except as otherwise provided herein, the provisions hereof shall inure to the benefit of, and be binding upon, the successors, assigns, and as relevant heirs, executors, and administrators, of the parties hereto. Nothing in this Agreement, express or implied, is intended to confer upon any party other than the parties hereto or their respective successors and assigns, or as relevant, their heirs, executors and administrators, any rights, remedies, obligations, or liabilities under or by reason of this Agreement, except as expressly provided by this Agreement.

5.5 **Entire Agreement**. This Agreement and the exhibits hereto constitute the full and entire understanding and agreement between the parties with regard to the subjects hereof. No party hereto shall be liable or bound to any other party in any manner with regard to the subjects hereof or thereof by any warranties, representations or covenants except as specifically set forth herein.

5.6 **Delays or Omissions**. No delay or omission to exercise any right, power, or remedy accruing to any holder of any Registrable Securities upon any breach or default of the Company under this Agreement shall impair any such right, power, or remedy of such holder, nor shall it be construed to be a waiver of any such breach or default, or an acquiescence therein, or of or in any similar breach or default thereafter occurring; nor shall any waiver of any single breach or default be deemed a waiver of any other breach or default theretofore or thereafter occurring. Any waiver, permit, consent, or approval of any kind or character on the part of any holder of any breach or default under this Agreement, or any waiver on the part of any holder of any provisions or conditions of this Agreement, must be in writing and shall be effective only to

the extent specifically set forth in such writing or as provided in this Agreement. All remedies, either under this Agreement or by law or otherwise afforded to any holder, shall be cumulative and not alternative. Each Investor (i) is not a third-party beneficiary with respect to the obligations of any of the other Investors under this Agreement. Only the Company shall have the right to seek enforcement of, or remedies under, the terms of this Agreement against any Investor breaching such terms; provided, however, that nothing contained herein shall be deemed to restrict or waive an Investor's right to bring a derivative claim on behalf of the Company in accordance with the laws of the State of Delaware if the Company refuses to seek enforcement of the terms of this Agreement.

5.7 **Execution and Delivery**. A facsimile or other reproduction of this Agreement may be executed by one or more parties hereto and delivered by such party by facsimile or any similar electronic transmission device pursuant to which the signature of or on behalf of such party can be seen. Such execution and delivery shall be considered valid, binding and effective for all purposes. At the request of any party hereto, all parties hereto agree to execute and deliver an original of this Agreement as well as any facsimile or other reproduction hereof.

5.8 **Jurisdiction; Venue**. The parties consent to the exclusive jurisdiction of, and venue in, the state courts in Santa Clara County in the State of California (or in the event of exclusive federal jurisdiction, the courts of the Northern District of California) with respect to any dispute arising out of or related to this Agreement which is not resolved by the relevant parties thereto themselves in writing.

5.9 **Jury Trial**. EACH OF THE PARTIES HERETO HEREBY IRREVOCABLY WAIVES; TO THE FULLEST EXTENT PERMITTED BY LAW, ANY AND ALL RIGHT TO TRIAL BY JURY IN ANY LEGAL PROCEEDING (WHETHER SOUNDING IN CONTRACT, TORT OR OTHERWISE) ARISING OUT OF OR RELATED TO THIS AGREEMENT. If the waiver of jury trial set forth in this Section 5.9 is determined by a court of competent jurisdiction to not be enforceable, then any claim or cause of action arising out of or relating to this Agreement which is not resolved by the relevant parties thereto themselves in writing shall be settled by judicial reference pursuant to California Code of Civil Procedure Section 638 et seq. before a referee sitting without a jury, such referee to be mutually acceptable to the parties or, if no agreement is reached, by a referee appointed by the Presiding Judge of the California Superior Court for Santa Clara County. This Section 5.9 shall not restrict a party hereto from exercising remedies under the Uniform Commercial Code or from exercising pre judgment remedies under applicable law.

5.10 **Further Assurances**. Each party hereto agrees to execute and deliver, by the proper exercise of its corporate, limited liability company, partnership or other powers, all such other and additional instruments and documents and do all such other acts and things as may be necessary to more fully effectuate this Agreement.

5.11 **Termination Upon Change of Control**. Notwithstanding anything to the contrary herein, this Agreement (excluding any then existing obligations) shall terminate upon a Liquidation Event.

5.12 **Conflict**. In the event of any conflict between the terms of this Agreement and the Company's Restated Certificate or its Bylaws, the terms of the Company's Restated Certificate or its Bylaws, as the case may be, will control.

5.13 **Dispute Resolution Fees**. If any action at law or in equity is necessary to enforce or interpret the terms of this Agreement or the Restated Certificate, the prevailing party shall be entitled to reasonable attorneys' fees, costs, and disbursements in addition to any other relief to which such party may be entitled.

5.14 **Counterparts**. This Agreement may be executed in any number of counterparts and signatures may be delivered by hand, or by facsimile, or by electronic mail (email) as a pdf attachment, each of which may be executed by less than all parties, each of which shall be enforceable against the parties actually executing such counterparts, and all of which together shall constitute one instrument.

5.15 **Severability**. If any provision of this Agreement or any portion thereof becomes, as a result of a change of law, or is declared by a court of competent jurisdiction to be, illegal, unenforceable, or void, such portion of such provision, or such provision in its entirety, to the extent necessary, shall be severed from this Agreement and the balance of such provision, as relevant, and the remainder of this Agreement shall remain enforceable in accordance with its terms.

5.16 **Counting of Time**. Whenever days are to be counted under this Agreement, the first day will not be counted and the last day will be counted, provided that if any day on which a period specified in this Agreement would otherwise terminate falls on a weekend or on a federal or Delaware or California State holiday, then that day shall be ignored for purposes of counting time hereunder.

5.17 **Titles and Subtitles**. The titles and subtitles used in this Agreement are used for convenience only and are not to be considered in construing or interpreting this Agreement.

5.18 **Aggregation of Stock**. All securities held or acquired by Affiliates of an Investor (including but not limited to: (i) a constituent partner or a retired partner of an Investor that is a partnership; (ii) a parent, subsidiary or other Affiliate of an Investor that is a corporation; (iii) an immediate family member living in the same household, a descendant, or a trust therefor, in the case of an Investor who is an individual; (iv) a current or former member of an Investor that is a limited liability company or (v) any mutual fund or other pooled investment vehicle now or hereafter existing that is advised or managed by the same investment adviser as, or an Affiliate of the investment adviser of, an Investor) shall be aggregated together for the purpose of determining the availability of any rights under this Agreement which are triggered by the beneficial ownership of a threshold number of shares of the Company's capital stock.

5.19 **Defined Terms from Restated Certificate**. If a capitalized term used in this Agreement is defined by cross reference to the Company's Restated Certificate and as of a given point in time such term is not defined in the Restated Certificate, such capitalized term shall have the meaning given to such term in the most recent version of the Restated Certificate preceding such point in time that contained such defined term.

5.20 **Amendment and Restatement of Prior Agreement**. The Prior Agreement is hereby amended in its entirety and restated as set forth herein. All provisions of, rights granted and covenants made in the Prior Agreement are hereby waived, released and superseded in their entirety and shall have no further force or effect.

5.21 **Right to Conduct Activities**. The Company acknowledges that certain Investors are in the business of venture capital investing ("**VC Investors**") and therefore review the business plans and related proprietary information of many enterprises, including enterprises which may have products or services which compete directly or indirectly with those of the Company. Nothing in this Agreement shall preclude or in any way restrict the Investors from investing or participating in any particular enterprise whether or not such enterprise has products or services which compete with those of the Company, and VC Investors shall not be deemed to be a competitor of the Company due to minority investments or board designation rights in competitors, *provided, however*, that a representative of a VC Investor who is a member of the Board or who serves as a Board observer of the Company may not also be a member of the Board or serve as a Board observer for a competitor of the Company. The Company hereby agrees that, to the extent permitted under applicable law, its Investors shall not be liable to the Company for any claim arising out of, or based upon, (i) the investment by such Investors in any entity competitive with the Company, or (ii) actions taken by any partner, officer or other representative of such Investors to assist any such competitive company, whether or not such action was taken as a member of the board of directors of such competitive company or otherwise, and whether or not such action has a detrimental effect on the Company; provided, however, that the foregoing shall not relieve (x) any of the Investors from liability associated with the unauthorized disclosure of the Company's confidential information obtained pursuant to this Agreement, or (y) any director or officer of the Company from any liability associated with his or her fiduciary duties to the Company.

(*signature pages follow*)

The parties are signing this Amended and Restated Investors' Rights Agreement as of the date stated in the introductory clause.

COMPANY:

ALLAKOS INC.

By: /s/ Robert Alexander
Name: Robert Alexander
Title: Chief Executive Officer

Address for Notice:
75 Shoreway Rd A
San Carlos, CA 94070
Attention: Chief Executive Officer

(Signature Page to Amended and Restated Investors' Rights Agreement)

The parties are signing this Amended and Restated Investors' Rights Agreement as of the date stated in the introductory clause.

INVESTOR:

NEA VENTURES 2017,
LIMITED PARTNERSHIP

By: /s/ Louis S. Citron
Name: Louis S. Citron
Title: Vice President

Address for notice:

NEA Ventures 2017, Limited Partnership
1954 Greenspring Drive, Suite 600
Timonium, MD 21093

(Signature Page to Amended and Restated Investors' Rights Agreement)

The parties are signing this Amended and Restated Investors' Rights Agreement as of the date stated in the introductory clause.

INVESTOR:

NEW ENTERPRISE ASSOCIATES 16, L.P.
By: NEA Partners 16, L.P., its general partner
By: NEA 16 GP, LLC, its general partner

By: /s/ Louis S. Citron
Name: Louis S. Citron
Title: Chief Legal Counsel

Address for notice:

New Enterprise Associates 16, L.P.
1954 Greenspring Drive, Suite 600
Timonium, MD 21093

The parties are signing this Amended and Restated Investors' Rights Agreement as of the date stated in the introductory clause.

INVESTOR:

RIVERVEST VENTURE FUND II, L.P.
By: RiverVest Venture Partners II, L.P., its General Partner
By: RiverVest Venture Partners II, LLC, its sole General Partner

By: /s/ John P. McKearn
John McKearn, Ph.D., Authorized Person

Address for Notice:
101 S. Hanley Road, Suite 1850
St. Louis, Missouri 63105
Attn: John McKearn, Ph.D.

With a copy to:

Gloria M. Skigen, Esq.
Holland & Knight LLP
263 Tresser Blvd., Suite 1400
Stamford, Connecticut 06901

(Signature Page to Amended and Restated Investors' Rights Agreement)

The parties are signing this Amended and Restated Investors' Rights Agreement as of the date stated in the introductory clause.

INVESTOR:

RIVERVEST VENTURE FUND II (OHIO), L.P.
By: RiverVest Venture Partners II (Ohio), LLC, its General Partner
By: RiverVest Venture Partners II, L.P., its sole member
By: RiverVest Venture Partners II, LLC, its general partner

By: /s/ John P. McKearn
John McKearn, Ph.D., Authorized Person

Address for Notice:
101 S. Hanley Road, Suite 1850
St. Louis, Missouri 63105
Attn: John McKearn, Ph.D.

With a copy to:

Gloria M. Skigen, Esq.
Holland & Knight LLP
263 Tresser Blvd., Suite 1400
Stamford, Connecticut 06901

(Signature Page to Amended and Restated Investors' Rights Agreement)

The parties are signing this Amended and Restated Investors' Rights Agreement as of the date stated in the introductory clause.

INVESTOR:

RIVERVEST VENTURE FUND III, L.P.
By: RiverVest Venture Partners III, L.P., its General Partner
By: RiverVest Venture Partners III, LLC, its sole General Partner

By: /s/ John P. McKearn
John McKearn, Ph.D., Manager

Address for Notice:
101 S. Hanley Road, Suite 1850
St. Louis, Missouri 63105
Attn: John McKearn, Ph.D.

With a copy to:

Gloria M. Skigen, Esq.
Holland & Knight LLP
263 Tresser Blvd., Suite 1400
Stamford, Connecticut 06901

(Signature Page to Amended and Restated Investors' Rights Agreement)

The parties are signing this Amended and Restated Investors' Rights Agreement as of the date stated in the introductory clause.

INVESTOR:

RIVERVEST VENTURE FUND III (OHIO), L.P.
By: RiverVest Venture Partners III (Ohio), LLC, its General Partner
By: RiverVest Venture Partners III, L.P., its sole member
By: RiverVest Venture Partners III, LLC, its general partner

By: /s/ John P. McKearn
John McKearn, Ph.D., Member

Address for Notice:
101 S. Hanley Road, Suite 1850
St. Louis, Missouri 63105
Attn: John McKearn, Ph.D.

With a copy to:

Gloria M. Skigen, Esq.
Holland & Knight LLP
263 Tresser Blvd., Suite 1400
Stamford, Connecticut 06901

(Signature Page to Amended and Restated Investors' Rights Agreement)

The parties are signing this Amended and Restated Investors' Rights Agreement as of the date stated in the introductory clause.

INVESTOR:

3X5 RIVERVEST FUND II, L.P.
By: 3x5 RiverVest Partners II, LLC, its General Partner
By: RiverVest 3x5 Managers II, L.P., its Member
By: RiverVest 3x5 Managers II, LLC, its General Partner

By: /s/ John P. McKearn
John McKearn, Ph.D., Member

Address for Notice:
101 S. Hanley Road, Suite 1850
St. Louis, Missouri 63105
Attn: John McKearn, Ph.D.

With a copy to:

Gloria M. Skigen, Esq.
Holland & Knight LLP
263 Tresser Blvd., Suite 1400
Stamford, Connecticut 06901

(Signature Page to Amended and Restated Investors' Rights Agreement)

The parties are signing this Amended and Restated Investors' Rights Agreement as of the date stated in the introductory clause.

INVESTOR:

3X5 RIVERVEST FUND II-B, L.P.
By: 3x5 RiverVest Partners II, LLC, its General Partner
By: RiverVest 3x5 Managers II, L.P., its Member
By: RiverVest 3x5 Managers II, LLC, its General Partner

By: /s/ John P. McKearn
John McKearn, Ph.D., Member

Address for Notice:
101 S. Hanley Road, Suite 1850
St. Louis, Missouri 63105
Attn: John McKearn, Ph.D.

With a copy to:

Gloria M. Skigen, Esq.
Holland & Knight LLP
263 Tresser Blvd., Suite 1400
Stamford, Connecticut 06901

(Signature Page to Amended and Restated Investors' Rights Agreement)

The parties are signing this Amended and Restated Investors' Rights Agreement as of the date stated in the introductory clause.

INVESTOR:

ALTA PARTNERS VIII, LP
By: Alta Partners Management VIII, LLC

By: /s/ Larry Randal
Name: Larry Randal
Title: CFO

Address for Notice:
Alta Partners VIII, L.P.
One Embarcadero Center, Suite 3700
San Francisco, California 94111
Attn: Finance

(Signature Page to Amended and Restated Investors' Rights Agreement)

The parties are signing this Amended and Restated Investors' Rights Agreement as of the date stated in the introductory clause.

INVESTOR:

ALTA PARTNERS IX, LP
By: Alta Partners Management IX, LLC, its general partner

By: /s/ Larry Randal
Name: Larry Randal
Title: CFO

Address for Notice:
Alta Partners IX, L.P.
One Embarcadero Center, Suite 3700
San Francisco, California 94111
Attn: Finance

The parties are signing this Amended and Restated Investors' Rights Agreement as of the date stated in the introductory clause.

INVESTOR:

ROCHE FINANCE LTD.

By: /s/ Carole Nuechterlein
Name: Carole Nuechterlein
Title: Authorized Signatory

By: /s/ Andreas Knierzinger
Name: Andreas Knierzinger
Title: Authorized Signatory

Notices are to be sent to:
Roche Finance Ltd.
Attn: Carole Nuechterlein
Grenzacherstrasse 122
Basel, CH-Switzerland 4070

A copy of all notices sent to Roche Finance Ltd. shall be simultaneously sent to the following:

Hoffmann-LaRoche Inc.
Attn: General Counsel
Overlook at Great Notch
150 Clove Road
8th Floor – Suite 8
Little Falls, New Jersey 07424
Fax: 973-890-8433

(Signature Page to Amended and Restated Investors' Rights Agreement)

The parties are signing this Amended and Restated Investors' Rights Agreement as of the date stated in the introductory clause.

INVESTOR:

SMALLCAP WORLD FUND, INC.
By: Capital Research and Management Company, for and on behalf of SMALLCAP World Fund, Inc.

By: /s/ Walter R. Burkley
Name: Walter R. Burkley
Title: Authorized Signatory

Address for Notice:
SMALLCAP World Fund, Inc.
c/o Capital Research and Management Company
333 South Hope Street, 33rd Floor
Los Angeles, California 90071
Attention: Jae Won Chung
email: jae.chung@capgroup.com

with a copy, which shall not constitute notice, to:

SMALLCAP World Fund, Inc.
333 South Hope Street, 53rd Floor
Los Angeles, California 90071
Attention: Craig Gordon
email: craig.gordon@capitalglobal.com

(Signature Page to Amended and Restated Investors' Rights Agreement)

The parties are signing this Amended and Restated Investors' Rights Agreement as of the date stated in the introductory clause.

INVESTOR:

LIFESCI VENTURE PARTNERS I, LP
By: LifeSci Venture GP, LLC, its General Partner

By: /s/ Paul Yook
Name:
Title:

Address for Notice:
LifeSci Venture GP, LLC
250 West 55th Street, 16th Floor
New York, NY 10019

(Signature Page to Amended and Restated Investors' Rights Agreement)

The parties are signing this Amended and Restated Investors' Rights Agreement as of the date stated in the introductory clause.

INVESTOR:

LIFESCI VENTURE SPV IV, LLC
By: LifeSci Venture GP, LLC, its General Partner

By: /s/ Paul Yook
Name:
Title:

Address for Notice:
LifeSci Venture GP, LLC
250 West 55th Street, 16th Floor
New York, NY 10019

(Signature Page to Amended and Restated Investors' Rights Agreement)

The parties are signing this Amended and Restated Investors' Rights Agreement as of the date stated in the introductory clause.

INVESTOR:

SAMSARA BIOCAPITAL, L.P.
By: Samsara BioCapital GP, LLC, General Partner

By: /s/ Srinivas Akkaraju
Name:
Title:

Address for Notice:

(Signature Page to Amended and Restated Investors' Rights Agreement)

The parties are signing this Amended and Restated Investors' Rights Agreement as of the date stated in the introductory clause.

INVESTOR:

ROCK SPRINGS CAPITAL MASTER FUND LP
By: Rock Springs General Partner LLC

By: /s/ Mark Bussard
Name: Mark Bussard
Title: Managing Member

Address for Notice:
Rock Springs Capital Master Fund LP
650 South Exeter Street, Suite 1070
Baltimore, MD 21202
Attn: General Counsel

The parties are signing this Amended and Restated Investors' Rights Agreement as of the date stated in the introductory clause.

INVESTOR:

CKE ASSOCIATES, LLC

By: /s/ Michael S. Ovitz
Name: Michael S. Ovitz
Title: CEO

Address for Notice:

(Signature Page to Amended and Restated Investors' Rights Agreement)

The parties are signing this Amended and Restated Investors' Rights Agreement as of the date stated in the introductory clause.

INVESTOR:

DAVID LAMOND

By: /s/ David Lamond

Address for Notice:

(Signature Page to Amended and Restated Investors' Rights Agreement)

The parties are signing this Amended and Restated Investors' Rights Agreement as of the date stated in the introductory clause.

INVESTOR:

REDMILE BIOPHARMA INVESTMENTS I, L.P.

By: /s/ Jeremy Green
Name: Jeremy Green
Title: Managing Member of the General Partner and the Management Company

(Signature Page to Amended and Restated Investors' Rights Agreement)

The parties are signing this Amended and Restated Investors' Rights Agreement as of the date stated in the introductory clause.

INVESTOR:

REDMILE CAPITAL OFFSHORE FUND, LTD.

By: /s/ Jeremy Green
Name: Jeremy Green
Title: Managing Member of the Investment Manager

(Signature Page to Amended and Restated Investors' Rights Agreement)

The parties are signing this Amended and Restated Investors' Rights Agreement as of the date stated in the introductory clause.

INVESTOR:

REDMILE CAPITAL OFFSHORE FUND II, LTD.

By: /s/ Jeremy Green
Name: Jeremy Green
Title: Managing Member of the Investment Manager

(Signature Page to Amended and Restated Investors' Rights Agreement)

The parties are signing this Amended and Restated Investors' Rights Agreement as of the date stated in the introductory clause.

INVESTOR:

REDMILE CAPITAL FUND, LP

By: /s/ Jeremy Green
Name: Jeremy Green
Title: Managing Member of the General Partner and the Investment Manager

(Signature Page to Amended and Restated Investors' Rights Agreement)

The parties are signing this Amended and Restated Investors' Rights Agreement as of the date stated in the introductory clause.

INVESTOR:

ROBERT SCHLEIMER

By: /s/ Robert Schleimer

Address for Notice:
Robert Schleimer

(Signature Page to Amended and Restated Investors' Rights Agreement)

The parties are signing this Amended and Restated Investors' Rights Agreement as of the date stated in the introductory clause.

INVESTOR:

BRUCE SCOTT BOCHNER REVOCABLE TRUST

By: /s/ Bruce Scott Bochner
Name: Bruce Scott Bochner
Title: Trustee

Address for Notice:
Bruce Scott Bochner Revocable Trust

The parties are signing this Amended and Restated Investors' Rights Agreement as of the date stated in the introductory clause.

INVESTOR:

JACQUELINE ANN SCHAFFER-BOCHNER, TRUSTEE FOR THE JACQUELINE ANN-SCHAFFER-BOCHNER REVOCABLE TRUST

By: /s/ Jacqueline Ann Schaffer-Bochner
Name: Jacqueline Ann Schaffer-Bochner
Title: Trustee

Address for Notice:
Jacqueline Ann Schaffer-Bochner, trustee for the Jacqueline Ann Schaffer-Bochner Revocable Trust

The parties are signing this Amended and Restated Investors' Rights Agreement as of the date stated in the introductory clause.

INVESTOR:

EVE G. MERMEL & SCOTT J. MERMEL, TRUSTEES FOR THE EVE G. MERMEL REVOCABLE TRUST DATED 8/16/1988

By: /s/ Eve G. Mermel
Name: Eve G. Mermel
Title: Trustee

Address for Notice:
Eve G. Mermel & Scott J. Mermel, trustees for the Eve G. Mermel Revocable Trust dated 8/16/1988

The parties are signing this Amended and Restated Investors' Rights Agreement as of the date stated in the introductory clause.

INVESTOR:

JONATHAN ALBERT SCHLEIMER

By: /s/ Jonathan Albert Schleimer

Address for Notice:
Jonathan Albert Schleimer

(Signature Page to Amended and Restated Investors' Rights Agreement)

The parties are signing this Amended and Restated Investors' Rights Agreement as of the date stated in the introductory clause.

INVESTOR:

ALEJANDRO DORENBAUM

By: /s/ Alejandro Dorenbaum

Address for Notice:
Alejandro Dorenbaum

(Signature Page to Amended and Restated Investors' Rights Agreement)

The parties are signing this Amended and Restated Investors' Rights Agreement as of the date stated in the introductory clause.

INVESTOR:

BARRY BOCHNER AND LAURIE BOCHNER, TRUSTEES FOR THE BOCHNER REVOCABLE TRUST DATED 12/13/2005

By: /s/ Barry Bochner
Name:
Title:

Address for Notice:
Barry Bochner and Laurie Bochner, trustees for the Bochner Revocable Trust dated 12/13/2005

(Signature Page to Amended and Restated Investors' Rights Agreement)

The parties are signing this Amended and Restated Investors' Rights Agreement as of the date stated in the introductory clause.

INVESTOR:

BEBBINGTON FAMILY TRUST DATED MAY 7TH 2003

By: /s/ Chris Bebbington
Name:
Title:

Address for Notice:
Bebbington Family Trust

(Signature Page to Amended and Restated Investors' Rights Agreement)

The parties are signing this Amended and Restated Investors' Rights Agreement as of the date stated in the introductory clause.

INVESTOR:

WS INVESTMENT COMPANY, LLC (2017A)

By: /s/ James Terranova
Name:
Title:

Address for Notice:
WS Investment Company, LLC (2017A)
650 Page Mill Road
Palo Alto, CA 94304

(Signature Page to Amended and Restated Investors' Rights Agreement)

The parties are signing this Amended and Restated Investors' Rights Agreement as of the date stated in the introductory clause.

INVESTOR:

PFM HEALTHCARE MASTER FUND, L.P.
By: Partner Fund Management, L.P., its investment adviser

By: /s/ Yuan DuBord
Name: Yuan DuBord
Title: CFO

Address for Notice:
Partner Fund Management, L.P.
4 Embarcadero Center #3500
San Francisco, CA 94111

The parties are signing this Amended and Restated Investors' Rights Agreement as of the date stated in the introductory clause.

INVESTOR:

PFM HEALTHCARE OPPORTUNITIES MASTER FUND, L.P.
By: Partner Fund Management, L.P., its investment adviser

By: /s/ Yuan DuBord
Name: Yuan DuBord
Title: CFO

Address for Notice:
Partner Fund Management, L.P.
4 Embarcadero Center #3500
San Francisco, CA 94111

(Signature Page to Amended and Restated Investors' Rights Agreement)

The parties are signing this Amended and Restated Investors' Rights Agreement as of the date stated in the introductory clause.

INVESTOR:

PFM HEALTHCARE EMERGING GROWTH MASTER FUND, L.P.
By: Partner Fund Management, L.P., its investment adviser

By: /s/ Yuan DuBord
Name: Yuan DuBord
Title: CFO

Address for Notice:
Partner Fund Management, L.P.
4 Embarcadero Center #3500
San Francisco, CA 94111

(Signature Page to Amended and Restated Investors' Rights Agreement)

The parties are signing this Amended and Restated Investors' Rights Agreement as of the date stated in the introductory clause.

INVESTOR:

PFM HEALTHCARE PRINCIPALS FUND, L.P.
By: Partner Investment Management, L.P., its investment adviser

By: /s/ Yuan DuBord
Name: Yuan DuBord
Title: CFO

Address for Notice:
Partner Fund Management, L.P.
4 Embarcadero Center #3500
San Francisco, CA 94111

The parties are signing this Amended and Restated Investors' Rights Agreement as of the date stated in the introductory clause.

INVESTOR:

PARTNER INVESTMENTS, L.P.
By: Partner Investment Management, L.P., its investment adviser

By: /s/ Yuan DuBord
Name: Yuan DuBord
Title: CFO

Address for Notice:
Partner Fund Management, L.P.
4 Embarcadero Center #3500
San Francisco, CA 94111

(Signature Page to Amended and Restated Investors' Rights Agreement)

The parties are signing this Amended and Restated Investors' Rights Agreement as of the date stated in the introductory clause.

INVESTOR:

JOHN Q. ADAMS JR. AND VICKI J. ADAMS

By: /s/ John Q. Adams
Name:

(Signature Page to Amended and Restated Investors' Rights Agreement)

The parties are signing this Amended and Restated Investors' Rights Agreement as of the date stated in the introductory clause.

INVESTOR:

DYETT FAMILY TRUST

By: /s/ John Dyett
Name: John Dyett
Title: Trustee

(Signature Page to Amended and Restated Investors' Rights Agreement)

The parties are signing this Amended and Restated Investors' Rights Agreement as of the date stated in the introductory clause.

INVESTOR:

ALVARO F GUILLEM AND MARY A GUILLEM TEN/COM

By: /s/ Alvaro F. Guillem
Name: Alvaro F. Guillem
Title: Self

(Signature Page to Amended and Restated Investors' Rights Agreement)

The parties are signing this Amended and Restated Investors' Rights Agreement as of the date stated in the introductory clause.

INVESTOR:

BERTI PROUGH TRUST

By: /s/ Stephen Prough
Name: Stephen Prough
Title: Trustee

(Signature Page to Amended and Restated Investors' Rights Agreement)

SCHEDULE I
NOTICE AND WAIVER/ELECTION OF
RIGHT OF FIRST REFUSAL

The undersigned Holder hereby waives or exercises, as indicated below, the undersigned Holder's Right of First Refusal under the Amended and Restated Investors' Rights Agreement dated as of November 30, 2017 (the "Investors' Rights Agreement"), by and among Allakos Inc., a Delaware corporation (the "Company") , the undersigned Holder or such Holder's predecessor in interest, and other Holders:

1. Waiver of [ ] days' notice period in which to exercise Right of First Refusal: **(please check only one below)**:

   The undersigned Holder:

   ( ) **WAIVES** in full the notice period described above.

   ( ) **DOES NOT WAIVE** the notice period described above.

2. Issuance and Sale of New Securities: (**please check only one below**):

   The undersigned Holder:

   ( ) **WAIVES** in full the Right of First Refusal granted to the undersigned Holder under the Amended and Restated Investors' Rights Agreement with respect to the issuance of the New Securities.

   ( ) **ELECTS TO PARTICIPATE** in such issuance by purchasing $ (*please provide amount*) in New Securities proposed to be issued by the Company representing LESS than the undersigned Holder's *pro rata* portion of the aggregate of $[ ] in New Securities being offered in the financing.

   ( ) **ELECTS TO PARTICIPATE** in such issuance by purchasing $ in New Securities proposed to be issued by the Company, representing the undersigned Holder's FULL *pro rata* portion of the aggregate of $[ ] in New Securities being offered in the financing.

   ( ) **ELECTS TO PARTICIPATE** in such issuance by purchasing the undersigned Holder's full *pro rata* portion of the aggregate of $[ ], in New Securities being offered by the Company in the financing AND, to the extent available, the greater of (x) an additional $ (*please provide amount*) or (y) the undersigned Holder's *pro rata* portion of any remaining. investment amount available in the event other Significant Holders (as defined in the Investors" Rights Agreement) do not exercise their full rights of first refusal with respect to the New Securities being offered in the financing.

[*signature page follows*]

Date: _____

_____
(Print Holder name)

_____
(Signature)

_____
(Print name of signatory, if signing for an entity)

_____
(Print title of signatory, if signing for an entity)

This is neither a commitment to purchase nor a commitment to issue the New Securities described above. Such issuance can only be made by way of definitive documentation related to such issuance. The Company will supply the Holder with such definitive documentation upon request or if the Holder indicates that the Holder desires to exercise the Holder's first offer rights under the Investors' Rights Agreement in whole or in part.

[Signature Page to Notice and Waiver / Election of Right of First Refusal]

EXHIBIT A

INVESTORS

Series A

Alta Partners VIII, LP

Roche Finance Ltd.

RiverVest Venture Fund II, L.P.

RiverVest Venture Fund III, L.P.

RiverVest Venture Fund II (Ohio), L.P.

Bruce Bochner

Christopher Bebbington

Robert Schleimer

Nenad Tomasevic

Esra Nutku-Bilir

Series B

New Enterprise Associates 16, L.P.

NEA Ventures 2017, Limited Partnership

Alta Partners IX, LP

Alta Partners VIII, LP

3x5 RiverVest Fund II, L.P.

3x5 RiverVest Fund II-B, L.P.

RiverVest Venture Fund II (Ohio), L.P.

RiverVest Venture Fund II, L.P.

RiverVest Venture Fund III (Ohio), L.P.

RiverVest Venture Fund III, L.P.

Roche Finance Ltd

SMALLCAP World Fund, Inc.

Redmile Capital Fund, LP

Redmile Capital Offshore Fund, Ltd.

Redmile Capital Offshore Fund II, Ltd.

Redmile Biopharma Investments, I, L.P.

PFM Healthcare Master Fund, L.P.

PFM Healthcare Opportunities Master Fund, L.P.

PFM Healthcare Emerging Growth Master Fund, L.P.

PFM Healthcare Principals Fund, L.P.

Partner Investments, L.P.

LifeSci Venture SPV IV, LLC

LifeSci Venture Partners I, LP

Samsara BioCapital, L.P.

Rock Springs Capital Master Fund LP

CKE Associates, LLC

David Lamond

Berti Prough Trust

Dyett Family Trust

John Q. Adams Jr. and Vicki J. Adams

Alvaro F Guillem and Mary A Guillem Ten/Com

Robert Schleimer

Bruce Scott Bochner Revocable Trust

Jacqueline Ann Schaffer-Bochner, trustee for the Jacqueline Ann Schaffer-Bochner Revocable Trust

Eve G. Mermel & Scott J. Mermel, trustees for the Eve G. Mermel Revocable Trust dated 8/16/1988

Jonathan Albert Schleimer

Alejandro Dorenbaum

Barry Bochner and Laurie Bochner, trustees for the Bochner Revocable Trust dated 12/13/2005

Bebbington Family Trust Dated May 7th 2003

WS Investment Company, LLC (2017A)

ALLAKOS INC.

FIRST AMENDMENT TO
AMENDED AND RESTATED INVESTORS' RIGHTS AGREEMENT

THIS FIRST AMENDMENT TO AMENDED AND RESTATED INVESTORS' RIGHTS AGREEMENT (this "**Amendment**") is made as of July 6, 2018 by and among Allakos Inc., a Delaware corporation (the "**Company**"), and the undersigned holders of the Company's capital stock.

WHEREAS, the Company and certain holders of the Company's capital stock previously entered into the Amended and Restated Investors' Rights Agreement dated November 30, 2017 (the "**Rights Agreement**");

WHEREAS, it is anticipated that the Company will enter into a Share Purchase Agreement with New Enterprise Associates 16, L.P. ("**NEA**") dated on or about the effective date of the Company's Registration Statement on Form S-1 (File No. 333-225836) (the "**Purchase Agreement**") pursuant to which NEA will purchase shares of the Company's Common Stock (the "**Shares**") concurrently with the closing of the Company's IPO (as defined in the Purchase Agreement) (the "**Closing**"); and

WHEREAS, the Company and the undersigned holders of the requisite number of shares of Company capital stock under the Rights Agreement now desire to amend the terms of the Rights Agreement as set forth herein to include the Shares as Registrable Securities under the Rights Agreement.

NOW, THEREFORE, in consideration of the premises and the mutual covenants contained herein, the parties hereto agree as follows:

1. Amendment to Section 1.1(s). Section 1.1(s) of the Rights Agreement is hereby amended and restated in its entirety to read as follows:

> "(s) "**Registrable Securities**" means (i) shares of Common Stock issued or issuable pursuant to the conversion of the Preferred Stock, (ii) the Common Stock issued pursuant to that certain Share Purchase Agreement by and between the Company and New Enterprise Associates 16, L.P. (or one or more of its Affiliates), dated on or about the effective date of the Company's Registration Statement on Form S-1 (File No. 333-225836), and (iii) any Common Stock issued as a dividend or other distribution with respect to or in exchange for or in replacement of the shares referenced in (i) above; *provided*, *however*, that Registrable Securities shall not include any shares of Common Stock described in clause (i), (ii) or (iii) above which have previously been registered or which have been sold to the public either pursuant to a registration statement or Rule 144, or which have been sold in a private transaction in which the transferor's rights under this Agreement are not validly assigned in accordance with this Agreement."

2. Governing Law. This Amendment shall be governed by the laws of the State of California without regard to choice of laws or conflict of laws provisions thereof.

3. Counterparts. This Amendment may be executed in two or more counterparts, each of which shall be deemed an original, but all of which together shall constitute one and the same instrument.

4. Titles and Subtitles. The titles and subtitles used in this Amendment are used for convenience only and are not to be considered in construing or interpreting this Amendment.

5. Severability. The invalidity or unenforceability of any provision hereof shall in no way affect the validity or enforceability of any other provision.

6. Rights Agreement. Wherever necessary, all other terms of the Rights Agreement are hereby amended to be consistent with the terms of this Amendment. Except as specifically set forth herein, the Rights Agreement shall remain in full force and effect.

* * *

IN WITNESS WHEREOF, the undersigned have executed this Amendment as of the date first above written.

ALLAKOS INC.,
a Delaware corporation

By: /s/ Robert Alexander
Name: Robert Alexander
Title: Chief Executive Officer

[*Signature Page to First Amendment to Amended and Restated Investors' Rights Agreement*]

IN WITNESS WHEREOF, the undersigned have executed this Amendment as of the date first above written.

INVESTOR:

NEA VENTURES 2017,
LIMITED PARTNERSHIP

By: /s/ Louis Citron
Name: Louis Citron
Title: Vice President

[*Signature Page to First Amendment to Amended and Restated Investors' Rights Agreement*]

IN WITNESS WHEREOF, the undersigned have executed this Amendment as of the date first above written.

INVESTOR:

NEW ENTERPRISE ASSOCIATES 16, L.P.
By: NEA Partners 16, L.P., its general partner
By: NEA 16 GP, LLC, its general partner

By: /s/ Louis Citron
Name: Louis Citron
Title: Chief Legal Officer

[*Signature Page to First Amendment to Amended and Restated Investors' Rights Agreement*]

IN WITNESS WHEREOF, the undersigned have executed this Amendment as of the date first above written.

INVESTOR:

RIVERVEST VENTURE FUND II, L.P.
By: RiverVest Venture Partners II, L.P., its General Partner
By: RiverVest Venture Partners II, LLC, its sole General Partner

By: /s/ John McKearn
John McKearn, Ph.D., Authorized Person

[*Signature Page to First Amendment to Amended and Restated Investors' Rights Agreement*]

IN WITNESS WHEREOF, the undersigned have executed this Amendment as of the date first above written.

INVESTOR:

RIVERVEST VENTURE FUND II (OHIO), L.P.
By: RiverVest Venture Partners II (Ohio), LLC, its General Partner
By: RiverVest Venture Partners II, L.P., its sole member
By: RiverVest Venture Partners II, LLC, its general partner

By: /s/ John McKearn
John McKearn, Ph.D., Authorized Person

[*Signature Page to First Amendment to Amended and Restated Investors' Rights Agreement*]

IN WITNESS WHEREOF, the undersigned have executed this Amendment as of the date first above written.

INVESTOR:

RIVERVEST VENTURE FUND III, L.P.
By: RiverVest Venture Partners III, L.P., its General Partner
By: RiverVest Venture Partners III, LLC, its sole General Partner

By: /s/ John McKearn
John McKearn, Ph.D., Manager

[*Signature Page to First Amendment to Amended and Restated Investors' Rights Agreement*]

IN WITNESS WHEREOF, the undersigned have executed this Amendment as of the date first above written.

INVESTOR:

RIVERVEST VENTURE FUND III (OHIO), L.P.
By: RiverVest Venture Partners III (Ohio), LLC, its General Partner
By: RiverVest Venture Partners III, L.P., its sole member
By: RiverVest Venture Partners III, LLC, its general partner

By: /s/ John McKearn
John McKearn, Ph.D., Member

[*Signature Page to First Amendment to Amended and Restated Investors' Rights Agreement*]

IN WITNESS WHEREOF, the undersigned have executed this Amendment as of the date first above written.

INVESTOR:

3X5 RIVERVEST FUND II, L.P.
By: 3x5 RiverVest Partners II, LLC, its General Partner
By: RiverVest 3x5 Managers II, L.P., its Member
By: RiverVest 3x5 Managers II, LLC, its General Partner

By: /s/ John McKearn
John McKearn, Ph.D., Member

IN WITNESS WHEREOF, the undersigned have executed this Amendment as of the date first above written.

INVESTOR:

3X5 RIVERVEST FUND II-B, L.P.
By: 3x5 RiverVest Partners II, LLC, its General Partner
By: RiverVest 3x5 Managers II, L.P., its Member
By: RiverVest 3x5 Managers II, LLC, its General Partner

By: /s/ John McKearn
John McKearn, Ph.D., Member

IN WITNESS WHEREOF, the undersigned have executed this Amendment as of the date first above written.

INVESTOR:

ALTA PARTNERS VIII, LP
By: Alta Partners Management VIII, LLC

By: /s/ Daniel Janney
Name: Daniel S. Janney
Title: Managing Director

[*Signature Page to First Amendment to Amended and Restated Investors' Rights Agreement*]

IN WITNESS WHEREOF, the undersigned have executed this Amendment as of the date first above written.

INVESTOR:

ALTA PARTNERS NEXTGEN FUND I, LP
By: Alta Partners NextGen Fund I Management, LLC, its general partner

By: /s/ Daniel Janney
Name: Daniel S. Janney
Title: Managing Director

[*Signature Page to First Amendment to Amended and Restated Investors' Rights Agreement*]

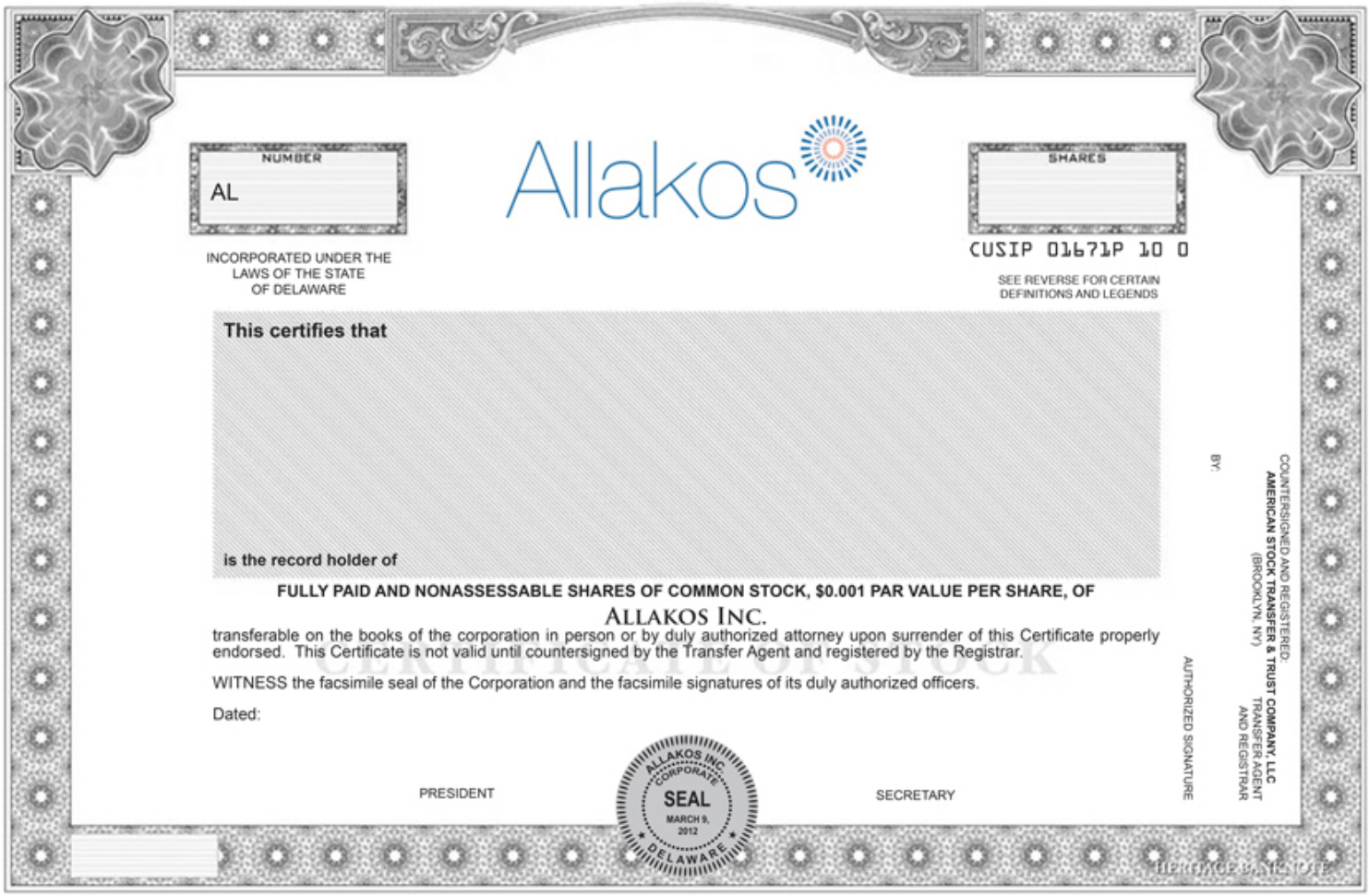
IN WITNESS WHEREOF, the undersigned have executed this Amendment as of the date first above written.

INVESTOR:

ROCHE FINANCE LTD.

By: /s/ Carole Nuechterlein
Name: Carole Nuechterlein
Title: Authorized signatory

By: /s/ Beat Kraehenmann
Name: Beat Kraehenmann
Title: Authorized signatory



NUMBER

AL

Allakos

SHARES

CUSIP 01671P 10 0

INCORPORATED UNDER THE LAWS OF THE STATE OF DELAWARE

SEE REVERSE FOR CERTAIN DEFINITIONS AND LEGENDS

This certifies that

is the record holder of

FULLY PAID AND NONASSESSABLE SHARES OF COMMON STOCK, $0.001 PAR VALUE PER SHARE, OF

ALLAKOS INC.

transferable on the books of the corporation in person or by duly authorized attorney upon surrender of this Certificate properly endorsed. This Certificate is not valid until countersigned by the Transfer Agent and registered by the Registrar.

WITNESS the facsimile seal of the Corporation and the facsimile signatures of its duly authorized officers.

Dated:

PRESIDENT

ALLAKOS INC. CORPORATE SEAL MARCH 9, 2012 DELAWARE

SECRETARY

BY:

AUTHORIZED SIGNATURE

COUNTERSIGNED AND REGISTERED:
AMERICAN STOCK TRANSFER & TRUST COMPANY, LLC
(BROOKLYN, NY)
TRANSFER AGENT AND REGISTRAR

The Corporation shall furnish without charge to each stockholder who so requests a statement of the powers, designations, preferences and relative, participating, optional or other special rights of each class of stock of the Corporation or series thereof and the qualifications, limitations or restrictions of such preferences and/or rights. Such requests shall be made to the Corporation's Secretary at the principal office of the Corporation.

KEEP THIS CERTIFICATE IN A SAFE PLACE. IF IT IS LOST, STOLEN,OR DESTROYED THE CORPORATION WILL REQUIRE A BOND INDEMNITY AS A CONDITION TO THE ISSUANCE OF A REPLACEMENT CERTIFICATE.

The following abbreviations, when used in the inscription on the face of this certificate, shall be construed as though they were written out in full according to applicable laws or regulations:

TEN COM	–	as tenants in common
TEN ENT	–	as tenants by the entireties
JT TEN	–	as joint tenants with right of survivorship and not as tenants in common
COM PROP	–	as community property

UNIF GIFT MIN ACT – ..... Custodian .....
(Cust) (Minor)
under Uniform Gifts to Minors Act.....
(State)

UNIF TRF MIN ACT – ..... Custodian (until age .....)
(Cust)
..... under Uniform Transfers
(Minor)
to Minors Act.....
(State)

Additional abbreviations may also be used though not in the above list.

FOR VALUE RECEIVED, _____ hereby sell(s), assign(s) and transfer(s) unto

PLEASE INSERT SOCIAL SECURITY OR OTHER IDENTIFYING NUMBER OF ASSIGNEE

_____
(PLEASE PRINT OR TYPEWRITE NAME AND ADDRESS, INCLUDING ZIP CODE, OF ASSIGNEE)

_____

_____

_____ shares of the capital stock represented by within Certificate, and do hereby irrevocably constitute and appoint

_____ attorney-in-fact to transfer the said stock on the books of the within named Corporation with full power of the substitution in the premises.

Dated _____

X _____

X _____

Signature(s) Guaranteed:

NOTICE: THE SIGNATURE TO THIS ASSIGNMENT MUST CORRESPOND WITH THE NAME AS WRITTEN UPON THE FACE OF THE CERTIFICATE IN EVERY PARTICULAR, WITHOUT ALTERATION OR ENLARGEMENT OR ANY CHANGE WHATSOEVER.

By _____

THE SIGNATURE(S) SHOULD BE GUARANTEED BY AN ELIGIBLE GUARANTOR INSTITUTION, (BANKS, STOCKBROKERS, SAVINGS AND LOAN ASSOCIATIONS AND CREDIT UNIONS WITH MEMBERSHIP IN AN APPROVED SIGNATURE GUARANTEE MEDALLION PROGRAM), PURSUANT TO S.E.C. RULE 17Ad-15. GUARANTEES BY A NOTARY PUBLIC ARE NOT ACCEPTABLE. SIGNATURE GUARANTEES MUST NOT BE DATED.

Exhibit 5.1

Wilson Sonsini Goodrich & Rosati
PROFESSIONAL CORPORATION

650 Page Mill Road
Palo Alto, CA 94304-1050

PHONE 650.493.9300
FAX 650.493.6811
www.wsgr.com

July 9, 2018

Allakos Inc.
75 Shoreway Road, Suite A
San Carlos, California 94070

Re: Registration Statement on Form S-1

Ladies and Gentlemen:

This opinion is furnished to you in connection with the Registration Statement on Form S-1 (Registration No. 333-225836), as amended (the "**Registration Statement**"), filed by Allakos Inc. (the "**Company**") with the Securities and Exchange Commission in connection with the registration under the Securities Act of 1933, as amended, of up to 6,900,000 shares (including up to 900,000 shares issuable upon exercise of an option granted to the underwriters by the Company) of the Company's common stock, $0.001 par value per share (the "**Shares**"), to be issued and sold by the Company. We understand that the Shares are to be sold to the underwriters for resale to the public as described in the Registration Statement and pursuant to an underwriting agreement, substantially in the form filed as an exhibit to the Registration Statement, to be entered into by and among the Company and the underwriters (the "**Underwriting Agreement**").

We are acting as counsel for the Company in connection with the sale of the Shares by the Company. In such capacity, we have examined originals or copies, certified or otherwise identified to our satisfaction, of such documents, corporate records, certificates of public officials and other instruments as we have deemed necessary for the purposes of rendering this opinion. In our examination, we have assumed the genuineness of all signatures, the authenticity of all documents submitted to us as originals, the conformity with the originals of all documents submitted to us as copies, the authenticity of the originals of such documents and the legal competence of all signatories to such documents.

We express no opinion herein as to the laws of any state or jurisdiction other than the General Corporation Law of the State of Delaware (including the statutory provisions and all applicable judicial decisions interpreting those laws) and the federal laws of the United States of America.

On the basis of the foregoing, we are of the opinion that upon the effectiveness of the Company's Amended and Restated Certificate of Incorporation, a form of which has been filed as Exhibit 3.2 to the Registration Statement, the Shares to be issued and sold by the Company have been duly authorized and, when such Shares are issued and paid for in accordance with the terms of the Underwriting Agreement, will be validly issued, fully paid and nonassessable.

We consent to the use of this opinion as an exhibit to the Registration Statement, and we consent to the reference of our name under the caption “Legal Matters” in the prospectus forming part of the Registration Statement.

Very truly yours,

/s/ Wilson Sonsini Goodrich & Rosati

WILSON SONSINI GOODRICH & ROSATI
Professional Corporation

ALLAKOS INC.

2018 EQUITY INCENTIVE PLAN

1. Purposes of the Plan. The purposes of this Plan are:

- to attract and retain the best available personnel for positions of substantial responsibility,
- to provide additional incentive to Employees, Directors and Consultants, and
- to promote the success of the Company's business.

The Plan permits the grant of Incentive Stock Options, Nonstatutory Stock Options, Restricted Stock, Restricted Stock Units, Stock Appreciation Rights, Performance Units and Performance Shares.

2. Definitions. As used herein, the following definitions will apply:

(a) "Administrator" means the Board or any of its Committees as will be administering the Plan, in accordance with Section 4 of the Plan.

(b) "Applicable Laws" means the legal and regulatory requirements relating to the administration of equity-based awards and the related issuance of Shares thereunder, including but not limited to U.S. federal and state corporate laws, U.S. federal and state securities laws, the Code, any stock exchange or quotation system on which the Common Stock is listed or quoted and the applicable laws of any non-U.S. country or jurisdiction where Awards are, or will be, granted under the Plan.

(c) "Award" means, individually or collectively, a grant under the Plan of Options, Stock Appreciation Rights, Restricted Stock, Restricted Stock Units, Performance Units or Performance Shares.

(d) "Award Agreement" means the written or electronic agreement setting forth the terms and provisions applicable to each Award granted under the Plan. The Award Agreement is subject to the terms and conditions of the Plan.

(e) "Board" means the Board of Directors of the Company.

(f) "Change in Control" means the occurrence of any of the following events:

(i) A change in the ownership of the Company which occurs on the date that any one person, or more than one person acting as a group ("Person"), acquires ownership of the stock of the Company that, together with the stock held by such Person, constitutes more than fifty percent (50%) of the total voting power of the stock of the Company; provided, however, that for purposes of this subsection, (A) the acquisition of additional stock by any one Person, who is

considered to own more than fifty percent (50%) of the total voting power of the stock of the Company will not be considered a Change in Control, and (B) if the stockholders of the Company immediately before such change in ownership continue to retain immediately after the change in ownership, in substantially the same proportions as their ownership of shares of the Company's voting stock immediately prior to the change in ownership, the direct or indirect beneficial ownership of fifty percent (50%) or more of the total voting power of the stock of the Company or of the ultimate parent entity of the Company, such event will not be considered a Change in Control under this subsection (i). For this purpose, indirect beneficial ownership will include, without limitation, an interest resulting from ownership of the voting securities of one or more corporations or other business entities which own the Company, as the case may be, either directly or through one or more subsidiary corporations or other business entities; or

(ii) A change in the effective control of the Company which occurs on the date that a majority of members of the Board is replaced during any twelve (12)-month period by Directors whose appointment or election is not endorsed by a majority of the members of the Board prior to the date of the appointment or election. For purposes of this subsection (ii), if any Person is considered to be in effective control of the Company, the acquisition of additional control of the Company by the same Person will not be considered a Change in Control; or

(iii) A change in the ownership of a substantial portion of the Company's assets which occurs on the date that any Person acquires (or has acquired during the twelve (12)-month period ending on the date of the most recent acquisition by such person or persons) assets from the Company that have a total gross fair market value equal to or more than fifty percent (50%) of the total gross fair market value of all of the assets of the Company immediately prior to such acquisition or acquisitions; provided, however, that for purposes of this subsection (iii), the following will not constitute a change in the ownership of a substantial portion of the Company's assets: (A) a transfer to an entity that is controlled by the Company's stockholders immediately after the transfer, or (B) a transfer of assets by the Company to: (1) a stockholder of the Company (immediately before the asset transfer) in exchange for or with respect to the Company's stock, (2) an entity, fifty percent (50%) or more of the total value or voting power of which is owned, directly or indirectly, by the Company, (3) a Person, that owns, directly or indirectly, fifty percent (50%) or more of the total value or voting power of all the outstanding stock of the Company, or (4) an entity, at least fifty percent (50%) of the total value or voting power of which is owned, directly or indirectly, by a Person described in this subsection (iii)(B)(3). For purposes of this subsection (iii), gross fair market value means the value of the assets of the Company, or the value of the assets being disposed of, determined without regard to any liabilities associated with such assets.

For purposes of this definition, persons will be considered to be acting as a group if they are owners of a corporation that enters into a merger, consolidation, purchase or acquisition of stock, or similar business transaction with the Company.

Notwithstanding the foregoing, a transaction will not be deemed a Change in Control unless the transaction qualifies as a change in control event within the meaning of Section 409A.

Further and for the avoidance of doubt, a transaction will not constitute a Change in Control if: (i) its sole purpose is to change the state of the Company's incorporation, or (ii) its sole purpose is to create a holding company that will be owned in substantially the same proportions by the persons who held the Company's securities immediately before such transaction.

(g) "Code" means the Internal Revenue Code of 1986, as amended. Reference to a specific section of the Code or regulation thereunder will include such section or regulation, any valid regulation promulgated under such section, and any comparable provision of any future legislation or regulation amending, supplementing or superseding such section or regulation.

(h) "Committee" means a committee of Directors or of other individuals satisfying Applicable Laws appointed by the Board, or a duly authorized committee of the Board, in accordance with Section 4 hereof.

(i) "Common Stock" means the Common Stock of the Company.

(j) "Company" means Allakos Inc., a Delaware corporation, or any successor thereto.

(k) "Consultant" means any natural person, including an advisor, engaged by the Company or a Parent or Subsidiary to render bona fide services to such entity, provided the services (i) are not in connection with the offer or sale of securities in a capital-raising transaction, and (ii) do not directly promote or maintain a market for the Company's securities, in each case, within the meaning of Form S-8 promulgated under the Securities Act, and provided, further, that a Consultant will include only those persons to whom the issuance of Shares may be registered under Form S-8 promulgated under the Securities Act.

(l) "Director" means a member of the Board.

(m) "Disability" means total and permanent disability as defined in Section 22(e)(3) of the Code, provided that in the case of Awards other than Incentive Stock Options, the Administrator in its discretion may determine whether a permanent and total disability exists in accordance with uniform and non-discriminatory standards adopted by the Administrator from time to time.

(n) "Employee" means any person, including Officers and Directors, employed by the Company or any Parent or Subsidiary of the Company. Neither service as a Director nor payment of a director's fee by the Company will be sufficient to constitute "employment" by the Company.

(o) "Exchange Act" means the Securities Exchange Act of 1934, as amended.

(p) "Exchange Program" means a program under which (i) outstanding Awards are surrendered or cancelled in exchange for awards of the same type (which may have higher or lower exercise prices and different terms), awards of a different type, and/or cash, (ii) Participants would have the opportunity to transfer any outstanding Awards to a financial institution or other person or entity selected by the Administrator, and/or (iii) the exercise price of an outstanding Award is increased or reduced. The Administrator will determine the terms and conditions of any Exchange Program in its sole discretion.

(q) "Fair Market Value" means, as of any date, the value of Common Stock determined as follows:

(i) For purposes of any Awards granted on the Registration Date, the Fair Market Value will be the initial price to the public as set forth in the final prospectus included within the registration statement in Form S-1 filed with the Securities and Exchange Commission for the initial public offering of the Company's Common Stock.

(ii) For purposes of any Awards granted on any other date, the Fair Market Value will be the closing sales price for Common Stock as quoted on any established stock exchange or national market system (including without limitation the New York Stock Exchange, NASDAQ Global Select Market, the NASDAQ Global Market or the NASDAQ Capital Market of The NASDAQ Stock Market) on which the Common Stock is listed on the date of determination (or the closing bid, if no sales were reported), as reported in *The Wall Street Journal* or such other source as the Administrator deems reliable. If the determination date for the Fair Market Value occurs on a non-trading day (i.e., a weekend or holiday), the Fair Market Value will be such price on the immediately preceding trading day, unless otherwise determined by the Administrator. In the absence of an established market for the Common Stock, the Fair Market Value thereof will be determined in good faith by the Administrator.

The determination of fair market value for purposes of tax withholding may be made in the Administrator's discretion subject to Applicable Laws and is not required to be consistent with the determination of Fair Market Value for other purposes.

(r) "Fiscal Year" means the fiscal year of the Company.

(s) "Incentive Stock Option" means an Option intended to qualify as an incentive stock option within the meaning of Section 422 of the Code and the regulations promulgated thereunder.

(t) "Nonstatutory Stock Option" means an Option that by its terms does not qualify or is not intended to qualify as an Incentive Stock Option.

(u) "Officer" means a person who is an officer of the Company within the meaning of Section 16 of the Exchange Act and the rules and regulations promulgated thereunder.

(v) "Option" means a stock option granted pursuant to the Plan.

(w) "Outside Director" means a Director who is not an Employee.

(x) "Parent" means a "parent corporation," whether now or hereafter existing, as defined in Section 424(e) of the Code.

(y) "Participant" means the holder of an outstanding Award.

(z) "Performance Share" means an Award denominated in Shares which may be earned in whole or in part upon attainment of performance goals or other vesting criteria as the Administrator may determine pursuant to Section 10.

(aa) "Performance Unit" means an Award which may be earned in whole or in part upon attainment of performance goals or other vesting criteria as the Administrator may determine and which may be settled for cash, Shares or other securities or a combination of the foregoing pursuant to Section 10.

(bb) "Period of Restriction" means the period during which the transfer of Shares of Restricted Stock are subject to restrictions and therefore, the Shares are subject to a substantial risk of forfeiture. Such restrictions may be based on the passage of time, the achievement of target levels of performance, or the occurrence of other events as determined by the Administrator.

(cc) "Plan" means this 2018 Equity Incentive Plan.

(dd) "Registration Date" means the effective date of the first registration statement that is filed by the Company and declared effective pursuant to Section 12(b) of the Exchange Act, with respect to any class of the Company's securities.

(ee) "Restricted Stock" means Shares issued pursuant to a Restricted Stock award under Section 7 of the Plan, or issued pursuant to the early exercise of an Option.

(ff) "Restricted Stock Unit" means a bookkeeping entry representing an amount equal to the Fair Market Value of one Share, granted pursuant to Section 8. Each Restricted Stock Unit represents an unfunded and unsecured obligation of the Company.

(gg) "Rule 16b-3" means Rule 16b-3 of the Exchange Act or any successor to Rule 16b-3, as in effect when discretion is being exercised with respect to the Plan.

(hh) "Section 16(b)" means Section 16(b) of the Exchange Act.

(ii) "Section 409A" means Code Section 409A, as it has been and may be amended from time to time, and any proposed or final Treasury Regulations and Internal Revenue Service guidance that has been promulgated or may be promulgated thereunder from time to time.

(jj) "Securities Act" means the Securities Act of 1933, as amended.

(kk) "Service Provider" means an Employee, Director or Consultant.

(ll) "Share" means a share of the Common Stock, as adjusted in accordance with Section 14 of the Plan.

(mm) "Stock Appreciation Right" means an Award, granted alone or in connection with an Option, that pursuant to Section 9 is designated as a Stock Appreciation Right.

(nn) "Subsidiary" means a "subsidiary corporation," whether now or hereafter existing, as defined in Section 424(f) of the Code.

3. Stock Subject to the Plan.

(a) Stock Subject to the Plan. Subject to the provisions of Section 14 of the Plan and the automatic increase set forth in Section 3(b) of the Plan, the maximum aggregate number of Shares that may be issued under the Plan is 4,000,000 Shares, plus any Shares subject to stock options or similar awards granted under the Company's 2012 Equity Incentive Plan, as amended (the "Existing Plan"), that, on or after the termination of the Existing Plan, expire or otherwise terminate without having been exercised in full and Shares issued pursuant to awards granted under the Existing Plan that, on or after the termination of the Existing Plan, are forfeited to or repurchased by the Company, with the maximum number of Shares to be added to the Plan pursuant to the preceding clause equal to 6,606,145 Shares. The Shares may be authorized, but unissued, or reacquired Common Stock.

(b) Automatic Share Reserve Increase. Subject to the provisions of Section 14 of the Plan, the number of Shares available for issuance under the Plan will be increased on the first day of each Fiscal Year beginning with the 2019 Fiscal Year, in an amount equal to the least of (i) 5,000,000 Shares, (ii) 5% of the outstanding Shares on the last day of the immediately preceding Fiscal Year or (iii) such number of Shares determined by the Board.

(c) Lapsed Awards. If an Award expires or becomes unexercisable without having been exercised in full, is surrendered pursuant to an Exchange Program, or, with respect to Restricted Stock, Restricted Stock Units, Performance Units or Performance Shares, is forfeited to or repurchased by the Company due to failure to vest, the unpurchased Shares (or for Awards other than Options or Stock Appreciation Rights the forfeited or repurchased Shares), which were subject thereto will become available for future grant or sale under the Plan (unless the Plan has terminated). With respect to Stock Appreciation Rights, only Shares actually issued (i.e., the net Shares issued) pursuant to a Stock Appreciation Right will cease to be available under the Plan; all remaining Shares under Stock Appreciation Rights will remain available for future grant or sale under the Plan (unless the Plan has terminated). Shares that have actually been issued under the Plan under any Award will not be returned to the Plan and will not become available for future distribution under the Plan; provided, however, that if Shares issued pursuant to Awards of Restricted Stock, Restricted Stock Units, Performance Shares or Performance Units are repurchased by the Company or are forfeited to the Company, such Shares will become available for future grant under the Plan. Shares used to pay the exercise price of an Award or to satisfy the tax withholding obligations related to an Award will become available for future grant or sale under the Plan. To the extent an Award under the Plan is paid out in cash rather than Shares, such cash payment will not result in reducing the number of Shares available for issuance under the Plan. Notwithstanding the foregoing and, subject to adjustment as provided in Section 14, the maximum number of Shares that may be issued upon the exercise of Incentive Stock Options will equal the aggregate Share number stated in Section 3(a), plus, to the extent allowable under Section 422 of the Code and the Treasury Regulations promulgated thereunder, any Shares that become available for issuance under the Plan pursuant to Sections 3(b) and 3(c).

(d) Share Reserve. The Company, during the term of this Plan, will at all times reserve and keep available such number of Shares as will be sufficient to satisfy the requirements of the Plan.

4. Administration of the Plan.

(a) Procedure.

(i) Multiple Administrative Bodies. Different Committees with respect to different groups of Service Providers may administer the Plan.

(ii) Rule 16b-3. To the extent desirable to qualify transactions hereunder as exempt under Rule 16b-3, the transactions contemplated hereunder will be structured to satisfy the requirements for exemption under Rule 16b-3.

(iii) Other Administration. Other than as provided above, the Plan will be administered by (A) the Board or (B) a Committee, which committee will be constituted to satisfy Applicable Laws.

(b) Powers of the Administrator. Subject to the provisions of the Plan, and in the case of a Committee, subject to the specific duties delegated by the Board to such Committee, the Administrator will have the authority, in its discretion:

(i) to determine the Fair Market Value;

(ii) to select the Service Providers to whom Awards may be granted hereunder;

(iii) to determine the number of Shares to be covered by each Award granted hereunder;

(iv) to approve forms of Award Agreements for use under the Plan;

(v) to determine the terms and conditions, not inconsistent with the terms of the Plan, of any Award granted hereunder. Such terms and conditions include, but are not limited to, the exercise price, the time or times when Awards may be exercised (which may be based on performance criteria), any vesting acceleration or waiver of forfeiture restrictions, and any restriction or limitation regarding any Award or the Shares relating thereto, based in each case on such factors as the Administrator will determine;

(vi) to institute and determine the terms and conditions of an Exchange Program;

(vii) to construe and interpret the terms of the Plan and Awards granted pursuant to the Plan;

(viii) to prescribe, amend and rescind rules and regulations relating to the Plan, including rules and regulations relating to sub-plans established for the purpose of satisfying applicable non-U.S. laws or for qualifying for favorable tax treatment under applicable non-U.S. laws;

(ix) to modify or amend each Award (subject to Section 19 of the Plan), including but not limited to the discretionary authority to extend the post-termination exercisability period of Awards and to extend the maximum term of an Option (subject to Section 6(b) of the Plan regarding Incentive Stock Options);

(x) to allow Participants to satisfy tax withholding obligations in such manner as prescribed in Section 15 of the Plan;

(xi) to authorize any person to execute on behalf of the Company any instrument required to effect the grant of an Award previously granted by the Administrator;

(xii) to allow a Participant to defer the receipt of the payment of cash or the delivery of Shares that would otherwise be due to such Participant under an Award; and

(xiii) to make all other determinations deemed necessary or advisable for administering the Plan.

(c) Effect of Administrator's Decision. The Administrator's decisions, determinations and interpretations will be final and binding on all Participants and any other holders of Awards.

5. Eligibility. Nonstatutory Stock Options, Stock Appreciation Rights, Restricted Stock, Restricted Stock Units, Performance Shares and Performance Units may be granted to Service Providers. Incentive Stock Options may be granted only to Employees.

6. Stock Options.

(a) Limitations. Each Option will be designated in the Award Agreement as either an Incentive Stock Option or a Nonstatutory Stock Option. However, notwithstanding such designation, to the extent that the aggregate fair market value of the shares with respect to which incentive stock options are exercisable for the first time by the Participant during any calendar year (under all plans of the Company and any Parent or Subsidiary) exceeds one hundred thousand dollars ($100,000), such options will be treated as nonstatutory stock options. For purposes of this Section 6(a), incentive stock options will be taken into account in the order in which they were granted. The fair market value of the shares will be determined as of the time the option with respect to such shares is granted.

(b) Term of Option. The term of each Option will be stated in the Award Agreement. In the case of an Incentive Stock Option, the term will be ten (10) years from the date of grant or such shorter term as may be provided in the Award Agreement. Moreover, in the case of an Incentive Stock Option granted to a Participant who, at the time the Incentive Stock Option is granted, owns stock representing more than ten percent (10%) of the total combined voting power of all classes of stock of the Company or any Parent or Subsidiary, the term of the Incentive Stock Option will be five (5) years from the date of grant or such shorter term as may be provided in the Award Agreement.

(c) Option Exercise Price and Consideration.

(i) Exercise Price. The per share exercise price for the Shares to be issued pursuant to exercise of an Option will be determined by the Administrator, subject to the following:

(1) In the case of an Incentive Stock Option

(A) granted to an Employee who, at the time the Incentive Stock Option is granted, owns stock representing more than ten percent (10%) of the voting power of all classes of stock of the Company or any Parent or Subsidiary, the per Share exercise price will be no less than one hundred ten percent (110%) of the Fair Market Value per Share on the date of grant.

(B) granted to any Employee other than an Employee described in paragraph (A) immediately above, the per Share exercise price will be no less than one hundred percent (100%) of the Fair Market Value per Share on the date of grant.

(2) In the case of a Nonstatutory Stock Option, the per Share exercise price will be no less than one hundred percent (100%) of the Fair Market Value per Share on the date of grant.

(3) Notwithstanding the foregoing, Options may be granted with a per Share exercise price of less than one hundred percent (100%) of the Fair Market Value per Share on the date of grant pursuant to a transaction described in, and in a manner consistent with, Section 424(a) of the Code.

(ii) Waiting Period and Exercise Dates. At the time an Option is granted, the Administrator will fix the period within which the Option may be exercised and will determine any conditions that must be satisfied before the Option may be exercised.

(iii) Form of Consideration. The Administrator will determine the acceptable form of consideration for exercising an Option, including the method of payment. In the case of an Incentive Stock Option, the Administrator will determine the acceptable form of consideration at the time of grant. Such consideration may consist entirely of: (1) cash; (2) check; (3) promissory note, to the extent permitted by Applicable Laws, (4) other Shares, provided that such Shares have a Fair Market Value on the date of surrender equal to the aggregate exercise price of the Shares as to which such Option will be exercised and provided that accepting such Shares will not result in any adverse accounting consequences to the Company, as the Administrator determines in its sole discretion; (5) consideration received by the Company under a broker-assisted (or other) cashless exercise program (whether through a broker or otherwise) implemented by the Company in connection with the Plan; (6) by net exercise; (7) such other consideration and method of payment for the issuance of Shares to the extent permitted by Applicable Laws; or (8) any combination of the foregoing methods of payment.

(d) Exercise of Option.

(i) Procedure for Exercise; Rights as a Stockholder. Any Option granted hereunder will be exercisable according to the terms of the Plan and at such times and under such conditions as determined by the Administrator and set forth in the Award Agreement. An Option may not be exercised for a fraction of a Share.

An Option will be deemed exercised when the Company receives: (i) a notice of exercise (in such form as the Administrator may specify from time to time) from the person entitled to exercise the Option, and (ii) full payment for the Shares with respect to which the Option is exercised (together with applicable withholding taxes). Full payment may consist of any consideration and method of payment authorized by the Administrator and permitted by the Award Agreement and the Plan. Shares issued upon exercise of an Option will be issued in the name of the Participant or, if requested by the Participant, in the name of the Participant and his or her spouse. Until the Shares are issued (as evidenced by the appropriate entry on the books of the Company or of a duly authorized transfer agent of the Company), no right to vote or receive dividends or any other rights as a stockholder will exist with respect to the Shares subject to an Option, notwithstanding the exercise of the Option. The Company will issue (or cause to be issued) such Shares promptly after the Option is exercised. No adjustment will be made for a dividend or other right for which the record date is prior to the date the Shares are issued, except as provided in Section 14 of the Plan.

Exercising an Option in any manner will decrease the number of Shares thereafter available, both for purposes of the Plan and for sale under the Option, by the number of Shares as to which the Option is exercised.

(ii) Termination of Relationship as a Service Provider. If a Participant ceases to be a Service Provider, other than upon the Participant's termination as the result of the Participant's death or Disability, the Participant may exercise his or her Option within such period of time as is specified in the Award Agreement to the extent that the Option is vested on the date of termination (but in no event later than the expiration of the term of such Option as set forth in the Award Agreement). In the absence of a specified time in the Award Agreement, the Option will remain exercisable for three (3) months following the Participant's termination. Unless otherwise provided by the Administrator, if on the date of termination the Participant is not vested as to his or her entire Option, the Shares covered by the unvested portion of the Option will revert to the Plan. If after termination the Participant does not exercise his or her Option within the time specified by the Administrator, the Option will terminate, and the Shares covered by such Option will revert to the Plan.

(iii) Disability of Participant. If a Participant ceases to be a Service Provider as a result of the Participant's Disability, the Participant may exercise his or her Option within such period of time as is specified in the Award Agreement to the extent the Option is vested on the date of termination (but in no event later than the expiration of the term of such Option as set forth in the Award Agreement). In the absence of a specified time in the Award Agreement, the Option will remain exercisable for twelve (12) months following the Participant's termination. Unless otherwise provided by the Administrator, if on the date of termination the Participant is not vested as to his or her entire Option, the Shares covered by the unvested portion of the Option will revert to the Plan. If after termination the Participant does not exercise his or her Option within the time specified herein, the Option will terminate, and the Shares covered by such Option will revert to the Plan.

(iv) Death of Participant. If a Participant dies while a Service Provider, the Option may be exercised following the Participant's death within such period of time as is specified in the Award Agreement to the extent that the Option is vested on the date of death (but in no event may the option be exercised later than the expiration of the term of such Option as set forth in the Award Agreement), by the Participant's designated beneficiary, provided such beneficiary has been designated prior to Participant's death in a form acceptable to the Administrator. If no such beneficiary has been designated by the Participant, then such Option may be exercised by the personal representative of the Participant's estate or by the person(s) to whom the Option is transferred pursuant to the Participant's will or in accordance with the laws of descent and distribution. In the absence of a specified time in the Award Agreement, the Option will remain exercisable for twelve (12) months following Participant's death. Unless otherwise provided by the Administrator, if at the time of death Participant is not vested as to his or her entire Option, the Shares covered by the unvested portion of the Option will immediately revert to the Plan. If the Option is not so exercised within the time specified herein, the Option will terminate, and the Shares covered by such Option will revert to the Plan.

(v) Tolling Expiration. A Participant's Award Agreement may also provide that:

(1) if the exercise of the Option following the termination of Participant's status as a Service Provider (other than upon the Participant's death or Disability) would result in liability under Section 16(b), then the Option will terminate on the earlier of (A) the expiration of the term of the Option set forth in the Award Agreement, or (B) the tenth (10th) day after the last date on which such exercise would result in liability under Section 16(b); or

(2) if the exercise of the Option following the termination of the Participant's status as a Service Provider (other than upon the Participant's death or Disability) would be prohibited at any time solely because the issuance of Shares would violate the registration requirements under the Securities Act, then the Option will terminate on the earlier of (A) the expiration of the term of the Option or (B) the expiration of a period of thirty (30)-day period after the termination of the Participant's status as a Service Provider during which the exercise of the Option would not be in violation of such registration requirements.

7. Restricted Stock.

(a) Grant of Restricted Stock. Subject to the terms and provisions of the Plan, the Administrator, at any time and from time to time, may grant Shares of Restricted Stock to Service Providers in such amounts as the Administrator, in its sole discretion, will determine.

(b) Restricted Stock Agreement. Each Award of Restricted Stock will be evidenced by an Award Agreement that will specify the Period of Restriction, the number of Shares granted, and such other terms and conditions as the Administrator, in its sole discretion, will determine. Unless the Administrator determines otherwise, the Company as escrow agent will hold Shares of Restricted Stock until the restrictions on such Shares have lapsed.

(c) Transferability. Except as provided in this Section 7 or the Award Agreement, Shares of Restricted Stock may not be sold, transferred, pledged, assigned, or otherwise alienated or hypothecated until the end of the applicable Period of Restriction.

(d) Other Restrictions. The Administrator, in its sole discretion, may impose such other restrictions on Shares of Restricted Stock as it may deem advisable or appropriate.

(e) Removal of Restrictions. Except as otherwise provided in this Section 7, Shares of Restricted Stock covered by each Restricted Stock grant made under the Plan will be released from escrow as soon as practicable after the last day of the Period of Restriction or at such other time as the Administrator may determine. The Administrator, in its discretion, may accelerate the time at which any restrictions will lapse or be removed.

(f) Voting Rights. During the Period of Restriction, Service Providers holding Shares of Restricted Stock granted hereunder may exercise full voting rights with respect to those Shares, unless the Administrator determines otherwise.

(g) Dividends and Other Distributions. During the Period of Restriction, Service Providers holding Shares of Restricted Stock will be entitled to receive all dividends and other distributions paid with respect to such Shares, unless the Administrator provides otherwise. If any such dividends or distributions are paid in Shares, the Shares will be subject to the same restrictions on transferability and forfeitability as the Shares of Restricted Stock with respect to which they were paid.

(h) Return of Restricted Stock to Company. On the date set forth in the Award Agreement, the Restricted Stock for which restrictions have not lapsed will revert to the Company and again will become available for grant under the Plan.

8. Restricted Stock Units.

(a) Grant. Restricted Stock Units may be granted at any time and from time to time as determined by the Administrator. After the Administrator determines that it will grant Restricted Stock Units under the Plan, it will advise the Participant in an Award Agreement of the terms, conditions, and restrictions related to the grant, including the number of Restricted Stock Units.

(b) Vesting Criteria and Other Terms. The Administrator will set vesting criteria in its discretion, which, depending on the extent to which the criteria are met, will determine the number of Restricted Stock Units that will be paid out to the Participant. The Administrator may set vesting criteria based upon the achievement of Company-wide, divisional, business unit, or individual goals (including, but not limited to, continued employment or service), applicable federal or state securities laws or any other basis determined by the Administrator in its discretion.

(c) Earning Restricted Stock Units. Upon meeting the applicable vesting criteria, the Participant will be entitled to receive a payout as determined by the Administrator. Notwithstanding the foregoing, at any time after the grant of Restricted Stock Units, the Administrator, in its sole discretion, may reduce or waive any vesting criteria that must be met to receive a payout.

(d) Form and Timing of Payment. Payment of earned Restricted Stock Units will be made as soon as practicable after the date(s) determined by the Administrator and set forth in the Award Agreement. The Administrator, in its sole discretion, may only settle earned Restricted Stock Units in cash, Shares, or a combination of both.

(e) Cancellation. On the date set forth in the Award Agreement, all unearned Restricted Stock Units will be forfeited to the Company.

9. Stock Appreciation Rights.

(a) Grant of Stock Appreciation Rights. Subject to the terms and conditions of the Plan, a Stock Appreciation Right may be granted to Service Providers at any time and from time to time as will be determined by the Administrator, in its sole discretion.

(b) Number of Shares. The Administrator will have complete discretion to determine the number of Stock Appreciation Rights granted to any Service Provider.

(c) Exercise Price and Other Terms. The per share exercise price for the Shares to be issued pursuant to exercise of a Stock Appreciation Right will be determined by the Administrator and will be no less than one hundred percent (100%) of the Fair Market Value per Share on the date of grant. Otherwise, the Administrator, subject to the provisions of the Plan, will have complete discretion to determine the terms and conditions of Stock Appreciation Rights granted under the Plan.

(d) Stock Appreciation Right Agreement. Each Stock Appreciation Right grant will be evidenced by an Award Agreement that will specify the exercise price, the term of the Stock Appreciation Right, the conditions of exercise, and such other terms and conditions as the Administrator, in its sole discretion, will determine.

(e) Expiration of Stock Appreciation Rights. A Stock Appreciation Right granted under the Plan will expire ten (10) years from the date of grant or such shorter term as may be provided in the Award Agreement, as determined by the Administrator, in its sole discretion. Notwithstanding the foregoing, the rules of Section 6(d) relating to exercise also will apply to Stock Appreciation Rights.

(f) Payment of Stock Appreciation Right Amount. Upon exercise of a Stock Appreciation Right, a Participant will be entitled to receive payment from the Company in an amount determined by multiplying:

(i) The difference between the Fair Market Value of a Share on the date of exercise over the exercise price; times

(ii) The number of Shares with respect to which the Stock Appreciation Right is exercised.

At the discretion of the Administrator, the payment upon Stock Appreciation Right exercise may be in cash, in Shares of equivalent value, or in some combination thereof.

10. Performance Units and Performance Shares.

(a) Grant of Performance Units/Shares. Performance Units and Performance Shares may be granted to Service Providers at any time and from time to time, as will be determined by the Administrator, in its sole discretion. The Administrator will have complete discretion in determining the number of Performance Units and Performance Shares granted to each Participant.

(b) Value of Performance Units/Shares. Each Performance Unit will have an initial value that is established by the Administrator on or before the date of grant. Each Performance Share will have an initial value equal to the Fair Market Value of a Share on the date of grant.

(c) Performance Objectives and Other Terms. The Administrator will set performance objectives or other vesting provisions (including, without limitation, continued status as a Service Provider) in its discretion which, depending on the extent to which they are met, will determine the number or value of Performance Units/Shares that will be paid out to the Service Providers. The time period during which the performance objectives or other vesting provisions must be met will be called the "Performance Period." Each Award of Performance Units/Shares will be evidenced by an Award Agreement that will specify the Performance Period, and such other terms and conditions as the Administrator, in its sole discretion, will determine. The Administrator may set performance objectives based upon the achievement of Company-wide, divisional, business unit or individual goals (including, but not limited to, continued employment or service), applicable federal or state securities laws, or any other basis determined by the Administrator in its discretion.

(d) Earning of Performance Units/Shares. After the applicable Performance Period has ended, the holder of Performance Units/Shares will be entitled to receive a payout of the number of Performance Units/Shares earned by the Participant over the Performance Period, to be determined as a function of the extent to which the corresponding performance objectives or other vesting provisions have been achieved. After the grant of a Performance Unit/Share, the Administrator, in its sole discretion, may reduce or waive any performance objectives or other vesting provisions for such Performance Unit/Share.

(e) Form and Timing of Payment of Performance Units/Shares. Payment of earned Performance Units/Shares will be made as soon as practicable after the expiration of the applicable Performance Period. The Administrator, in its sole discretion, may pay earned Performance Units/Shares in the form of cash, in Shares (which have an aggregate Fair Market Value equal to the value of the earned Performance Units/Shares at the close of the applicable Performance Period) or in a combination thereof.

(f) Cancellation of Performance Units/Shares. On the date set forth in the Award Agreement, all unearned or unvested Performance Units/Shares will be forfeited to the Company, and again will be available for grant under the Plan.

11. Outside Director Limitations. No Outside Director may be paid, issued or granted, in any Fiscal Year, cash compensation and equity awards (including any Awards issued under this Plan) with an aggregate value greater than $1,000,000 (with the value of each equity award based on its grant date fair value (determined in accordance with U.S. generally accepted accounting principles)). Any cash compensation paid or Awards granted to an individual for his or her services as an Employee, or for his or her services as a Consultant (other than as an Outside Director), will not count for purposes of the limitation under this Section 11.

12. Leaves of Absence/Transfer Between Locations. Unless the Administrator provides otherwise, vesting of Awards granted hereunder will be suspended during any unpaid leave of absence. A Participant will not cease to be an Employee in the case of (i) any leave of absence approved by the Company or (ii) transfers between locations of the Company or between the Company, its Parent, or any Subsidiary. For purposes of Incentive Stock Options, no such leave may exceed three (3) months, unless reemployment upon expiration of such leave is guaranteed by statute or contract. If reemployment upon expiration of a leave of absence approved by the Company is not so guaranteed, then six (6) months following the first (1st) day of such leave any Incentive Stock Option held by the Participant will cease to be treated as an Incentive Stock Option and will be treated for tax purposes as a Nonstatutory Stock Option.

13. Transferability of Awards. Unless determined otherwise by the Administrator, an Award may not be sold, pledged, assigned, hypothecated, transferred, or disposed of in any manner other than by will or by the laws of descent or distribution and may be exercised, during the lifetime of the Participant, only by the Participant. If the Administrator makes an Award transferable, such Award will contain such additional terms and conditions as the Administrator deems appropriate.

14. Adjustments; Dissolution or Liquidation; Merger or Change in Control.

(a) Adjustments. In the event that any dividend or other distribution (whether in the form of cash, Shares, other securities, or other property), recapitalization, stock split, reverse stock split, reorganization, merger, consolidation, split-up, spin-off, combination, repurchase, or exchange of Shares or other securities of the Company, or other change in the corporate structure of the Company affecting the Shares occurs, the Administrator, in order to prevent diminution or enlargement of the benefits or potential benefits intended to be made available under the Plan, will adjust the number and class of Shares that may be delivered under the Plan and/or the number, class, and price of Shares covered by each outstanding Award, and the numerical Share limits in Section 3 of the Plan.

(b) Dissolution or Liquidation. In the event of the proposed dissolution or liquidation of the Company, the Administrator will notify each Participant as soon as practicable prior to the effective date of such proposed transaction. To the extent it has not been previously exercised, an Award will terminate immediately prior to the consummation of such proposed action.

(c) Change in Control. In the event of a merger of the Company with or into another corporation or other entity or a Change in Control, each outstanding Award will be treated as the Administrator determines subject to the restriction in the following paragraph, including, without limitation, that each Award be assumed or an equivalent option or right substituted by the successor corporation or a Parent or Subsidiary of the successor corporation. The Administrator will not be required to treat all Awards or Participants similarly in the transaction.

In the event that the successor corporation does not assume or substitute for the Award, the Participant will fully vest in and have the right to exercise all of his or her outstanding Options and Stock Appreciation Rights, including Shares as to which such Awards would not otherwise be vested or exercisable, all restrictions on Restricted Stock and Restricted Stock Units will lapse, and, with respect to Awards with performance-based vesting, all performance goals or other vesting criteria will be deemed achieved at one hundred percent (100%) of target levels and all other terms and conditions met. In addition, if an Option or Stock Appreciation Right is not assumed or substituted in the event of a Change in Control, the Administrator will notify the Participant in writing or electronically that the Option or Stock Appreciation Right will be exercisable for a period of time determined by the Administrator in its sole discretion, and the Option or Stock Appreciation Right will terminate upon the expiration of such period.

For the purposes of this subsection (c), an Award will be considered assumed if, following the Change in Control, the Award confers the right to purchase or receive, for each Share subject to the Award immediately prior to the Change in Control, the consideration (whether stock, cash, or other securities or property) received in the Change in Control by holders of Common Stock for each Share held on the effective date of the transaction (and if holders were offered a choice of consideration, the type of consideration chosen by the holders of a majority of the outstanding Shares); provided, however, that if such consideration received in the Change in Control is not solely common stock of the successor corporation or its Parent, the Administrator may, with the consent of the successor corporation, provide for the consideration to be received upon the exercise of an Option or Stock Appreciation Right or upon the payout of a Restricted Stock Unit, Performance Unit or Performance Share, for each Share subject to such Award, to be solely common stock of the successor corporation or its Parent equal in fair market value to the per share consideration received by holders of Common Stock in the Change in Control.

Notwithstanding anything in this Section 14(c) to the contrary, an Award that vests, is earned or paid-out upon the satisfaction of one or more performance goals will not be considered assumed if the Company or its successor modifies any of such performance goals without the Participant's consent; provided, however, a modification to such performance goals only to reflect the successor corporation's post-Change in Control corporate structure will not be deemed to invalidate an otherwise valid Award assumption.

(d) Outside Director Awards. With respect to Awards granted to an Outside Director, in the event of a Change in Control, then the Participant will fully vest in and have the right to exercise Options and/or Stock Appreciation Rights as to all of the Shares underlying such Award, including those Shares which would not otherwise be vested or exercisable, all restrictions on Restricted Stock and Restricted Stock Units will lapse, and, with respect to Awards with performance-based vesting, all performance goals or other vesting criteria will be deemed achieved at one hundred percent (100%) of target levels and all other terms and conditions met.

15. Tax.

(a) Withholding Requirements. Prior to the delivery of any Shares or cash pursuant to an Award (or exercise thereof) or such earlier time as any tax withholding obligations are due, the Company will have the power and the right to deduct or withhold, or require a Participant to remit to the Company, an amount sufficient to satisfy U.S. federal, state, or local taxes, non-U.S. taxes, or other taxes (including the Participant's FICA obligation) required to be withheld with respect to such Award (or exercise thereof).

(b) Withholding Arrangements. The Administrator, in its sole discretion and pursuant to such procedures as it may specify from time to time, may permit a Participant to satisfy such tax withholding obligation, in whole or in part by (without limitation) (i) paying cash, (ii) electing to have the Company withhold otherwise deliverable cash or Shares having a fair market value not in excess of the maximum statutory amount required to be withheld, or (iii) delivering to the Company already-owned Shares having a fair market value not in excess of the maximum statutory amount required to be withheld. The fair market value of the Shares to be withheld or delivered will be determined as of the date that the taxes are required to be withheld.

(c) Compliance With Section 409A. Awards will be designed and operated in such a manner that they are either exempt from the application of, or comply with, the requirements of Section 409A such that the grant, payment, settlement or deferral will not be subject to the additional tax or interest applicable under Section 409A, except as otherwise determined in the sole discretion of the Administrator. The Plan and each Award Agreement under the Plan is intended to meet the requirements of Section 409A and will be construed and interpreted in accordance with such intent, except as otherwise determined in the sole discretion of the Administrator. To the extent that an Award or payment, or the settlement or deferral thereof, is subject to Section 409A the Award will be granted, paid, settled or deferred in a manner that will meet the requirements of Section 409A, such that the grant, payment, settlement or deferral will not be subject to the additional tax or interest applicable under Section 409A. In no event will the Company (or any Parent or Subsidiary of the Company, as applicable) reimburse a Participant for any taxes imposed or other costs incurred as a result of Section 409A.

16. No Effect on Employment or Service. Neither the Plan nor any Award will confer upon a Participant any right with respect to continuing the Participant's relationship as a Service Provider, nor will they interfere in any way with the Participant's right or the right of the Company (or any Parent or Subsidiary of the Company) to terminate such relationship at any time, with or without cause, to the extent permitted by Applicable Laws.

17. Date of Grant. The date of grant of an Award will be, for all purposes, the date on which the Administrator makes the determination granting such Award, or such other later date as is determined by the Administrator. Notice of the determination will be provided to each Participant within a reasonable time after the date of such grant.

18. Term of Plan. Subject to Section 23 of the Plan, the Plan will become effective upon the later to occur of (i) its adoption by the Board or (ii) the business day immediately prior to the Registration Date. It will continue in effect for a term of ten (10) years from the date adopted by the Board, unless terminated earlier under Section 19 of the Plan.

19. Amendment and Termination of the Plan.

(a) Amendment and Termination. The Administrator may at any time amend, alter, suspend or terminate the Plan.

(b) Stockholder Approval. The Company will obtain stockholder approval of any Plan amendment to the extent necessary and desirable to comply with Applicable Laws.

(c) Effect of Amendment or Termination. No amendment, alteration, suspension or termination of the Plan will materially impair the rights of any Participant, unless mutually agreed otherwise between the Participant and the Administrator, which agreement must be in writing and signed by the Participant and the Company. Termination of the Plan will not affect the Administrator's ability to exercise the powers granted to it hereunder with respect to Awards granted under the Plan prior to the date of such termination.

20. Conditions Upon Issuance of Shares.

(a) Legal Compliance. Shares will not be issued pursuant to an Award unless the exercise of such Award and the issuance and delivery of such Shares will comply with Applicable Laws and will be further subject to the approval of counsel for the Company with respect to such compliance.

(b) Investment Representations. As a condition to the exercise of an Award, the Company may require the person exercising such Award to represent and warrant at the time of any such exercise that the Shares are being purchased only for investment and without any present intention to sell or distribute such Shares if, in the opinion of counsel for the Company, such a representation is required.

21. Inability to Obtain Authority. The inability of the Company to obtain authority from any regulatory body having jurisdiction or to complete or comply with the requirements of any registration or other qualification of the Shares under any U.S. federal or state law, any non-U.S. law, or the rules and regulations of the Securities and Exchange Commission, the stock exchange on which Shares of the same class are then listed, or any other governmental or regulatory body, which authority, registration, qualification or rule compliance is deemed by the Company's counsel to be necessary or advisable for the issuance and sale of any Shares hereunder, will relieve the Company of any liability in respect of the failure to issue or sell such Shares as to which such requisite authority, registration, qualification or rule compliance will not have been obtained.

22. Clawback. The Administrator may specify in an Award Agreement that the Participant's rights, payments, and/or benefits with respect to an Award will be subject to reduction, cancellation, forfeiture, and/or recoupment upon the occurrence of certain specified events, in addition to any applicable vesting, performance or other conditions and restrictions of an Award. Notwithstanding any provisions to the contrary under this Plan, an Award granted under the Plan shall be subject to the Company's clawback policy (if any) as may be established and/or amended from time to time. The Board may require a Participant to forfeit or return to and/or reimburse the Company all or a portion of the Award and/or Shares issued under the Award, any amounts paid under the Award, and any payments or proceeds paid or provided upon disposition of the Shares issued under the Award, pursuant to the terms of such Company policy or as necessary or appropriate to comply with Applicable Laws.

23. Stockholder Approval. The Plan will be subject to approval by the stockholders of the Company within twelve (12) months after the date the Plan is adopted by the Board. Such stockholder approval will be obtained in the manner and to the degree required under Applicable Laws.

ALLAKOS INC.
2018 EQUITY INCENTIVE PLAN
STOCK OPTION AGREEMENT

Unless otherwise defined herein, the terms defined in the Allakos Inc. 2018 Equity Incentive Plan (the "Plan") will have the same defined meanings in this Stock Option Agreement, which includes the Notice of Stock Option Grant (the "Notice of Grant"), the Terms and Conditions of Stock Option Grant attached hereto as Exhibit A, the Exercise Notice attached hereto as Exhibit B, and all other exhibits and appendices attached hereto (all together, the "Option Agreement").

NOTICE OF STOCK OPTION GRANT

Participant:

Address:

The undersigned Participant has been granted an Option to purchase Common Stock of Allakos Inc. (the "Company"), subject to the terms and conditions of the Plan and this Option Agreement, as follows:

Grant Number:	_____
Date of Grant:	_____
Vesting Commencement Date:	_____
Number of Shares Granted:	_____
Exercise Price per Share (in U.S. Dollars): $	_____
Total Exercise Price(in U.S. Dollars): $	_____
Type of Option:	___ Incentive Stock Option
	___ Nonstatutory Stock Option
Term/Expiration Date:	_____

Vesting Schedule:

Subject to accelerated vesting as set forth below or in the Plan, this Option will be exercisable, in whole or in part, in accordance with the following schedule:

[*Insert vesting schedule, e.g.:* Twenty-five percent (25%) of the Shares subject to the Option shall vest on the one (1) year anniversary of the Vesting Commencement Date, and one forty-eighth (1/48th) of the Shares subject to the Option shall vest each month thereafter on the same day of the month as the Vesting Commencement Date (and if there is no corresponding day, on the last day of the month), subject to Participant continuing to be a Service Provider through each such date.]

Termination Period:

This Option will be exercisable for three (3) months after Participant ceases to be a Service Provider, unless such termination is due to Participant's death or Disability, in which case this Option will be exercisable for twelve (12) months after Participant ceases to be a Service Provider. Notwithstanding the foregoing sentence, in no event may this Option be exercised after the Term/Expiration Date as provided above and this Option may be subject to earlier termination as provided in Section 14 of the Plan.

By Participant's signature and the signature of the representative of the Company below, Participant and the Company agree that this Option is granted under and governed by the terms and conditions of the Plan and this Option Agreement, including the Terms and Conditions of Stock Option Grant, attached hereto as Exhibit A, all of which are made a part of this document. Participant acknowledges receipt of a copy of the Plan. Participant has reviewed the Plan and this Option Agreement in their entirety, has had an opportunity to obtain the advice of counsel prior to executing this Option Agreement, and fully understands all provisions of the Plan and this Option Agreement. Participant hereby agrees to accept as binding, conclusive, and final all decisions or interpretations of the Administrator upon any questions relating to the Plan and the Option Agreement. Participant further agrees to notify the Company upon any change in the residence address indicated below.

PARTICIPANT	ALLAKOS INC.
_____	_____
Signature	Signature
_____	_____
Print Name	Print Name
	_____
	Title

Address:

_____

_____

EXHIBIT A

TERMS AND CONDITIONS OF STOCK OPTION GRANT

1. Grant of Option.

(a) The Company hereby grants to the individual ("Participant") named in the Notice of Stock Option Grant of this Option Agreement (the "Notice of Grant") an option (the "Option") to purchase the number of Shares set forth in the Notice of Grant, at the exercise price per Share set forth in the Notice of Grant (the "Exercise Price"), subject to all of the terms and conditions in this Option Agreement and the Plan, which is incorporated herein by this reference. Subject to Section 19(c) of the Plan, in the event of a conflict between the terms and conditions of the Plan and the terms and conditions of this Option Agreement, the terms and conditions of the Plan will prevail.

(b) For U.S. taxpayers, the Option will be designated as either an Incentive Stock Option ("ISO") or a Nonstatutory Stock Option ("NSO"). If designated in the Notice of Grant as an ISO, this Option is intended to qualify as an ISO under Section 422 of the Internal Revenue Code of 1986, as amended (the "Code"). However, if this Option is intended to be an ISO, to the extent that it exceeds the $100,000 rule of Code Section 422(d) it will be treated as an NSO. Further, if for any reason this Option (or portion thereof) will not qualify as an ISO, then, to the extent of such nonqualification, such Option (or portion thereof) shall be regarded as a NSO granted under the Plan. In no event will the Administrator, the Company or any Parent or Subsidiary or any of their respective employees or directors have any liability to Participant (or any other person) due to the failure of the Option to qualify for any reason as an ISO.

(c) For non-U.S. taxpayers, the Option will be designated as an NSO.

2. Vesting Schedule. Except as provided in Section 3, the Option awarded by this Option Agreement will vest in accordance with the vesting provisions set forth in the Notice of Grant. Shares subject to this Option that are scheduled to vest on a certain date or upon the occurrence of a certain condition will not vest in accordance with any of the provisions of this Option Agreement, unless Participant will have been continuously a Service Provider from the Date of Grant until the date such vesting occurs.

3. Administrator Discretion. The Administrator, in its discretion, may accelerate the vesting of the balance, or some lesser portion of the balance, of the unvested Option at any time, subject to the terms of the Plan. If so accelerated, such Option will be considered as having vested as of the date specified by the Administrator.

4. Exercise of Option.

(a) Right to Exercise. This Option may be exercised only within the term set out in the Notice of Grant, and may be exercised during such term only in accordance with the Plan and the terms of this Option Agreement.

(b) Method of Exercise. This Option is exercisable by delivery of an exercise notice (the "Exercise Notice") in the form attached as Exhibit B to the Notice of Grant or in a manner and pursuant to such procedures as the Administrator may determine, which will state the election to exercise the Option, the number of Shares in respect of which the Option is being exercised (the "Exercised Shares"), and such other representations and agreements as may be required by the Company pursuant to the provisions of the Plan. The Exercise Notice will be completed by Participant and delivered to the Company. The Exercise Notice will be accompanied by payment of the aggregate Exercise Price as to all Exercised Shares and of any Tax Obligations (as defined in Section 6(a)). This Option will be deemed to be exercised upon receipt by the Company of such fully executed Exercise Notice accompanied by the aggregate Exercise Price.

5. Method of Payment. Payment of the aggregate Exercise Price will be by any of the following, or a combination thereof, at the election of Participant:

(a) cash in U.S. dollars;

(b) check designated in U.S. dollars;

(c) consideration received by the Company under a formal cashless exercise program adopted by the Company in connection with the Plan; or

(d) if Participant is a U.S. employee, surrender of other Shares which have a Fair Market Value on the date of surrender equal to the aggregate Exercise Price of the Exercised Shares and that are owned free and clear of any liens, claims, encumbrances, or security interests, provided that accepting such Shares, in the sole discretion of the Administrator, will not result in any adverse accounting consequences to the Company.

6. Tax Obligations.

(a) Responsibility for Taxes. Participant acknowledges that, regardless of any action taken by the Company or, if different, Participant's employer (the "Employer") or any Parent or Subsidiary to which Participant is providing services (together, the "Service Recipients"), the ultimate liability for any tax and/or social insurance liability obligations and requirements in connection with the Option, including, without limitation, (i) all federal, state, and local taxes (including the Participant's Federal Insurance Contributions Act (FICA) obligations) that are required to be withheld by any Service Recipient or other payment of tax-related items related to Participant's participation in the Plan and legally applicable to Participant, (ii) the Participant's and, to the extent required by any Service Recipient, the Service Recipient's fringe benefit tax liability, if any, associated with the grant, vesting, or exercise of the Option or sale of Shares, and (iii) any other Service Recipient taxes the responsibility for which the Participant has, or has agreed to bear, with respect to the Option (or exercise thereof or issuance of Shares thereunder) (collectively, the "Tax Obligations"), is and remains Participant's sole responsibility and may exceed the amount actually withheld by the applicable Service Recipient(s). Participant further acknowledges that no Service Recipient (A) makes any representations or undertakings regarding the treatment of any Tax Obligations in connection with any aspect of the Option, including, but not limited to, the grant, vesting or exercise of the Option, the subsequent sale of Shares acquired pursuant to such exercise

and the receipt of any dividends or other distributions, and (B) do not commit to and are under no obligation to structure the terms of the grant or any aspect of the Option to reduce or eliminate Participant's liability for Tax Obligations or achieve any particular tax result. Further, if Participant is subject to Tax Obligations in more than one jurisdiction between the Date of Grant and the date of any relevant taxable or tax withholding event, as applicable, Participant acknowledges that the applicable Service Recipient(s) (or former employer, as applicable) may be required to withhold or account for Tax Obligations in more than one jurisdiction. If Participant fails to make satisfactory arrangements for the payment of any required Tax Obligations hereunder at the time of the applicable taxable event, Participant acknowledges and agrees that the Company may refuse to issue or deliver the Shares.

(b) Tax Withholding. Pursuant to such procedures as the Administrator may specify from time to time, the applicable Service Recipient(s) shall withhold the amount required to be withheld for the payment of Tax Obligations. The Administrator, in its sole discretion and pursuant to such procedures as it may specify from time to time, may permit Participant to satisfy such Tax Obligations, in whole or in part (without limitation), if permissible by applicable local law, by (i) paying cash in U.S. dollars, (ii) electing to have the Company withhold otherwise deliverable Shares having a fair market value equal to the minimum amount that is necessary to meet the withholding requirement for such Tax Obligations (or such greater amount as Participant may elect if permitted by the Administrator, if such greater amount would not result in adverse financial accounting consequences), (iii) having the amount of such Tax Obligations withheld from Participant's wages or other cash compensation paid to Participant by the applicable Service Recipient(s), (iv) delivering to the Company already vested and owned Shares having a fair market value equal to such Tax Obligations, or (v) selling a sufficient number of such Shares otherwise deliverable to Participant through such means as the Company may determine in its sole discretion (whether through a broker or otherwise) equal to the minimum amount that is necessary to meet the withholding requirement for such Tax Obligations (or such greater amount as Participant may elect if permitted by the Administrator, if such greater amount would not result in adverse financial accounting consequences). To the extent determined appropriate by the Administrator in its discretion, the Administrator will have the right (but not the obligation) to satisfy any Tax Obligations by reducing the number of Shares otherwise deliverable to Participant. Further, if Participant is subject to tax in more than one jurisdiction between the Date of Grant and a date of any relevant taxable or tax withholding event, as applicable, Participant acknowledges and agrees that the applicable Service Recipient(s) (and/or former employer, as applicable) may be required to withhold or account for tax in more than one jurisdiction.

(c) Notice of Disqualifying Disposition of ISO Shares. If the Option is an ISO, and if Participant sells or otherwise disposes of any of the Shares acquired pursuant to the ISO on or before the later of (i) the date two (2) years after the Date of Grant, or (ii) the date one (1) year after the date of exercise, Participant will immediately notify the Company in writing of such disposition. Participant agrees that Participant may be subject to income tax withholding by the Company on the compensation income recognized by Participant.

(d) Code Section 409A. Under Code Section 409A, a stock right (such as the Option) that vests after December 31, 2004 (or that vested on or prior to such date but which was materially modified after October 3, 2004) that was granted with a per share exercise price that is determined by the Internal Revenue Service (the "IRS") to be less than the fair market value of an underlying share on the date of grant (a "discount option") may be considered "deferred compensation." A stock right that is a "discount option" may result in (i) income recognition by the recipient of the stock right prior to the exercise of the stock right, (ii) an additional twenty percent (20%) federal income tax, and (iii) potential penalty and interest charges. The "discount option" may also result in additional state income, penalty and interest tax to the recipient of the stock right. Participant acknowledges that the Company cannot and has not guaranteed that the IRS will agree that the per Share exercise price of this Option equals or exceeds the fair market value of a Share on the date of grant in a later examination. Participant agrees that if the IRS determines that the Option was granted with a per Share exercise price that was less than the fair market value of a Share on the date of grant, Participant shall be solely responsible for Participant's costs related to such a determination.

7. Rights as Stockholder. Neither Participant nor any person claiming under or through Participant will have any of the rights or privileges of a stockholder of the Company in respect of any Shares deliverable hereunder unless and until certificates representing such Shares (which may be in book entry form) will have been issued, recorded on the records of the Company or its transfer agents or registrars, and delivered to Participant (including through electronic delivery to a brokerage account). After such issuance, recordation, and delivery, Participant will have all the rights of a stockholder of the Company with respect to voting such Shares and receipt of dividends and distributions on such Shares.

8. No Guarantee of Continued Service. PARTICIPANT ACKNOWLEDGES AND AGREES THAT THE VESTING OF SHARES PURSUANT TO THE VESTING SCHEDULE HEREOF IS EARNED ONLY BY CONTINUING AS A SERVICE PROVIDER, WHICH UNLESS PROVIDED OTHERWISE UNDER APPLICABLE LAW IS AT THE WILL OF THE APPLICABLE SERVICE RECIPIENT AND NOT THROUGH THE ACT OF BEING HIRED, BEING GRANTED THIS OPTION OR ACQUIRING SHARES HEREUNDER. PARTICIPANT FURTHER ACKNOWLEDGES AND AGREES THAT THIS OPTION AGREEMENT, THE TRANSACTIONS CONTEMPLATED HEREUNDER AND THE VESTING SCHEDULE SET FORTH HEREIN DO NOT CONSTITUTE AN EXPRESS OR IMPLIED PROMISE OF CONTINUED ENGAGEMENT AS A SERVICE PROVIDER FOR THE VESTING PERIOD, FOR ANY PERIOD, OR AT ALL, AND WILL NOT INTERFERE IN ANY WAY WITH PARTICIPANT'S RIGHT OR THE RIGHT OF ANY SERVICE RECIPIENT TO TERMINATE PARTICIPANT'S RELATIONSHIP AS A SERVICE PROVIDER, SUBJECT TO APPLICABLE LAW, WHICH TERMINATION, UNLESS PROVIDED OTHERWISE UNDER APPLICABLE LAW, MAY BE AT ANY TIME, WITH OR WITHOUT CAUSE.

9. Nature of Grant. In accepting the Option, Participant acknowledges, understands and agrees that:

(a) the grant of the Option is voluntary and occasional and does not create any contractual or other right to receive future grants of options, or benefits in lieu of options, even if options have been granted in the past;

(b) all decisions with respect to future option or other grants, if any, will be at the sole discretion of the Administrator;

(c) Participant is voluntarily participating in the Plan;

(d) the Option and any Shares acquired under the Plan are not intended to replace any pension rights or compensation;

(e) the Option and Shares acquired under the Plan and the income and value of same, are not part of normal or expected compensation for purposes of calculating any severance, resignation, termination, redundancy, dismissal, end-of-service payments, bonuses, long-service awards, pension or retirement or welfare benefits or similar payments;

(f) the future value of the Shares underlying the Option is unknown, indeterminable, and cannot be predicted with certainty;

(g) if the underlying Shares do not increase in value, the Option will have no value;

(h) if Participant exercises the Option and acquires Shares, the value of such Shares may increase or decrease in value, even below the Exercise Price;

(i) for purposes of the Option, Participant's engagement as a Service Provider will be considered terminated as of the date Participant is no longer actively providing services to the Company or any Parent or Subsidiary (regardless of the reason for such termination and whether or not later found to be invalid or in breach of employment laws in the jurisdiction where Participant is a Service Provider or the terms of Participant's employment or service agreement, if any), and unless otherwise expressly provided in this Option Agreement (including by reference in the Notice of Grant to other arrangements or contracts) or determined by the Administrator, (i) Participant's right to vest in the Option under the Plan, if any, will terminate as of such date and will not be extended by any notice period (*e.g.*, Participant's period of service would not include any contractual notice period or any period of "garden leave" or similar period mandated under employment laws in the jurisdiction where Participant is a Service Provider or Participant's employment or service agreement, if any, unless Participant is providing bona fide services during such time); and (ii) the period (if any) during which Participant may exercise the Option after such termination of Participant's engagement as a Service Provider will commence on the date Participant ceases to actively provide services and will not be extended by any notice period mandated under employment laws in the jurisdiction where Participant is employed or terms of Participant's engagement agreement, if any; the Administrator shall have the exclusive discretion to determine when Participant is no longer actively providing services for purposes of his or her Option grant (including whether Participant may still be considered to be providing services while on a leave of absence and consistent with local law);

(j) unless otherwise provided in the Plan or by the Administrator in its discretion, the Option and the benefits evidenced by this Option Agreement do not create any entitlement to have the Option or any such benefits transferred to, or assumed by, another company nor to be exchanged, cashed out or substituted for, in connection with any corporate transaction affecting the Shares; and

(k) the following provisions apply only if Participant is providing services outside the United States:

(i) the Option and the Shares subject to the Option are not part of normal or expected compensation or salary for any purpose;

(ii) Participant acknowledges and agrees that no Service Recipient shall be liable for any foreign exchange rate fluctuation between Participant's local currency and the United States Dollar that may affect the value of the Option or of any amounts due to Participant pursuant to the exercise of the Option or the subsequent sale of any Shares acquired upon exercise; and

(iii) no claim or entitlement to compensation or damages shall arise from forfeiture of the Option resulting from the termination of Participant's engagement as a Service Provider (for any reason whatsoever, whether or not later found to be invalid or in breach of employment laws in the jurisdiction where Participant is a Service Provider or the terms of Participant's employment or service agreement, if any), and in consideration of the grant of the Option to which Participant is otherwise not entitled, Participant irrevocably agrees never to institute any claim against any Service Recipient, waives his or her ability, if any, to bring any such claim, and releases each Service Recipient from any such claim; if, notwithstanding the foregoing, any such claim is allowed by a court of competent jurisdiction, then, by participating in the Plan, Participant shall be deemed irrevocably to have agreed not to pursue such claim and agrees to execute any and all documents necessary to request dismissal or withdrawal of such claim.

10. No Advice Regarding Grant. The Company is not providing any tax, legal or financial advice, nor is the Company making any recommendations regarding Participant's participation in the Plan, or Participant's acquisition or sale of the Shares underlying the Option. Participant is hereby advised to consult with his or her own personal tax, legal and financial advisors regarding his or her participation in the Plan before taking any action related to the Plan.

11. **Data Privacy**. ***Participant hereby explicitly and unambiguously consents to the collection, use and transfer, in electronic or other form, of Participant's personal data as described in this Option Agreement and any other Option grant materials by and among, as applicable, the Service Recipients for the exclusive purpose of implementing, administering and managing Participant's participation in the Plan.***

Participant understands that the Company and the Employer may hold certain personal information about Participant, including, but not limited to, Participant's name, home address and telephone number, date of birth, social insurance number or other identification number, salary, nationality, job title, any Shares or directorships held in the Company, details of all Options or any other entitlement to Shares awarded, canceled, exercised, vested, unvested or outstanding in Participant's favor ("Data"), for the exclusive purpose of implementing, administering and managing the Plan.

Participant understands that Data may be transferred to a stock plan service provider, as may be selected by the Company in the future, assisting the Company with the implementation, administration, and management of the Plan. Participant understands that the recipients of the Data may be located in the United States or elsewhere, and that the recipient's country of operation (e.g., the United States) may have different data privacy laws and protections than Participant's country. Participant understands that if he or she resides outside the United States, he or she may request a list with the names and addresses of any potential recipients of the Data by contacting his or her local human resources representative. Participant authorizes the Company and any other possible recipients which may assist the Company (presently or in the future) with implementing, administering and managing the Plan to receive, possess, use, retain and transfer the Data, in electronic or other form, for the sole purposes of implementing, administering and managing Participant's participation in the Plan. Participant understands that Data will be held only as long as is necessary to implement, administer and manage Participant's participation in the Plan. Participant understands that if he or she resides outside the United States, he or she may, at any time, view Data, request additional information about the storage and processing of Data, require any necessary amendments to Data or refuse or withdraw the consents herein, in any case without cost, by contacting in writing his or her local human resources representative. Further, Participant understands that he or she is providing the consents herein on a purely voluntary basis. If Participant does not consent, or if Participant later seeks to revoke his or her consent, his or her engagement as a Service Provider and career with the Employer will not be adversely affected. The only adverse consequence of refusing or withdrawing Participant's consent is that the Company would not be able to grant Participant Options or other equity awards or administer or maintain such awards. Therefore, Participant understands that refusing or withdrawing his or her consent may affect Participant's ability to participate in the Plan. For more information on the consequences of Participant's refusal to consent or withdrawal of consent, Participant understands that he or she may contact his or her local human resources representative.

12. Address for Notices. Any notice to be given to the Company under the terms of this Option Agreement will be addressed to the Company at Allakos Inc., 75 Shoreway Road, Suite A, San Carlos, California 94070, or at such other address as the Company may hereafter designate in writing.

13. Non-Transferability of Option. This Option may not be transferred in any manner otherwise than by will or by the laws of descent or distribution and may be exercised during the lifetime of Participant only by Participant.

14. Successors and Assigns. The Company may assign any of its rights under this Option Agreement to single or multiple assignees, and this Option Agreement shall inure to the benefit of the successors and assigns of the Company. Subject to the restrictions on transfer herein set forth, this Option Agreement shall be binding upon Participant and his or her heirs, executors, administrators, successors and assigns. The rights and obligations of Participant under this Option Agreement may only be assigned with the prior written consent of the Company.

15. Additional Conditions to Issuance of Stock. If at any time the Company will determine, in its discretion, that the listing, registration, qualification or rule compliance of the Shares upon any securities exchange or under any state, federal or non-U.S. law, the tax code and related regulations or under the rulings or regulations of the United States Securities and Exchange Commission or any other governmental regulatory body or the clearance, consent or approval of the United States Securities and Exchange Commission or any other governmental regulatory authority is necessary or desirable as a condition to the purchase by, or issuance of Shares, to Participant (or his or her estate) hereunder, such purchase or issuance will not occur unless and until such listing, registration, qualification, rule compliance, clearance, consent or approval will have been completed, effected or obtained free of any conditions not acceptable to the Company. Subject to the terms of the Option Agreement and the Plan, the Company shall not be required to issue any certificate or certificates for Shares hereunder prior to the lapse of such reasonable period of time following the date of exercise of the Option as the Administrator may establish from time to time for reasons of administrative convenience.

16. Language. If Participant has received this Option Agreement or any other document related to the Plan translated into a language other than English and if the meaning of the translated version is different than the English version, the English version will control.

17. Interpretation. The Administrator will have the power to interpret the Plan and this Option Agreement and to adopt such rules for the administration, interpretation and application of the Plan as are consistent therewith and to interpret or revoke any such rules (including, but not limited to, the determination of whether or not any Shares subject to the Option have vested). All actions taken and all interpretations and determinations made by the Administrator in good faith will be final and binding upon Participant, the Company and all other interested persons. Neither the Administrator nor any person acting on behalf of the Administrator will be personally liable for any action, determination, or interpretation made in good faith with respect to the Plan or this Option Agreement.

18. Electronic Delivery and Acceptance. The Company may, in its sole discretion, decide to deliver any documents related to the Option awarded under the Plan or future options that may be awarded under the Plan by electronic means or require Participant to participate in the Plan by electronic means. Participant hereby consents to receive such documents by electronic delivery and agrees to participate in the Plan through any on-line or electronic system established and maintained by the Company or a third party designated by the Company.

19. Captions. Captions provided herein are for convenience only and are not to serve as a basis for interpretation or construction of this Option Agreement.

20. Option Agreement Severable. In the event that any provision in this Option Agreement will be held invalid or unenforceable, such provision will be severable from, and such invalidity or unenforceability will not be construed to have any effect on, the remaining provisions of this Option Agreement.

21. Amendment, Suspension or Termination of the Plan. By accepting this Option, Participant expressly warrants that he or she has received an Option under the Plan, and has received, read, and understood a description of the Plan. Participant understands that the Plan is discretionary in nature and may be amended, suspended or terminated by the Administrator at any time.

22. Governing Law and Venue. This Option Agreement will be governed by the laws of California, without giving effect to the conflict of law principles thereof. For purposes of litigating any dispute that arises under this Option or this Option Agreement, the parties hereby submit to and consent to the jurisdiction of the State of California, and agree that such litigation will be conducted in the courts of Santa Clara County, California, or the United States federal courts for the Northern District of California, and no other courts, where this Option is made and/or to be performed.

23. Country Addendum. Notwithstanding any provisions in this Option Agreement, this Option shall be subject to any special terms and conditions set forth in an appendix (if any) to this Option Agreement for any country whose laws are applicable to Participant and this Option (as determined by the Administrator in its sole discretion) (the "Country Addendum"). Moreover, if Participant relocates to one of the countries included in the Country Addendum (if any), the special terms and conditions for such country will apply to Participant, to the extent the Company determines that the application of such terms and conditions is necessary or advisable for legal or administrative reasons. The Country Addendum (if any) constitutes a part of this Option Agreement.

24. Modifications to the Option Agreement. This Option Agreement constitutes the entire understanding of the parties on the subjects covered. Participant expressly warrants that he or she is not accepting this Option Agreement in reliance on any promises, representations, or inducements other than those contained herein. Modifications to this Option Agreement or the Plan can be made only in an express written contract executed by a duly authorized officer of the Company. Notwithstanding anything to the contrary in the Plan or this Option Agreement, the Company reserves the right to revise this Option Agreement as it deems necessary or advisable, in its sole discretion and without the consent of Participant, to comply with Code Section 409A or to otherwise avoid imposition of any additional tax or income recognition under Section 409A of the Code in connection with the Option.

25. No Waiver. Either party's failure to enforce any provision or provisions of this Option Agreement shall not in any way be construed as a waiver of any such provision or provisions, nor prevent that party from thereafter enforcing each and every other provision of this Option Agreement. The rights granted both parties herein are cumulative and shall not constitute a waiver of either party's right to assert all other legal remedies available to it under the circumstances.

26. Tax Consequences. Participant has reviewed with his or her own tax advisors the U.S. federal, state, local and non-U.S. tax consequences of this investment and the transactions contemplated by this Option Agreement. With respect to such matters, Participant relies solely on such advisors and not on any statements or representations of the Company or any of its agents, written or oral. Participant understands that Participant (and not the Company) shall be responsible for Participant's own tax liability that may arise as a result of this investment or the transactions contemplated by this Option Agreement.

EXHIBIT B

ALLAKOS INC.

2018 EQUITY INCENTIVE PLAN

EXERCISE NOTICE

Allakos Inc.
75 Shoreway Road, Suite A
San Carlos, California 94070

Attention: Stock Administration

1. Exercise of Option. Effective as of today, , , the undersigned ("Purchaser") hereby elects to purchase shares (the "Shares") of the Common Stock of Allakos Inc. (the "Company") under and pursuant to the 2018 Equity Incentive Plan (the "Plan") and the Stock Option Agreement, dated and including the Notice of Grant, the Terms and Conditions of Stock Option Grant, and exhibits attached thereto (the "Option Agreement"). The purchase price for the Shares will be $, as required by the Option Agreement.

2. Delivery of Payment. Purchaser herewith delivers to the Company the full purchase price of the Shares and any Tax Obligations (as defined in Section 6(a) of the Option Agreement) to be paid in connection with the exercise of the Option.

3. Representations of Purchaser. Purchaser acknowledges that Purchaser has received, read and understood the Plan and the Option Agreement and agrees to abide by and be bound by their terms and conditions.

4. Rights as Stockholder. Until the issuance (as evidenced by the appropriate entry on the books of the Company or of a duly authorized transfer agent of the Company) of the Shares, no right to vote or receive dividends or any other rights as a stockholder will exist with respect to the Shares subject to the Option, notwithstanding the exercise of the Option. The Shares so acquired will be issued to Purchaser as soon as practicable after exercise of the Option. No adjustment will be made for a dividend or other right for which the record date is prior to the date of issuance, except as provided in Section 14 of the Plan.

5. Tax Consultation. Purchaser understands that Purchaser may suffer adverse tax consequences as a result of Purchaser's purchase or disposition of the Shares. Purchaser represents that Purchaser has consulted with any tax consultants Purchaser deems advisable in connection with the purchase or disposition of the Shares and that Purchaser is not relying on the Company for any tax advice.

6. Entire Agreement; Governing Law. The Plan and Option Agreement are incorporated herein by this reference. This Exercise Notice, the Plan and the Option Agreement constitute the entire agreement of the parties with respect to the subject matter hereof and supersede in their entirety all prior undertakings and agreements of the Company and Purchaser with respect to the subject matter hereof, and may not be modified adversely to the Purchaser's interest except by means of a writing signed by the Company and Purchaser. This Option Agreement is governed by the internal substantive laws, but not the choice of law rules, of California.

Submitted by:

PURCHASER

Signature

Print Name

Address:

Accepted by:

ALLAKOS INC.

Signature

Print Name

Title

Date Received

ALLAKOS INC.
2018 EQUITY INCENTIVE PLAN
RESTRICTED STOCK UNIT AGREEMENT

NOTICE OF RESTRICTED STOCK UNIT GRANT

Unless otherwise defined herein, the terms defined in the Allakos Inc. 2018 Equity Incentive Plan (the "Plan") will have the same defined meanings in this Restricted Stock Unit Agreement, which includes the Notice of Restricted Stock Unit Grant (the "Notice of Grant"), the Terms and Conditions of Restricted Stock Unit Grant attached hereto as Exhibit A, and all other exhibits and appendices attached hereto (the "Award Agreement").

Participant:

Address:

The undersigned Participant has been granted the right to receive an Award of Restricted Stock Units, subject to the terms and conditions of the Plan and this Award Agreement, as follows:

Grant Number: _____

Date of Grant: _____

Vesting Commencement Date: _____

Number of Restricted Stock Units: _____

Vesting Schedule:

Subject to any acceleration provisions contained in the Plan or set forth below, the Restricted Stock Units will vest in accordance with the following schedule:

[*Insert vesting schedule, e.g.:* Twenty-five percent (25%) of the Restricted Stock Units will vest on the one (1) year anniversary of the Vesting Commencement Date, and one sixteenth (1/16th) of the Restricted Stock Units will vest quarterly thereafter on the same day as the Vesting Commencement Date, subject to Participant continuing to be a Service Provider through each such date.**]**

In the event Participant ceases to be a Service Provider for any or no reason before Participant vests in the Restricted Stock Units, the Restricted Stock Units and Participant's right to acquire any Shares hereunder will immediately terminate.

By Participant's signature and the signature of the representative of Allakos Inc. (the "Company") below, Participant and the Company agree that this Award of Restricted Stock Units is granted under and governed by the terms and conditions of the Plan and this Award Agreement, including the Terms and Conditions of Restricted Stock Unit Grant, attached hereto as Exhibit A, all of which are made a part of this document. Participant acknowledges receipt of a copy of the Plan. Participant has reviewed the Plan and this Award Agreement in their entirety, has had

an opportunity to obtain the advice of counsel prior to executing this Award Agreement, and fully understands all provisions of the Plan and this Award Agreement. Participant hereby agrees to accept as binding, conclusive, and final all decisions or interpretations of the Administrator upon any questions relating to the Plan and the Award Agreement. Participant further agrees to notify the Company upon any change in the residence address indicated below.

PARTICIPANT:

Signature

Print Name

Address:

ALLAKOS INC.

Signature

Print Name

Title

EXHIBIT A

TERMS AND CONDITIONS OF RESTRICTED STOCK UNIT GRANT

1. Grant of Restricted Stock Units. The Company hereby grants to the individual ("Participant") named in the Notice of Grant of Restricted Stock Units of this Award Agreement (the "Notice of Grant") under the Plan an Award of Restricted Stock Units, subject to all of the terms and conditions in this Award Agreement and the Plan, which is incorporated herein by this reference. Subject to Section 19(c) of the Plan, in the event of a conflict between the terms and conditions of the Plan and this Award Agreement, the terms and conditions of the Plan shall prevail.

2. Company's Obligation to Pay. Each Restricted Stock Unit represents the right to receive a Share on the date it vests. Unless and until the Restricted Stock Units will have vested in the manner set forth in Section 3 or 4, Participant will have no right to payment of any such Restricted Stock Units. Prior to actual payment of any vested Restricted Stock Units, such Restricted Stock Unit will represent an unsecured obligation of the Company, payable (if at all) only from the general assets of the Company.

3. Vesting Schedule. Except as provided in Section 4, and subject to Section 5, the Restricted Stock Units awarded by this Award Agreement will vest in accordance with the vesting schedule set forth in the Notice of Grant, subject to Participant continuing to be a Service Provider through each applicable vesting date.

4. Payment after Vesting.

(a) General Rule. Subject to Section 8, any Restricted Stock Units that vest will be paid to Participant (or in the event of Participant's death, to his or her properly designated beneficiary or estate) in whole Shares. Subject to the provisions of Section 4(b), such vested Restricted Stock Units shall be paid in whole Shares as soon as practicable after vesting, but in each such case within sixty (60) days following the vesting date. In no event will Participant be permitted, directly or indirectly, to specify the taxable year of payment of any Restricted Stock Units payable under this Award Agreement.

(b) Acceleration.

(i) Discretionary Acceleration. The Administrator, in its discretion, may accelerate the vesting of the balance, or some lesser portion of the balance, of the unvested Restricted Stock Units at any time, subject to the terms of the Plan. If so accelerated, such Restricted Stock Units will be considered as having vested as of the date specified by the Administrator. If Participant is a U.S. taxpayer, the payment of Shares vesting pursuant to this Section 4(b) shall in all cases be paid at a time or in a manner that is exempt from, or complies with, Section 409A. The prior sentence may be superseded in a future agreement or amendment to this Award Agreement only by direct and specific reference to such sentence.

(ii) Notwithstanding anything in the Plan or this Award Agreement or any other agreement (whether entered into before, on or after the Date of Grant), if the vesting of the balance, or some lesser portion of the balance, of the Restricted Stock Units is accelerated in connection with Participant's termination as a Service Provider (provided that such termination is a "separation from service" within the meaning of Section 409A, as determined by the Company), other than due to Participant's death, and if (x) Participant is a U.S. taxpayer and a "specified employee" within the meaning of Section 409A at the time of such termination as a Service Provider and (y) the payment of such accelerated Restricted Stock Units will result in the imposition of additional tax under Section 409A if paid to Participant on or within the six (6) month period following Participant's termination as a Service Provider, then the payment of such accelerated Restricted Stock Units will not be made until the date six (6) months and one (1) day following the date of Participant's termination as a Service Provider, unless Participant dies following his or her termination as a Service Provider, in which case, the Restricted Stock Units will be paid in Shares to Participant's estate as soon as practicable following his or her death.

(c) Section 409A. It is the intent of this Award Agreement that it and all payments and benefits to U.S. taxpayers hereunder be exempt from, or comply with, the requirements of Section 409A so that none of the Restricted Stock Units provided under this Award Agreement or Shares issuable thereunder will be subject to the additional tax imposed under Section 409A, and any ambiguities herein will be interpreted to be so exempt or so comply. Each payment payable under this Award Agreement is intended to constitute a separate payment for purposes of Treasury Regulation Section 1.409A-2(b)(2). However, in no event will the Company reimburse Participant, or be otherwise responsible for, any taxes or costs that may be imposed on Participant as a result of Section 409A. For purposes of this Award Agreement, "Section 409A" means Section 409A of the Code, and any final Treasury Regulations and Internal Revenue Service guidance thereunder, as each may be amended from time to time.

5. Forfeiture Upon Termination as a Service Provider. Notwithstanding any contrary provision of this Award Agreement, if Participant ceases to be a Service Provider for any or no reason, the then-unvested Restricted Stock Units awarded by this Award Agreement will thereupon be forfeited at no cost to the Company and Participant will have no further rights thereunder.

6. Tax Consequences. Participant has reviewed with his or her own tax advisors the U.S. federal, state, local and non-U.S. tax consequences of this investment and the transactions contemplated by this Award Agreement. With respect to such matters, Participant relies solely on such advisors and not on any statements or representations of the Company or any of its agents, written or oral. Participant understands that Participant (and not the Company) shall be solely responsible for Participant's own tax liability that may arise as a result of this investment or the transactions contemplated by this Award Agreement.

7. Death of Participant. Any distribution or delivery to be made to Participant under this Award Agreement will, if Participant is then deceased, be made to Participant's designated beneficiary, or if no beneficiary survives Participant, the administrator or executor of Participant's estate. Any such transferee must furnish the Company with (a) written notice of his or her status as transferee, and (b) evidence satisfactory to the Company to establish the validity of the transfer and compliance with any laws or regulations pertaining to said transfer.

8. Tax Obligations

(a) Responsibility for Taxes. Participant acknowledges that, regardless of any action taken by the Company or, if different, Participant's employer (the "Employer") or any Parent or Subsidiary to which Participant is providing services (together, the "Service Recipients"), the ultimate liability for any tax and/or social insurance liability obligations and requirements in connection with the Restricted Stock Units, including, without limitation, (i) all federal, state, and local taxes (including the Participant's Federal Insurance Contributions Act (FICA) obligations) that are required to be withheld by any Service Recipient or other payment of tax-related items related to Participant's participation in the Plan and legally applicable to Participant, (ii) the Participant's and, to the extent required by any Service Recipient, the Service Recipient's fringe benefit tax liability, if any, associated with the grant, vesting, or settlement of the Restricted Stock Units or sale of Shares, and (iii) any other Service Recipient taxes the responsibility for which the Participant has, or has agreed to bear, with respect to the Restricted Stock Units (or settlement thereof or issuance of Shares thereunder) (collectively, the "Tax Obligations"), is and remains Participant's sole responsibility and may exceed the amount actually withheld by the applicable Service Recipient(s). Participant further acknowledges that no Service Recipient (A) makes any representations or undertakings regarding the treatment of any Tax Obligations in connection with any aspect of the Restricted Stock Units, including, but not limited to, the grant, vesting or settlement of the Restricted Stock Units, the subsequent sale of Shares acquired pursuant to such settlement and the receipt of any dividends or other distributions, and (B) do not commit to and are under no obligation to structure the terms of the grant or any aspect of the Restricted Stock Units to reduce or eliminate Participant's liability for Tax Obligations or achieve any particular tax result. Further, if Participant is subject to Tax Obligations in more than one jurisdiction between the Date of Grant and the date of any relevant taxable or tax withholding event, as applicable, Participant acknowledges that the applicable Service Recipient(s) (or former employer, as applicable) may be required to withhold or account for Tax Obligations in more than one jurisdiction. If Participant fails to make satisfactory arrangements for the payment of any required Tax Obligations hereunder at the time of the applicable taxable event, Participant acknowledges and agrees that the Company may refuse to issue or deliver the Shares.

(b) Tax Withholding. When Shares are issued as payment for vested Restricted Stock Units, Participant generally will recognize immediate U.S. taxable income if Participant is a U.S. taxpayer. If Participant is a non-U.S. taxpayer, Participant will be subject to applicable taxes in his or her jurisdiction. Pursuant to such procedures as the Administrator may specify from time to time, the Company and/or Service Recipient shall withhold the amount required to be withheld for the payment of Tax Obligations. The Administrator, in its sole discretion and pursuant to such procedures as it may specify from time to time, may permit Participant to satisfy such Tax Obligations, in whole or in part (without limitation), if permissible by applicable local law, by (i) paying cash, (ii) electing to have the Company withhold otherwise deliverable Shares having a fair market value equal to the minimum amount that is necessary to meet the withholding requirement for such Tax Obligations (or such greater amount as Participant may elect if permitted by the Administrator, if such greater amount would not result in adverse financial accounting consequences), (iii) withholding the amount of such Tax Obligations from Participant's wages or other cash compensation paid to Participant by the Company and/or the Service Recipient, (iv) delivering to the Company already vested and owned Shares having a fair market value equal to such Tax Obligations, or (v) selling a sufficient number of such Shares otherwise deliverable to Participant through such means as the Company may determine in its sole discretion (whether

through a broker or otherwise) equal to the minimum amount that is necessary to meet the withholding requirement for such Tax Obligations (or such greater amount as Participant may elect if permitted by the Administrator, if such greater amount would not result in adverse financial accounting consequences). To the extent determined appropriate by the Company in its discretion, it will have the right (but not the obligation) to satisfy any Tax Obligations through the method described in clause (ii) above and, until determined otherwise by the Company, the method described in clause (ii) above will be the method by which such Tax Obligations are satisfied. Further, if Participant is subject to tax in more than one jurisdiction between the Date of Grant and a date of any relevant taxable or tax withholding event, as applicable, Participant acknowledges and agrees that the Company and/or the Service Recipient (and/or former employer, as applicable) may be required to withhold or account for tax in more than one jurisdiction. If Participant fails to make satisfactory arrangements for the payment of such Tax Obligations hereunder at the time any applicable Restricted Stock Units otherwise are scheduled to vest pursuant to Sections 3 or 4, Participant will permanently forfeit such Restricted Stock Units and any right to receive Shares thereunder and such Restricted Stock Units will be returned to the Company at no cost to the Company. Participant acknowledges and agrees that the Company may refuse to deliver the Shares if such Tax Obligations are not delivered at the time they are due.

9. Rights as Stockholder. Neither Participant nor any person claiming under or through Participant will have any of the rights or privileges of a stockholder of the Company in respect of any Shares deliverable hereunder unless and until certificates representing such Shares (which may be in book entry form) will have been issued, recorded on the records of the Company or its transfer agents or registrars, and delivered to Participant (including through electronic delivery to a brokerage account). After such issuance, recordation, and delivery, Participant will have all the rights of a stockholder of the Company with respect to voting such Shares and receipt of dividends and distributions on such Shares.

10. No Guarantee of Continued Service. PARTICIPANT ACKNOWLEDGES AND AGREES THAT THE VESTING OF THE RESTRICTED STOCK UNITS PURSUANT TO THE VESTING SCHEDULE HEREOF IS EARNED ONLY BY CONTINUING AS A SERVICE PROVIDER, WHICH UNLESS PROVIDED OTHERWISE UNDER APPLICABLE LAW IS AT THE WILL OF THE APPLICABLE SERVICE RECIPIENT AND NOT THROUGH THE ACT OF BEING HIRED, BEING GRANTED THIS RESTRICTED STOCK UNIT AWARD OR ACQUIRING SHARES HEREUNDER. PARTICIPANT FURTHER ACKNOWLEDGES AND AGREES THAT THIS AWARD AGREEMENT, THE TRANSACTIONS CONTEMPLATED HEREUNDER AND THE VESTING SCHEDULE SET FORTH HEREIN DO NOT CONSTITUTE AN EXPRESS OR IMPLIED PROMISE OF CONTINUED ENGAGEMENT AS A SERVICE PROVIDER FOR THE VESTING PERIOD, FOR ANY PERIOD, OR AT ALL, AND SHALL NOT INTERFERE IN ANY WAY WITH PARTICIPANT'S RIGHT OR THE RIGHT OF ANY SERVICE RECIPIENT TO TERMINATE PARTICIPANT'S RELATIONSHIP AS A SERVICE PROVIDER, SUBJECT TO APPLICABLE LAW, WHICH TERMINATION, UNLESS PROVIDED OTHERWISE UNDER APPLICABLE LAW, MAY BE AT ANY TIME, WITH OR WITHOUT CAUSE.

11. Grant is Not Transferable. Except to the limited extent provided in Section 7, this grant and the rights and privileges conferred hereby will not be transferred, assigned, pledged or hypothecated in any way (whether by operation of law or otherwise) and will not be subject to sale

under execution, attachment or similar process. Upon any attempt to transfer, assign, pledge, hypothecate or otherwise dispose of this grant, or any right or privilege conferred hereby, or upon any attempted sale under any execution, attachment or similar process, this grant and the rights and privileges conferred hereby immediately will become null and void.

12. Nature of Grant. In accepting the grant, Participant acknowledges, understands, and agrees that:

(a) the grant of the Restricted Stock Units is voluntary and occasional and does not create any contractual or other right to receive future grants of Restricted Stock Units, or benefits in lieu of Restricted Stock Units, even if Restricted Stock Units have been granted in the past;

(b) all decisions with respect to future Restricted Stock Units or other grants, if any, will be at the sole discretion of the Administrator;

(c) Participant is voluntarily participating in the Plan;

(d) the Restricted Stock Units and the Shares subject to the Restricted Stock Units are not intended to replace any pension rights or compensation;

(e) the Restricted Stock Units and the Shares subject to the Restricted Stock Units, and the income and value of same, are not part of normal or expected compensation for purposes of calculating any severance, resignation, termination, redundancy, dismissal, end-of-service payments, bonuses, long-service awards, pension or retirement or welfare benefits or similar payments;

(f) the future value of the Shares underlying the Restricted Stock Units is unknown, indeterminable and cannot be predicted;

(g) for purposes of the Restricted Stock Units, Participant's status as a Service Provider will be considered terminated as of the date Participant is no longer actively providing services to the Company or any Parent or Subsidiary (regardless of the reason for such termination and whether or not later to be found invalid or in breach of employment laws in the jurisdiction where Participant is a Service Provider or the terms of Participant's employment or service agreement, if any), and unless otherwise expressly provided in this Award Agreement (including by reference in the Notice of Grant to other arrangements or contracts) or determined by the Administrator, Participant's right to vest in the Restricted Stock Units under the Plan, if any, will terminate as of such date and will not be extended by any notice period (e.g., Participant's period of service would not include any contractual notice period or any period of "garden leave" or similar period mandated under employment laws in the jurisdiction where Participant is a Service Provider or the terms of Participant's employment or service agreement, if any, unless Participant is providing bona fide services during such time); the Administrator shall have the exclusive discretion to determine when Participant is no longer actively providing services for purposes of the Restricted Stock Units grant (including whether Participant may still be considered to be providing services while on a leave of absence and consistent with local law);

(h) unless otherwise provided in the Plan or by the Administrator in its discretion, the Restricted Stock Units and the benefits evidenced by this Award Agreement do not create any entitlement to have the Restricted Stock Units or any such benefits transferred to, or assumed by, another company nor be exchanged, cashed out or substituted for, in connection with any corporate transaction affecting the Shares; and

(i) the following provisions apply only if Participant is providing services outside the United States:

(i) the Restricted Stock Units and the Shares subject to the Restricted Stock Units are not part of normal or expected compensation or salary for any purpose;

(ii) Participant acknowledges and agrees that no Service Recipient shall be liable for any foreign exchange rate fluctuation between Participant's local currency and the United States Dollar that may affect the value of the Restricted Stock Units or of any amounts due to Participant pursuant to the settlement of the Restricted Stock Units or the subsequent sale of any Shares acquired upon settlement; and

(iii) no claim or entitlement to compensation or damages shall arise from forfeiture of the Restricted Stock Units resulting from the termination of Participant's status as a Service Provider (for any reason whatsoever whether or not later found to be invalid or in breach of employment laws in the jurisdiction where Participant is a Service Provider or the terms of Participant's employment or service agreement, if any), and in consideration of the grant of the Restricted Stock Units to which Participant is otherwise not entitled, Participant irrevocably agrees never to institute any claim against any Service Recipient, waives his or her ability, if any, to bring any such claim, and releases each Service Recipient from any such claim; if, notwithstanding the foregoing, any such claim is allowed by a court of competent jurisdiction, then, by participating in the Plan, Participant shall be deemed irrevocably to have agreed not to pursue such claim and agrees to execute any and all documents necessary to request dismissal or withdrawal of such claim.

13. No Advice Regarding Grant. The Company is not providing any tax, legal or financial advice, nor is the Company making any recommendations regarding Participant's participation in the Plan, or Participant's acquisition or sale of the Shares underlying the Restricted Stock Units. Participant is hereby advised to consult with his or her own personal tax, legal and financial advisors regarding his or her participation in the Plan before taking any action related to the Plan.

14. ***Data Privacy. Participant hereby explicitly and unambiguously consents to the collection, use and transfer, in electronic or other form, of Participant's personal data as described in this Award Agreement and any other Restricted Stock Unit grant materials by and among, as applicable, the Service Recipients for the exclusive purpose of implementing, administering and managing Participant's participation in the Plan.***

Participant understands that the Company and the Service Recipient may hold certain personal information about Participant, including, but not limited to, Participant's name, home address and telephone number, date of birth, social insurance number or other identification number, salary, nationality, job title, any Shares or directorships held in the Company, details of all Restricted Stock Units or any other entitlement to Shares awarded, canceled, exercised, vested, unvested or outstanding in Participant's favor ("Data"), for the exclusive purpose of implementing, administering and managing the Plan.

Participant understands that Data may be transferred to a stock plan service provider, as may be selected by the Company in the future, assisting the Company with the implementation, administration, and management of the Plan. Participant understands that the recipients of the Data may be located in the United States or elsewhere, and that the recipients' country of operation (e.g., the United States) may have different data privacy laws and protections than Participant's country. Participant understands that if he or she resides outside the United States, he or she may request a list with the names and addresses of any potential recipients of the Data by contacting his or her local human resources representative. Participant authorizes the Company, any stock plan service provider selected by the Company and any other possible recipients which may assist the Company (presently or in the future) with implementing, administering and managing the Plan to receive, possess, use, retain and transfer the Data, in electronic or other form, for the sole purpose of implementing, administering and managing his or her participation in the Plan. Participant understands that Data will be held only as long as is necessary to implement, administer and manage Participant's participation in the Plan. Participant understands if he or she resides outside the United States, he or she may, at any time, view Data, request additional information about the storage and processing of Data, require any necessary amendments to Data or refuse or withdraw the consents herein, in any case without cost, by contacting in writing his or her local human resources representative. Further, Participant understands that he or she is providing the consents herein on a purely voluntary basis. If Participant does not consent, or if Participant later seeks to revoke his or her consent, his or her status as a Service Provider and career with the Service Recipient will not be adversely affected. The only adverse consequence of refusing or withdrawing Participant's consent is that the Company would not be able to grant Participant Restricted Stock Units or other equity awards or administer or maintain such awards. Therefore, Participant understands that refusing or withdrawing his or her consent may affect Participant's ability to participate in the Plan. For more information on the consequences of Participant's refusal to consent or withdrawal of consent, Participant understands that he or she may contact his or her local human resources representative.

15. Address for Notices. Any notice to be given to the Company under the terms of this Award Agreement will be addressed to the Company at Allakos Inc. 75 Shoreway Road, Suite A, San Carlos, California 94070 or at such other address as the Company may hereafter designate in writing.

16. Electronic Delivery and Acceptance. The Company may, in its sole discretion, decide to deliver any documents related to the Restricted Stock Units awarded under the Plan or future Restricted Stock Units that may be awarded under the Plan by electronic means or require Participant to participate in the Plan by electronic means. Participant hereby consents to receive such documents by electronic delivery and agrees to participate in the Plan through any on-line or electronic system established and maintained by the Company or a third party designated by the Company.

17. No Waiver. Either party's failure to enforce any provision or provisions of this Award Agreement shall not in any way be construed as a waiver of any such provision or provisions, nor prevent that party from thereafter enforcing each and every other provision of this Award Agreement. The rights granted both parties herein are cumulative and shall not constitute a waiver of either party's right to assert all other legal remedies available to it under the circumstances.

18. Successors and Assigns. The Company may assign any of its rights under this Award Agreement to single or multiple assignees, and this Award Agreement shall inure to the benefit of the successors and assigns of the Company. Subject to the restrictions on transfer herein set forth, this Award Agreement shall be binding upon Participant and his or her heirs, executors, administrators, successors and assigns. The rights and obligations of Participant under this Award Agreement may only be assigned with the prior written consent of the Company.

19. Additional Conditions to Issuance of Stock. If at any time the Company will determine, in its discretion, that the listing, registration, qualification or rule compliance of the Shares upon any securities exchange or under any state, federal or non-U.S. law, the tax code and related regulations or under the rulings or regulations of the United States Securities and Exchange Commission or any other governmental regulatory body or the clearance, consent or approval of the United States Securities and Exchange Commission or any other governmental regulatory authority is necessary or desirable as a condition to the issuance of Shares to Participant (or his or her estate) hereunder, such issuance will not occur unless and until such listing, registration, qualification, rule compliance, clearance, consent or approval will have been completed, effected or obtained free of any conditions not acceptable to the Company. Subject to the terms of the Award Agreement and the Plan, the Company shall not be required to issue any certificate or certificates for Shares hereunder prior to the lapse of such reasonable period of time following the date of vesting of the Restricted Stock Units as the Administrator may establish from time to time for reasons of administrative convenience.

20. Language. If Participant has received this Award Agreement or any other document related to the Plan translated into a language other than English and if the meaning of the translated version is different than the English version, the English version will control.

21. Interpretation. The Administrator will have the power to interpret the Plan and this Award Agreement and to adopt such rules for the administration, interpretation and application of the Plan as are consistent therewith and to interpret or revoke any such rules (including, but not limited to, the determination of whether or not any Restricted Stock Units have vested). All actions taken and all interpretations and determinations made by the Administrator in good faith will be final and binding upon Participant, the Company and all other interested persons. Neither the Administrator nor any person acting on behalf of the Administrator will be personally liable for any action, determination, or interpretation made in good faith with respect to the Plan or this Award Agreement.

22. Captions. Captions provided herein are for convenience only and are not to serve as a basis for interpretation or construction of this Award Agreement.

23. Amendment, Suspension or Termination of the Plan. By accepting this Award, Participant expressly warrants that he or she has received an Award of Restricted Stock Units under the Plan, and has received, read, and understood a description of the Plan. Participant understands that the Plan is discretionary in nature and may be amended, suspended or terminated by the Administrator at any time.

24. Modifications to the Award Agreement. This Award Agreement constitutes the entire understanding of the parties on the subjects covered. Participant expressly warrants that he or she is not accepting this Award Agreement in reliance on any promises, representations, or inducements other than those contained herein. Modifications to this Award Agreement or the Plan can be made only in an express written contract executed by a duly authorized officer of the Company. Notwithstanding anything to the contrary in the Plan or this Award Agreement, the Company reserves the right to revise this Award Agreement as it deems necessary or advisable, in its sole discretion and without the consent of Participant, to comply with Section 409A or to otherwise avoid imposition of any additional tax or income recognition under Section 409A in connection with this Award of Restricted Stock Units.

25. Governing Law; Venue; Severability. This Award Agreement and the Restricted Stock Units are governed by the internal substantive laws, but not the choice of law rules, of California. For purposes of litigating any dispute that arises under these Restricted Stock Units or this Award Agreement, the parties hereby submit to and consent to the jurisdiction of the State of California, and agree that such litigation will be conducted in the courts of Santa Clara County, California, or the United States federal courts for the Northern District of California, and no other courts, where this Award Agreement is made and/or to be performed. In the event that any provision hereof becomes or is declared by a court of competent jurisdiction to be illegal, unenforceable or void, this Award Agreement shall continue in full force and effect.

26. Entire Agreement. The Plan is incorporated herein by this reference. The Plan and this Award Agreement (including the appendices and exhibits referenced herein) constitute the entire agreement of the parties with respect to the subject matter hereof and supersede in their entirety all prior undertakings and agreements of the Company and Participant with respect to the subject matter hereof, and may not be modified adversely to the Participant's interest except by means of a writing signed by the Company and Participant.

27. Country Addendum. Notwithstanding any provisions in this Award Agreement, the Restricted Stock Unit grant shall be subject to any special terms and conditions set forth in an appendix (if any) to this Award Agreement for any country whose laws are applicable to Participant and this Award of Restricted Stock Units (as determined by the Administrator in its sole discretion) (the "Country Addendum"). Moreover, if Participant relocates to one of the countries included in the Country Addendum (if any), the special terms and conditions for such country will apply to Participant, to the extent the Company determines that the application of such terms and conditions is necessary or advisable for legal or administrative reasons. The Country Addendum constitutes part of this Award Agreement.

Exhibit 10.4

ALLAKOS INC.

2018 EMPLOYEE STOCK PURCHASE PLAN

1. Purpose. The purpose of the Plan is to provide employees of the Company and its Designated Companies with an opportunity to purchase Common Stock through accumulated Contributions. The Company intends for the Plan to have two components: a component that is intended to qualify as an "employee stock purchase plan" under Section 423 of the Code (the "423 Component") and a component that is not intended to qualify as an "employee stock purchase plan" under Section 423 of the Code (the "Non-423 Component"). The provisions of the 423 Component, accordingly, will be construed so as to extend and limit Plan participation in a uniform and nondiscriminatory basis consistent with the requirements of Section 423 of the Code. An option to purchase shares of Common Stock under the Non-423 Component will be granted pursuant to rules, procedures, or sub-plans adopted by the Administrator designed to achieve tax, securities laws, or other objectives for Eligible Employees and the Company. Except as otherwise provided herein, the Non-423 Component will operate and be administered in the same manner as the 423 Component.

2. Definitions.

(a) "Administrator" means the Board or any Committee designated by the Board to administer the Plan pursuant to Section 14.

(b) "Affiliate" means any entity, other than a Subsidiary, in which the Company has an equity or other ownership interest.

(c) "Applicable Laws" means the requirements relating to the administration of equity-based awards under U.S. state corporate laws, U.S. federal and state securities laws, the Code, any stock exchange or quotation system on which the Common Stock is listed or quoted and the applicable laws of any foreign country or jurisdiction where options are, or will be, granted under the Plan.

(d) "Board" means the Board of Directors of the Company.

(e) "Change in Control" means the occurrence of any of the following events:

(i) A change in the ownership of the Company which occurs on the date that any one person, or more than one person acting as a group ("Person"), acquires ownership of the stock of the Company that, together with the stock held by such Person, constitutes more than fifty percent (50%) of the total voting power of the stock of the Company; provided, however, that for purposes of this subsection, the acquisition of additional stock by any one Person, who is considered to own more than fifty percent (50%) of the total voting power of the stock of the Company will not be considered a Change in Control. Further, if the stockholders of the Company immediately before such change in ownership continue to retain immediately after the change in ownership, in substantially the same proportions as their ownership

of shares of the Company's voting stock immediately prior to the change in ownership, direct or indirect beneficial ownership of fifty percent (50%) or more of the total voting power of the stock of the Company or of the ultimate parent entity of the Company, such event shall not be considered a Change in Control under this subsection (i). For this purpose, indirect beneficial ownership shall include, without limitation, an interest resulting from ownership of the voting securities of one or more corporations or other business entities which own the Company, as the case may be, either directly or through one or more subsidiary corporations or other business entities; or

(ii) A change in the effective control of the Company which occurs on the date that a majority of members of the Board is replaced during any twelve (12)-month period by Directors whose appointment or election is not endorsed by a majority of the members of the Board prior to the date of the appointment or election. For purposes of this subsection (ii), if any Person is considered to be in effective control of the Company, the acquisition of additional control of the Company by the same Person will not be considered a Change in Control; or

(iii) A change in the ownership of a substantial portion of the Company's assets which occurs on the date that any Person acquires (or has acquired during the twelve (12)-month period ending on the date of the most recent acquisition by such Person) assets from the Company that have a total gross fair market value equal to or more than fifty percent (50%) of the total gross fair market value of all of the assets of the Company immediately prior to such acquisition or acquisitions; provided, however, that for purposes of this subsection, the following will not constitute a change in the ownership of a substantial portion of the Company's assets: (A) a transfer to an entity that is controlled by the Company's stockholders immediately after the transfer, or (B) a transfer of assets by the Company to: (1) a stockholder of the Company (immediately before the asset transfer) in exchange for or with respect to the Company's stock, (2) an entity, fifty percent (50%) or more of the total value or voting power of which is owned, directly or indirectly, by the Company, (3) a Person, that owns, directly or indirectly, fifty percent (50%) or more of the total value or voting power of all the outstanding stock of the Company, or (4) an entity, at least fifty percent (50%) of the total value or voting power of which is owned, directly or indirectly, by a Person described in this subsection (iii)(B)(3). For purposes of this subsection, gross fair market value means the value of the assets of the Company, or the value of the assets being disposed of, determined without regard to any liabilities associated with such assets.

For purposes of this definition, persons will be considered to be acting as a group if they are owners of a corporation that enters into a merger, consolidation, purchase, or acquisition of stock, or similar business transaction with the Company.

Notwithstanding the foregoing, a transaction will not be deemed a Change in Control unless the transaction qualifies as a change in control event within the meaning of Code Section 409A, as it has been and may be amended from time to time, and any proposed or final U.S. Treasury Regulations and Internal Revenue Service guidance that has been promulgated or may be promulgated thereunder from time to time.

Further and for the avoidance of doubt, a transaction will not constitute a Change in Control if: (i) its sole purpose is to change the jurisdiction of the Company's incorporation, or (ii) its sole purpose is to create a holding company that will be owned in substantially the same proportions by the persons who held the Company's securities immediately before such transaction.

(f) "Code" means the U.S. Internal Revenue Code of 1986, as amended. Reference to a specific section of the Code will include such section, any valid regulation or other official applicable guidance promulgated under such section, and any comparable provision of any future legislation or regulation amending, supplementing or superseding such section or regulation.

(g) "Committee" means a committee of the Board appointed in accordance with Section 14 hereof.

(h) "Common Stock" means the common stock of the Company.

(i) "Company" means Allakos Inc., a Delaware corporation, or any successor thereto.

(j) "Compensation" includes an Eligible Employee's base straight time gross earnings but excludes payments for incentive compensation, bonuses, payments for overtime and shift premium, equity compensation income and other similar compensation. The Administrator, in its discretion, may, on a uniform and nondiscriminatory basis, establish a different definition of Compensation for a subsequent Offering Period.

(k) "Contributions" means the payroll deductions and other additional payments that the Company may permit to be made by a Participant to fund the exercise of options granted pursuant to the Plan.

(l) "Designated Company" means any Subsidiary or Affiliate that has been designated by the Administrator from time to time in its sole discretion as eligible to participate in the Plan. For purposes of the 423 Component, only the Company and its Subsidiaries may be Designated Companies, provided, however that at any given time, a Subsidiary that is a Designated Company under the 423 Component will not be a Designated Company under the Non-423 Component.

(m) "Director" means a member of the Board.

(n) "Eligible Employee" means any individual who is a common law employee providing services to the Company or a Designated Company and is customarily employed for at least twenty (20) hours per week and more than five (5) months in any calendar year by the Employer, or any lesser number of hours per week and/or number of months in any calendar year established by the Administrator (if required under Applicable Laws) for purposes of any separate Offering or the Non-423 Component. For purposes of the Plan, the employment relationship will be treated as continuing intact while the individual is on sick leave or other leave of absence that the Employer approves or is legally protected under Applicable Laws. Where the period of leave exceeds three (3) months and the individual's right to reemployment is not guaranteed either by statute or by contract, the employment relationship will be deemed to have terminated three (3) months and one (1) day following the commencement of such leave. The

Administrator, in its discretion, from time to time may, prior to an Enrollment Date for all options to be granted on such Enrollment Date in an Offering, determine (for each Offering under the 423 Component on a uniform and nondiscriminatory basis or as otherwise permitted by Treasury Regulation Section 1.423-2) that the definition of Eligible Employee will or will not include an individual if he or she: (i) has not completed at least two (2) years of service since his or her last hire date (or such lesser period of time as may be determined by the Administrator in its discretion), (ii) customarily works not more than twenty (20) hours per week (or such lesser period of time as may be determined by the Administrator in its discretion), (iii) customarily works not more than five (5) months per calendar year (or such lesser period of time as may be determined by the Administrator in its discretion), (iv) is a highly compensated employee within the meaning of Section 414(q) of the Code, or (v) is a highly compensated employee within the meaning of Section 414(q) of the Code with compensation above a certain level or is an officer or subject to the disclosure requirements of Section 16(a) of the Exchange Act, provided the exclusion is applied with respect to each Offering under the 423 Component in an identical manner to all highly compensated individuals of the Employer whose Eligible Employees are participating in that Offering. Each exclusion will be applied with respect to an Offering under the 423 Component in a manner complying with U.S. Treasury Regulation Section 1.423-2(e)(2)(ii). Such exclusions may be applied with respect to an Offering under the Non-423 Component without regard to the limitations of U.S. Treasury Regulation Section 1.423-2.

(o) "Employer" means the employer of the applicable Eligible Employee(s).

(p) "Enrollment Date" means the first Trading Day of an Offering Period.

(q) "Exchange Act" means the U.S. Securities Exchange Act of 1934, as amended, including the rules and regulations promulgated thereunder.

(r) "Exercise Date" means the last Trading Day of the Purchase Period. Notwithstanding the foregoing, in the event that an Offering Period is terminated prior to its expiration pursuant to Section 20(a), the Administrator, in its sole discretion, may determine that any Purchase Period also terminating under such Offering Period will terminate without options being exercised on the Exercise Date that otherwise would have occurred on the last Trading Day of such Purchase Period.

(s) "Fair Market Value" means, as of any date, the value of a share of Common Stock determined as follows:

(i) For purposes of the Enrollment Date of the first Offering Period under the Plan, the Fair Market Value will be the initial price to the public as set forth in the final prospectus included within the Registration Statement.

(ii) For all other purposes, the Fair Market Value will be the closing sales price for Common Stock as quoted on any established stock exchange or national market system (including without limitation the New York Stock Exchange, NASDAQ Global Select Market, the NASDAQ Global Market or the NASDAQ Capital Market of The NASDAQ Stock Market) on which the Common Stock is listed on the date of determination (or the closing bid, if no sales were reported), as reported in *The Wall Street Journal* or such other source as the Administrator deems reliable. If the determination date for the Fair Market

Value occurs on a non-trading day (i.e., a weekend or holiday), the Fair Market Value will be such price on the immediately preceding trading day, unless otherwise determined by the Administrator. In the absence of an established market for the Common Stock, the Fair Market Value thereof will be determined in good faith by the Administrator.

The determination of fair market value for purposes of tax withholding may be made in the Administrator's discretion subject to Applicable Laws and is not required to be consistent with the determination of Fair Market Value for other purposes.

(iii) In the absence of an established market for the Common Stock, the Fair Market Value thereof will be determined in good faith by the Administrator; or

(iv) For purposes of the Enrollment Date of the first Offering Period under the Plan, the Fair Market Value will be the initial price to the public as set forth in the final prospectus included within the Registration Statement.

(t) "Fiscal Year" means the fiscal year of the Company.

(u) "New Exercise Date" means a new Exercise Date if the Administrator shortens any Offering Period then in progress.

(v) "Offering" means an offer under the Plan of an option that may be exercised during an Offering Period as further described in Section 4. For purposes of the Plan, the Administrator may designate separate Offerings under the Plan (the terms of which need not be identical) in which Eligible Employees of one or more Employers will participate, even if the dates of the applicable Offering Periods of each such Offering are identical and the provisions of the Plan will separately apply to each Offering. To the extent permitted by U.S. Treasury Regulation Section 1.423-2(a)(1), the terms of each Offering need not be identical provided that the terms of the Plan and an Offering together satisfy U.S. Treasury Regulation Section 1.423-2(a)(2) and (a)(3).

(w) "Offering Periods" means the overlapping, consecutive periods of approximately twenty-four (24) months during which an option granted pursuant to the Plan may be exercised, commencing on the first Trading Day on or after February 15 and August 15 of each year and terminating on the last Trading Day on or before February 15 and August 15, approximately twenty-four (24) months later; provided, however, that the first Offering Period under the Plan will commence with the first Trading Day on or after the Registration Date and will end on the last Trading Day on or before August 15, 2020, and provided, further, that the second Offering Period under the Plan will commence on the first Trading Day on or after February 15, 2019. The duration and timing of Offering Periods may be changed pursuant to Sections 4, 20 and 30.

(x) "Parent" means a "parent corporation," whether now or hereafter existing, as defined in Section 424(e) of the Code.

(y) "Participant" means an Eligible Employee that participates in the Plan.

(z) "Plan" means this Allakos Inc. 2018 Employee Stock Purchase Plan.

(aa) "Purchase Period" means the periods during an Offering Period during which shares of Common Stock may be purchased on a Participant's behalf in accordance with the terms of the Plan. Unless the Administrator provides otherwise, Purchase Periods for all Offering Periods will (i) commence on the first Trading Day on or after February 15 and August 15 and (ii) terminate on the last Trading Day on or before August 15 of the same year and February 15 of the following year, respectively; provided, however, that the first Purchase Period under the Plan will commence on the first Trading Day on or after the Registration Date and will end on the last Trading Day on or before February 15, 2019.

(bb) "Purchase Price" means an amount equal to eighty-five percent (85%) of the Fair Market Value on the Enrollment Date or on the Exercise Date, whichever is lower; provided however, that the Purchase Price may be determined for subsequent Offering Periods by the Administrator subject to compliance with Section 423 of the Code (or any successor rule or provision or any other Applicable Law, regulation or stock exchange rule) or pursuant to Section 20.

(cc) "Registration Date" means the effective date of the Registration Statement.

(dd) "Registration Statement" means the registration statement on Form S-1 filed with the Securities and Exchange Commission for the initial public offering of the Common Stock.

(ee) "Subsidiary" means a "subsidiary corporation," whether now or hereafter existing, as defined in Section 424(f) of the Code.

(ff) "Trading Day" means a day on which the national stock exchange upon which the Common Stock is listed is open for trading.

(gg) "U.S. Treasury Regulations" means the Treasury regulations of the Code. Reference to a specific Treasury Regulation will include such Treasury Regulation, the section of the Code under which such regulation was promulgated, and any comparable provision of any future legislation or regulation amending, supplementing, or superseding such Section or regulation.

3. Eligibility.

(a) First Offering Period. Any individual who is an Eligible Employee immediately prior to the first Offering Period will be automatically enrolled in the first Offering Period.

(b) Subsequent Offering Periods. Any Eligible Employee on a given Enrollment Date subsequent to the first Offering Period will be eligible to participate in the Plan, subject to the requirements of Section 5.

(c) Non-U.S. Employees. Eligible Employees who are citizens or residents of a non-U.S. jurisdiction (without regard to whether they also are citizens or residents of the United States or resident aliens (within the meaning of Section 7701(b)(1)(A) of the Code)) may be excluded from participation in the Plan or an Offering if the participation of such Eligible Employees is prohibited under the laws of the applicable jurisdiction or if complying with the laws of the

applicable jurisdiction would cause the Plan or an Offering to violate Section 423 of the Code. In the case of the Non-423 Component, Eligible Employees may be excluded from participation in the Plan or an Offering if the Administrator determines that participation of such Eligible Employees is not advisable or practicable.

(d) Limitations. Any provisions of the Plan to the contrary notwithstanding, no Eligible Employee will be granted an option under the Plan (i) to the extent that, immediately after the grant, such Eligible Employee (or any other person whose stock would be attributed to such Eligible Employee pursuant to Section 424(d) of the Code) would own capital stock of the Company or any Parent or Subsidiary of the Company and/or hold outstanding options to purchase such stock possessing five percent (5%) or more of the total combined voting power or value of all classes of the capital stock of the Company or of any Parent or Subsidiary of the Company, or (ii) to the extent that his or her rights to purchase stock under all employee stock purchase plans (as defined in Section 423 of the Code) of the Company or any Parent or Subsidiary of the Company accrues at a rate, which exceeds twenty-five thousand dollars ($25,000) worth of stock (determined at the Fair Market Value of the stock at the time such option is granted) for each calendar year in which such option is outstanding at any time, as determined in accordance with Section 423 of the Code and the regulations thereunder.

4. Offering Periods. The Plan will be implemented by consecutive, overlapping Offering Periods with a new Offering Period commencing on the first Trading Day on or after February 15 and August 15 of each year, or on such other dates as the Administrator will determine; provided, however, that the first Offering Period under the Plan will commence with the first Trading Day on or after the Registration Date and end on the last Trading Day on or before August 15, 2020, and provided, further, that the second Offering Period under the Plan will commence on the first Trading Day on or after February 15, 2019. The Administrator will have the power to change the duration of Offering Periods (including the commencement dates thereof) with respect to future Offerings without stockholder approval if such change is announced prior to the scheduled beginning of the first Offering Period to be affected thereafter; provided, however, that no Offering Period may last more than twenty-seven (27) months.

5. Participation.

(a) First Offering Period. An Eligible Employee will be entitled to continue to participate in the first Offering Period pursuant to Section 3(a) only if such individual submits a subscription agreement authorizing Contributions in a form determined by the Administrator (which may be similar to the form attached hereto as Exhibit A) to the Company's stock administration office (i) no earlier than the effective date of the Form S-8 registration statement with respect to the issuance of Common Stock under this Plan and (ii) no later than ten (10) business days following the effective date of such Form S-8 registration statement or such other date as the Administrator may determine (the "Enrollment Window"). An Eligible Employee's failure to submit the subscription agreement during the Enrollment Window will result in the automatic termination of such individual's participation in the first Offering Period.

(b) Subsequent Offering Periods. An Eligible Employee may participate in the Plan pursuant to Section 3(b) by (i) submitting to the Company's stock administration office (or its designee) a properly completed subscription agreement authorizing Contributions in the form provided by the Administrator for such purpose or (ii) following an electronic or other enrollment procedure determined by the Administrator, in either case on or before a date determined by the Administrator prior to an applicable Enrollment Date.

6. Contributions.

(a) At the time a Participant enrolls in the Plan pursuant to Section 5, he or she will elect to have Contributions (in the form of payroll deductions or otherwise, to the extent permitted by the Administrator) made on each pay day during the Offering Period in an amount not exceeding 15% of the Compensation that he or she receives on the pay day (for illustrative purposes, should a pay day occur on an Exercise Date, a Participant will have any Contributions made on such day applied to his or her account under the then-current Purchase Period or Offering Period). The Administrator, in its sole discretion, may permit all Participants in a specified Offering to contribute amounts to the Plan through payment by cash, check or other means set forth in the subscription agreement prior to each Exercise Date of each Purchase Period. A Participant's subscription agreement will remain in effect for successive Offering Periods unless terminated as provided in Section 10 hereof.

(b) In the event Contributions are made in the form of payroll deductions, such payroll deductions for a Participant will commence on the first pay day following the Enrollment Date and will end on the last pay day on or prior to the last Exercise Date of such Offering Period to which such authorization is applicable, unless sooner terminated by the Participant as provided in Section 10 hereof; provided, however, that for the first Offering Period, payroll deductions will commence on the first pay day on or following the end of the Enrollment Window.

(c) All Contributions made for a Participant will be credited to his or her account under the Plan and Contributions will be made in whole percentages of his or her Compensation only. A Participant may not make any additional payments into such account.

(d) A Participant may discontinue his or her participation in the Plan as provided under Section 10. Unless otherwise determined by the Administrator, during a Purchase Period, a Participant may not increase the rate of his or her Contributions and may only decrease the rate of his or her Contributions one (1) time and such decrease must be to a Contribution rate of zero percent (0%). Any such decrease during a Purchase Period requires the Participant (i) properly completing and submitting to the Company's stock administration office (or its designee) a new subscription agreement authorizing the change in Contribution rate in the form provided by the Administrator for such purpose or (ii) following an electronic or other procedure prescribed by the Administrator, in either case on or before a date determined by the Administrator prior to an applicable Exercise Date. If a Participant has not followed such procedures to change the rate of Contributions, the rate of his or her Contributions will continue at the originally elected rate throughout the Purchase Period and future Offering Periods and Purchase Periods (unless the Participant's participation is terminated as provided in Sections 10 or 11). The Administrator may, in its sole discretion, amend the nature and/or number of Contribution rate changes that may be made by Participants during any Offering Period or Purchase Period and may establish other conditions or limitations as it deems

appropriate for Plan administration. Any change in the rate of Contributions made pursuant to this Section 6(d) will be effective as of the first (1st) full payroll period following five (5) business days after the date on which the change is made by the Participant (unless the Administrator, in its sole discretion, elects to process a given change in payroll deduction rate earlier).

(e) Notwithstanding the foregoing, to the extent necessary to comply with Section 423(b)(8) of the Code and Section 3(d), a Participant's Contributions may be decreased to zero percent (0%) at any time during a Purchase Period. Subject to Section 423(b)(8) of the Code and Section 3(d) hereof, Contributions will recommence at the rate originally elected by the Participant effective as of the beginning of the first Purchase Period scheduled to end in the following calendar year, unless terminated by the Participant as provided in Section 10.

(f) Notwithstanding any provisions to the contrary in the Plan, the Administrator may allow Participants to participate in the Plan via cash contributions instead of payroll deductions if (i) payroll deductions are not permitted under Applicable Laws, (ii) the Administrator determines that cash contributions are permissible under Section 423 of the Code; or (iii) the Participants are participating in the Non-423 Component.

(g) At the time the option is exercised, in whole or in part, or at the time some or all of the Common Stock issued under the Plan is disposed of (or at any other time that a taxable event related to the Plan occurs), the Participant must make adequate provision for the Company's or Employer's federal, state, local or any other tax liability payable to any authority including taxes imposed by jurisdictions outside of the U.S., national insurance, social security or other tax withholding obligations, if any, which arise upon the exercise of the option or the disposition of the Common Stock (or any other time that a taxable event related to the Plan occurs). At any time, the Company or the Employer may, but will not be obligated to, withhold from the Participant's compensation the amount necessary for the Company or the Employer to meet applicable withholding obligations, including any withholding required to make available to the Company or the Employer any tax deductions or benefits attributable to the sale or early disposition of Common Stock by the Eligible Employee. In addition, the Company or the Employer may, but will not be obligated to, withhold from the proceeds of the sale of Common Stock or use any other method of withholding the Company or the Employer deems appropriate to the extent permitted by U.S. Treasury Regulation Section 1.423-2(f).

7. Grant of Option. On the Enrollment Date of each Offering Period, each Eligible Employee participating in such Offering Period will be granted an option to purchase on each Exercise Date during such Offering Period (at the applicable Purchase Price) up to a number of shares of Common Stock determined by dividing such Eligible Employee's Contributions accumulated prior to such Exercise Date and retained in the Eligible Employee's account as of the Exercise Date by the applicable Purchase Price; provided that in no event will an Eligible Employee be permitted to purchase during each Purchase Period more than 3,000 shares of Common Stock (subject to any adjustment pursuant to Section 19) and provided further that such purchase will be subject to the limitations set forth in Sections 3(d) and 13 and in the subscription agreement. The Eligible Employee may accept the grant of such option (i) with respect to the first Offering Period by submitting a properly completed subscription agreement in accordance with the requirements of

Section 5 on or before the last day of the Enrollment Window, and (ii) with respect to any subsequent Offering Period under the Plan, by electing to participate in the Plan in accordance with the requirements of Section 5. The Administrator may, for future Offering Periods, increase or decrease, in its absolute discretion, the maximum number of shares of Common Stock that an Eligible Employee may purchase during each Purchase Period. Exercise of the option will occur as provided in Section 8, unless the Participant has withdrawn pursuant to Section 10. The option will expire on the last day of the Offering Period.

8. Exercise of Option.

(a) Unless a Participant withdraws from the Plan as provided in Section 10, his or her option for the purchase of shares of Common Stock will be exercised automatically on each Exercise Date, and the maximum number of full shares subject to the option will be purchased for such Participant at the applicable Purchase Price with the accumulated Contributions from his or her account. No fractional shares of Common Stock will be purchased; any Contributions accumulated in a Participant's account, which are not sufficient to purchase a full share will be retained in the Participant's account for the subsequent Purchase Period or Offering Period, as applicable, subject to earlier withdrawal by the Participant as provided in Section 10. Any other funds left over in a Participant's account after the Exercise Date will be returned to the Participant. During a Participant's lifetime, a Participant's option to purchase shares of Common Stock hereunder is exercisable only by him or her.

(b) If the Administrator determines that, on a given Exercise Date, the number of shares of Common Stock with respect to which options are to be exercised may exceed (i) the number of shares of Common Stock that were available for sale under the Plan on the Enrollment Date of the applicable Offering Period, or (ii) the number of shares of Common Stock available for sale under the Plan on such Exercise Date, the Administrator may in its sole discretion (x) provide that the Company will make a pro rata allocation of the shares of Common Stock available for purchase on such Enrollment Date or Exercise Date, as applicable, in as uniform a manner as will be practicable and as it will determine in its sole discretion to be equitable among all Participants exercising options to purchase Common Stock on such Exercise Date, and continue all Offering Periods then in effect or (y) provide that the Company will make a pro rata allocation of the shares of Common Stock available for purchase on such Enrollment Date or Exercise Date, as applicable, in as uniform a manner as will be practicable and as it will determine in its sole discretion to be equitable among all participants exercising options to purchase Common Stock on such Exercise Date, and terminate any or all Offering Periods then in effect pursuant to Section 20. The Company may make a pro rata allocation of the shares available on the Enrollment Date of any applicable Offering Period pursuant to the preceding sentence, notwithstanding any authorization of additional shares for issuance under the Plan by the Company's stockholders subsequent to such Enrollment Date.

9. Delivery. As soon as reasonably practicable after each Exercise Date on which a purchase of shares of Common Stock occurs, the Company will arrange the delivery to each Participant of the shares purchased upon exercise of his or her option in a form determined by the Administrator (in its sole discretion) and pursuant to rules established by the Administrator. The Company may permit or require that shares be deposited directly with a broker designated by the Company or with a designated agent of

the Company, and the Company may utilize electronic or automated methods of share transfer. The Company may require that shares be retained with such broker or agent for a designated period of time and/or may establish other procedures to permit tracking of disqualifying dispositions of such shares. No Participant will have any voting, dividend, or other stockholder rights with respect to shares of Common Stock subject to any option granted under the Plan until such shares have been purchased and delivered to the Participant as provided in this Section 9.

10. Withdrawal.

(a) A Participant may withdraw all but not less than all the Contributions credited to his or her account and not yet used to exercise his or her option under the Plan at any time by (i) submitting to the Company's stock administration office (or its designee) a written notice of withdrawal in the form determined by the Administrator for such purpose (which may be similar to the form attached hereto as Exhibit B), or (ii) following an electronic or other withdrawal procedure determined by the Administrator. The Administrator may set forth a deadline of when a withdrawal must occur to be effective prior to a given Exercise Date in accordance with policies it may approve from time to time. All of the Participant's Contributions credited to his or her account will be paid to such Participant promptly after receipt of notice of withdrawal and such Participant's option for the Offering Period will be automatically terminated, and no further Contributions for the purchase of shares will be made for such Offering Period. If a Participant withdraws from an Offering Period, Contributions will not resume at the beginning of the succeeding Offering Period, unless the Participant re-enrolls in the Plan in accordance with the provisions of Section 5.

(b) A Participant's withdrawal from an Offering Period will not have any effect on his or her eligibility to participate in any similar plan that may hereafter be adopted by the Company or in succeeding Offering Periods that commence after the termination of the Offering Period from which the Participant withdraws.

11. Termination of Employment. Upon a Participant's ceasing to be an Eligible Employee, for any reason, he or she will be deemed to have elected to withdraw from the Plan and the Contributions credited to such Participant's account during the Offering Period but not yet used to purchase shares of Common Stock under the Plan will be returned to such Participant or, in the case of his or her death, to the person or persons entitled thereto under Section 15, and such Participant's option will be automatically terminated. Unless otherwise provided by the Administrator, a Participant whose employment transfers between entities through a termination with an immediate rehire (with no break in service) by the Company or a Designated Company will not be treated as terminated under the Plan; however, if a Participant transfers from an Offering under the 423 Component to the Non-423 Component, the exercise of the option will be qualified under the 423 Component only to the extent it complies with Section 423 of the Code, unless otherwise provided by the Administrator.

12. Interest. No interest will accrue on the Contributions of a participant in the Plan, except as may be required by Applicable Laws, as determined by the Company, and if so required by the laws of a particular jurisdiction, will apply to all Participants in the relevant Offering under the 423 Component, except to the extent otherwise permitted by U.S. Treasury Regulation Section 1.423-2(f).

13. Stock.

(a) Subject to adjustment upon changes in capitalization of the Company as provided in Section 19 hereof, the maximum number of shares of Common Stock that will be made available for sale under the Plan will be 500,000 Shares. The number of shares of Common Stock available for issuance under the Plan will be increased on the first day of each Fiscal Year beginning with the 2019 Fiscal Year equal to the least of (i) 1,000,000 Shares, (ii) 1% of the outstanding shares of Common Stock on the last day of the immediately preceding Fiscal Year, or (iii) an amount determined by the Administrator no later than the last day of the immediately preceding Fiscal Year.

(b) Until the shares of Common Stock are issued (as evidenced by the appropriate entry on the books of the Company or of a duly authorized transfer agent of the Company), a Participant will have only the rights of an unsecured creditor with respect to such shares, and no right to vote or receive dividends or any other rights as a stockholder will exist with respect to such shares.

(c) Shares of Common Stock to be delivered to a Participant under the Plan will be registered in the name of the Participant or in the name of the Participant and his or her spouse.

14. Administration. The Plan will be administered by the Board or a Committee appointed by the Board, which Committee will be constituted to comply with Applicable Laws. The Administrator will have full and exclusive discretionary authority to construe, interpret and apply the terms of the Plan, to delegate ministerial duties to any of the Company's employees, to designate separate Offerings under the Plan, to designate Subsidiaries and Affiliates as participating in the 423 Component or Non-423 Component, to determine eligibility, to adjudicate all disputed claims filed under the Plan and to establish such procedures that it deems necessary for the administration of the Plan (including, without limitation, to adopt such procedures and sub-plans as are necessary or appropriate to permit the participation in the Plan by employees who are foreign nationals or employed outside the U.S., the terms of which sub-plans may take precedence over other provisions of this Plan, with the exception of Section 13(a) hereof, but unless otherwise superseded by the terms of such sub-plan, the provisions of this Plan will govern the operation of such sub-plan). Unless otherwise determined by the Administrator, the Eligible Employees eligible to participate in each sub-plan will participate in a separate Offering or in the Non-423 Component. Without limiting the generality of the foregoing, the Administrator is specifically authorized to adopt rules and procedures regarding eligibility to participate, the definition of Compensation, handling of Contributions, making of Contributions to the Plan (including, without limitation, in forms other than payroll deductions), establishment of bank or trust accounts to hold Contributions, payment of interest, conversion of local currency, obligations to pay payroll tax, determination of beneficiary designation requirements, withholding procedures and handling of stock certificates that vary with applicable local requirements. The Administrator also is authorized to determine that, to the extent permitted by U.S. Treasury Regulation Section 1.423-2(f), the terms of an option granted under the Plan or an Offering to citizens or residents of a non-U.S. jurisdiction will be less favorable than the terms of options granted under the Plan or the same Offering to employees resident solely in the U.S. Every finding, decision, and determination made by the Administrator will, to the full extent permitted by law, be final and binding upon all parties.

15. Designation of Beneficiary.

(a) If permitted by the Administrator, a Participant may file a designation of a beneficiary who is to receive any shares of Common Stock and cash, if any, from the Participant's account under the Plan in the event of such Participant's death subsequent to an Exercise Date on which the option is exercised but prior to delivery to such Participant of such shares and cash. In addition, if permitted by the Administrator, a Participant may file a designation of a beneficiary who is to receive any cash from the Participant's account under the Plan in the event of such Participant's death prior to exercise of the option. If a Participant is married and the designated beneficiary is not the spouse, spousal consent will be required for such designation to be effective.

(b) Such designation of beneficiary may be changed by the Participant at any time by notice in a form determined by the Administrator. In the event of the death of a Participant and in the absence of a beneficiary validly designated under the Plan who is living at the time of such Participant's death, the Company will deliver such shares and/or cash to the executor or administrator of the estate of the Participant, or if no such executor or administrator has been appointed (to the knowledge of the Company), the Company, in its discretion, may deliver such shares and/or cash to the spouse or to any one or more dependents or relatives of the Participant, or if no spouse, dependent or relative is known to the Company, then to such other person as the Company may designate.

(c) All beneficiary designations will be in such form and manner as the Administrator may designate from time to time. Notwithstanding Sections 15(a) and (b) above, the Company and/or the Administrator may decide not to permit such designations by Participants in non-U.S. jurisdictions to the extent permitted by U.S. Treasury Regulation Section 1.423-2(f).

16. Transferability. Neither Contributions credited to a Participant's account nor any rights with regard to the exercise of an option or to receive shares of Common Stock under the Plan may be assigned, transferred, pledged or otherwise disposed of in any way (other than by will, the laws of descent and distribution or as provided in Section 15 hereof) by the Participant. Any such attempt at assignment, transfer, pledge or other disposition will be without effect, except that the Company may treat such act as an election to withdraw funds from an Offering Period in accordance with Section 10 hereof.

17. Use of Funds. The Company may use all Contributions received or held by it under the Plan for any corporate purpose, and the Company will not be obligated to segregate such Contributions except under Offerings or for Participants in the Non-423 Component for which Applicable Laws require that Contributions to the Plan by Participants be segregated from the Company's general corporate funds and/or deposited with an independent third party. Until shares of Common Stock are issued, Participants will have only the rights of an unsecured creditor with respect to such shares.

18. Reports. Individual accounts will be maintained for each Participant in the Plan. Statements of account will be given to participating Eligible Employees at least annually, which statements will set forth the amounts of Contributions, the Purchase Price, the number of shares of Common Stock purchased and the remaining cash balance, if any.

19. Adjustments, Dissolution, Liquidation, Merger, or Change in Control.

(a) Adjustments. In the event that any dividend or other distribution (whether in the form of cash, Common Stock, other securities, or other property), recapitalization, stock split, reverse stock split, reorganization, merger, consolidation, split-up, spin-off, combination, repurchase, or exchange of Common Stock or other securities of the Company, or other change in the corporate structure of the Company affecting the Common Stock occurs, the Administrator, in order to prevent dilution or enlargement of the benefits or potential benefits intended to be made available under the Plan, will, in such manner as it may deem equitable, adjust the number and class of Common Stock that may be delivered under the Plan, the Purchase Price per share, the class, and the number of shares of Common Stock covered by each option under the Plan that has not yet been exercised, and the numerical limits of Sections 7 and 13.

(b) Dissolution or Liquidation. In the event of the proposed dissolution or liquidation of the Company, any Offering Period then in progress will be shortened by setting a New Exercise Date, and will terminate immediately prior to the consummation of such proposed dissolution or liquidation, unless provided otherwise by the Administrator. The New Exercise Date will be before the date of the Company's proposed dissolution or liquidation. The Administrator will notify each Participant in writing or electronically, prior to the New Exercise Date, that the Exercise Date for the Participant's option has been changed to the New Exercise Date and that the Participant's option will be exercised automatically on the New Exercise Date, unless prior to such date the Participant has withdrawn from the Offering Period as provided in Section 10 hereof.

(c) Merger or Change in Control. In the event of a merger or Change in Control, each outstanding option will be assumed or an equivalent option substituted by the successor corporation or a Parent or Subsidiary of the successor corporation. In the event that the successor corporation refuses to assume or substitute for the option, the Offering Period with respect to which such option relates will be shortened by setting a New Exercise Date on which such Offering Period will end. The New Exercise Date will occur before the date of the Company's proposed merger or Change in Control. The Administrator will notify each Participant in writing or electronically prior to the New Exercise Date, that the Exercise Date for the Participant's option has been changed to the New Exercise Date and that the Participant's option will be exercised automatically on the New Exercise Date, unless prior to such date the Participant has withdrawn from the Offering Period as provided in Section 10 hereof.

20. Amendment or Termination.

(a) The Administrator, in its sole discretion, may amend, suspend, or terminate the Plan, or any part thereof, at any time and for any reason. If the Plan is terminated, the Administrator, in its discretion, may elect to terminate all outstanding Offering Periods either immediately or upon completion of the purchase of shares of Common Stock on the next Exercise Date (which may be sooner than originally scheduled, if determined by the Administrator in its discretion), or may elect to permit Offering Periods to expire in accordance with their terms (and subject to any adjustment pursuant to Section 19). If the Offering Periods are terminated prior to expiration, all amounts then credited to Participants' accounts that have not been used to purchase shares of Common Stock will be returned to the Participants (without interest thereon, except as otherwise required under Applicable Laws, as further set forth in Section 12 hereof) as soon as administratively practicable.

(b) Without stockholder consent and without limiting Section 20(a), the Administrator will be entitled to change the Offering Periods or Purchase Periods, designate separate Offerings, limit the frequency and/or number of changes in the amount withheld during an Offering Period, establish the exchange rate applicable to amounts withheld in a currency other than U.S. dollars, permit Contributions in excess of the amount designated by a Participant in order to adjust for delays or mistakes in the Company's processing of properly completed Contribution elections, establish reasonable waiting and adjustment periods and/or accounting and crediting procedures to ensure that amounts applied toward the purchase of Common Stock for each Participant properly correspond with Contribution amounts, and establish such other limitations or procedures as the Administrator determines in its sole discretion advisable that are consistent with the Plan.

(c) In the event the Administrator determines that the ongoing operation of the Plan may result in unfavorable financial accounting consequences, the Administrator may, in its discretion and, to the extent necessary or desirable, modify, amend or terminate the Plan to reduce or eliminate such accounting consequence including, but not limited to:

(i) amending the Plan to conform with the safe harbor definition under the Financial Accounting Standards Board Accounting Standards Codification Topic 718 (or any successor thereto), including with respect to an Offering Period underway at the time;

(ii) altering the Purchase Price for any Offering Period or Purchase Period including an Offering Period or Purchase Period underway at the time of the change in Purchase Price;

(iii) shortening any Offering Period or Purchase Period by setting a New Exercise Date, including an Offering Period or Purchase Period underway at the time of the Administrator action;

(iv) reducing the maximum percentage of Compensation a Participant may elect to set aside as Contributions; and

(v) reducing the maximum number of shares of Common Stock a Participant may purchase during any Offering Period or Purchase Period.

Such modifications or amendments will not require stockholder approval or the consent of any Participants.

21. Notices. All notices or other communications by a Participant to the Company under or in connection with the Plan will be deemed to have been duly given when received in the form and manner specified by the Company at the location, or by the person, designated by the Company for the receipt thereof.

22. Conditions Upon Issuance of Shares. Shares of Common Stock will not be issued with respect to an option unless the exercise of such option and the issuance and delivery of such shares pursuant thereto will comply with all applicable provisions of law, domestic or foreign, including, without limitation, the U.S. Securities Act of 1933, as amended, the Exchange Act, the rules and regulations promulgated thereunder, and the requirements of any stock exchange upon which the shares may then be listed, and will be further subject to the approval of counsel for the Company with respect to such compliance.

As a condition to the exercise of an option, the Company may require the person exercising such option to represent and warrant at the time of any such exercise that the shares are being purchased only for investment and without any present intention to sell or distribute such shares if, in the opinion of counsel for the Company, such a representation is required by any of the aforementioned applicable provisions of law.

23. Code Section 409A. The 423 Component of the Plan is exempt from the application of Code Section 409A and any ambiguities herein will be interpreted to so be exempt from Code Section 409A. In furtherance of the foregoing and notwithstanding any provision in the Plan to the contrary, if the Administrator determines that an option granted under the Plan may be subject to Code Section 409A or that any provision in the Plan would cause an option under the Plan to be subject to Code Section 409A, the Administrator may amend the terms of the Plan and/or of an outstanding option granted under the Plan, or take such other action the Administrator determines is necessary or appropriate, in each case, without the Participant's consent, to exempt any outstanding option or future option that may be granted under the Plan from or to allow any such options to comply with Code Section 409A, but only to the extent any such amendments or action by the Administrator would not violate Code Section 409A. Notwithstanding the foregoing, the Company, and any Parent, Subsidiary or Affiliate will have no liability to a Participant or any other party if the option to purchase Common Stock under the Plan that is intended to be exempt from or compliant with Code Section 409A is not so exempt or compliant or for any action taken by the Administrator with respect thereto. The Company makes no representation that the option to purchase Common Stock under the Plan is compliant with Code Section 409A.

24. Term of Plan. The Plan will become effective upon the later to occur of (i) its adoption by the Board or (ii) the business day immediately prior to the Registration Date. It will continue in effect for a term of twenty (20) years, unless sooner terminated under Section 20.

25. Stockholder Approval. The Plan will be subject to approval by the stockholders of the Company within twelve (12) months after the date the Plan is adopted by the Board. Such stockholder approval will be obtained in the manner and to the degree required under Applicable Laws.

26. Governing Law. The Plan will be governed by, and construed in accordance with, the laws of the State of California (except its choice-of-law provisions).

27. No Right to Employment. Participation in the Plan by a Participant will not be construed as giving a Participant the right to be retained as an employee of the Company or a Subsidiary or Affiliate, as applicable. Further, the Company or a Subsidiary or Affiliate may dismiss a Participant from employment at any time, free from any liability or any claim under the Plan.

28. Severability. If any provision of the Plan is or becomes or is deemed to be invalid, illegal, or unenforceable for any reason in any jurisdiction or as to any Participant, such invalidity, illegality or unenforceability will not affect the remaining parts of the Plan, and the Plan will be construed and enforced as to such jurisdiction or Participant as if the invalid, illegal or unenforceable provision had not been included.

29. Compliance with Applicable Laws. The terms of this Plan are intended to comply with all Applicable Laws and will be construed accordingly.

30. Automatic Transfer to Low Price Offering Period. To the extent permitted by Applicable Laws, if the Fair Market Value on any Exercise Date in an Offering Period is lower than the Fair Market Value on the Enrollment Date of such Offering Period, then all Participants in such Offering Period automatically will be withdrawn from such Offering Period immediately after the exercise of their option on such Exercise Date and automatically re-enrolled in the immediately following Offering Period as of the first day thereof.

EXHIBIT A

ALLAKOS INC.

2018 EMPLOYEE STOCK PURCHASE PLAN

SUBSCRIPTION AGREEMENT

_____ Original Application Offering Date:_____

_____ Change in Payroll Deduction Rate

1. (“Employee”) hereby elects to participate in the Allakos Inc. 2018 Employee Stock Purchase Plan (the “Plan”) and subscribes to purchase shares of the Company’s Common Stock in accordance with this Subscription Agreement and the Plan. Unless otherwise defined herein, the terms defined in the 2018 Employee Stock Purchase Plan (the “Plan”) shall have the same defined meanings in this Subscription Agreement.

2. Employee hereby authorizes payroll deductions from each paycheck in the amount of % (from 1% to 15%) of his or her Compensation on each payday during the Offering Period in accordance with the Plan. (Please note that no fractional percentages are permitted.)

3. Employee understands that said payroll deductions will be accumulated for the purchase of shares of Common Stock at the applicable Purchase Price determined in accordance with the Plan. Employee understands that if he or she does not withdraw from an Offering Period, any accumulated payroll deductions will be used to automatically exercise his or her option and purchase Common Stock under the Plan.

4. Employee has received a copy of the complete Plan and its accompanying prospectus. Employee understands that his or her participation in the Plan is in all respects subject to the terms of the Plan.

5. Shares of Common Stock purchased by Employee under the Plan should be issued in the name(s) of (Employee or Employee and Spouse only).

6. Employee understands that if he or she disposes of any shares that he or she purchased under the Plan within two (2) years after the Enrollment Date (the first day of the Offering Period during which he or she purchased such shares) or one (1) year after the applicable Exercise Date, he or she will be treated for federal income tax purposes as having received ordinary income at the time of such disposition in an amount equal to the excess of the fair market value of the shares at the time such shares were purchased over the price paid for the shares. Employee hereby agrees to notify the Company in writing within thirty (30) days after the date of any disposition of such shares and to make adequate provision for federal, state or other tax withholding obligations, if any, that arise upon the disposition of such shares. The Company may, but will not be obligated to, withhold from Employee’s compensation the amount necessary

to meet any applicable withholding obligation including any withholding necessary to make available to the Company any tax deductions or benefits attributable to Employee's sale or early disposition of such shares. Employee understands that if he or she disposes of such shares at any time after the expiration of the two (2)-year and one-(1) year holding periods, he or she will be treated for federal income tax purposes as having received income only at the time of such disposition, and that such income will be taxed as ordinary income only to the extent of an amount equal to the lesser of (i) the excess of the fair market value of the shares at the time of such disposition over the purchase price paid for the shares, or (ii) 15% of the fair market value of the shares on the first day of the Offering Period. The remainder of the gain, if any, recognized on such disposition will be taxed as capital gain.

7. Employee hereby agrees to be bound by the terms of the Plan. The effectiveness of this Subscription Agreement is dependent upon Employee's eligibility to participate in the Plan.

Employee's Social Security Number: _____

Employee's Address: _____

_____

_____

EMPLOYEE UNDERSTANDS THAT THIS SUBSCRIPTION AGREEMENT WILL REMAIN IN EFFECT THROUGHOUT SUCCESSIVE OFFERING PERIODS UNLESS TERMINATED BY EMPLOYEE.

Dated: _____

_____

Signature of Employee

EXHIBIT B

ALLAKOS INC.

2018 EMPLOYEE STOCK PURCHASE PLAN

NOTICE OF WITHDRAWAL

Unless otherwise defined herein, the terms defined in the 2018 Employee Stock Purchase Plan (the "Plan") shall have the same defined meanings in this Notice of Withdrawal.

The undersigned Participant in the Offering Period of the Allakos Inc. 2018 Employee Stock Purchase Plan that began on , (the "Offering Date") hereby notifies the Company that he or she hereby withdraws from the Offering Period. He or she hereby directs the Company to pay to the undersigned as promptly as practicable all the payroll deductions credited to his or her account with respect to such Offering Period. The undersigned understands and agrees that his or her option for such Offering Period will be terminated automatically. The undersigned understands further that no further payroll deductions will be made for the purchase of shares in the current Offering Period and the undersigned will be eligible to participate in succeeding Offering Periods only by delivering to the Company a new Subscription Agreement.

Name and Address of Participant:

_____

_____

_____

Signature:

_____

Date: _____

Exhibit 10.5

ALLAKOS INC.

July 6, 2018

Robert Alexander
c/o Allakos Inc.

Dear Robert:

This letter supersedes the April 20, 2017, employment offer letter entered into by Allakos Inc. (the "**Company**") and you. You will continue in your position with the Company as its Chief Executive Officer ("**CEO**") reporting solely to the Company's Board of Directors (the "**Board**").

As CEO, you will continue to have the powers, authorities, and duties of management usually vested in the office of the chief executive officer of a corporation of a similar size and nature to the Company, subject to the legal directives of the Board in exercising its general oversight function. Unless otherwise previously disclosed to the Board in writing or subsequently approved by the Board, you will continue to devote your full business time and attention to the performance of your duties hereunder and shall not engage in any other business, profession or occupation for compensation or otherwise which would conflict or interfere with the rendition of such services, either directly or indirectly, except as otherwise set forth in Exhibit A attached hereto. Prior to an initial public offering of the Company's or an affiliate's securities (an "**IPO**"), you shall also continue to serve as a member of the Board as long as you remain the CEO. Following an IPO, the Company shall cause you to be nominated for election as a director and to be recommended to the stockholders for election as a director as long as you remain the CEO. You shall also continue to serve in such other positions and capacities with any affiliate of the Company as may be requested from time to time by the Board. All service as a member of the Board or with any affiliate of the Company pursuant to this letter shall continue to be without additional compensation to you. The principal location of your employment shall continue to be at the Company's principal executive offices located in San Carlos, California, although you understand and continue to agree that you may be required to travel from time to time for business reasons.

You will continue to receive an annual salary of $500,000, which will be paid, less applicable withholdings, semi-monthly in accordance with the Company's normal payroll procedures. You shall continue to be entitled to such increases (but not decreases) in your annual salary, if any, as may be determined from time to time in the sole discretion of the Board. In addition, you will continue to be eligible for an annual bonus targeted at 50% of your annual salary (the "**Annual Bonus**"). The actual Annual Bonus will continue to be based on the achievement of certain performance objectives to be established by mutual agreement between you and the Board. Any actual Annual Bonus earned by you will continue to be paid in accordance with the Company's normal payroll procedures, but no later than March 15 of the calendar year after the calendar year in which any such actual Annual Bonus is earned.

As a Company employee, you will also continue to be eligible to participate in the Company's employee benefit and perquisite plans and programs, in accordance with the terms of such plans and programs, as amended by the Company from time to time, subject to any restrictions imposed by applicable law, on a basis no less favorable than such benefits and perquisites are provided by the Company from time to time to the Company's other senior executives. Please note that the Company continues to reserve the right to cancel or change the benefit and perquisite plans and programs it offers to its employees at any time. You will also continue to be entitled to four (4) weeks' paid vacation.

You shall continue to be entitled to receive prompt reimbursement for all travel and business expenses reasonably incurred and accounted for by you (in accordance with the policies and procedures established from time to time by the Company) in performing services hereunder.

In addition, your existing Company stock options and any future Company stock options granted to you by the Company shall continue to be exercisable for a period of twenty four months (or such longer period as provided in the Company equity plan under which the applicable option was granted) after the earlier of: your termination due to your death or Disability (as defined in applicable Company equity plan) or your Qualifying Termination (as defined below), subject to earlier termination under the terms of the applicable Company equity plan; provided, however, that no Company option of yours shall be exercisable after its expiration date.

Notwithstanding the terms of any document to the contrary, in the event that a Change in Control (as defined below) occurs, one hundred percent (100%) of the total number of shares subject to your Company options or other stock awards shall immediately vest as of the date immediately preceding the Change in Control, subject to your continued employment through such date. Notwithstanding anything herein to the contrary, in the event that, during the period commencing three (3) months prior to a Change in Control and ending upon a Change in Control (the "**Pre-Change in Control Period**"), your employment is terminated (i) by the Company without Cause (as defined below), (ii) due to your death or Disability, or (iii) due to your resignation of your employment with the Company for Good Reason (as defined below), then one hundred percent (100%) of the total number of shares subject to your Company options or other stock awards that have not vested will immediately vest and become exercisable in accordance with this letter (the "**Change in Control Vesting Benefits**"); provided, however, that the Company continues to agree that all future stock awards granted to you shall contain distribution terms and other terms and conditions so that such other stock awards shall be exempt from or comply with the requirements of Section 409A (as defined below) and that none of such other stock awards will be subject to the additional tax imposed under Section 409A. Further, notwithstanding anything herein to the contrary, in the event that your employment is terminated by the Company without Cause (and other than due to your death or Disability) or you resign your employment with the Company for Good Reason (each, a "**Qualifying Termination**"), in either case, outside the Pre-Change in Control Period, then the total number of shares subject to your Company options or other stock awards that have not vested but would have vested if you had remained employed on the first anniversary of the date of your termination will immediately vest and become exercisable in accordance with this letter (such accelerated vesting, the "**Equity Vesting Benefits**").

As used in this letter, the term “Change in Control” means (i) a sale or exclusive license of all or substantially all of the Company’s assets, (ii) a merger, consolidation or other capital reorganization or business combination transaction of the Company with or into another corporation, limited liability company or other entity, or (iii) the consummation of a transaction, or series of related transactions, in which any “person” (as such term is used in Sections 13(d) and 14(d) of the Securities Exchange Act of 1934,as amended) becomes the “beneficial owner” (as defined in Rule 13d-3 of the Securities Exchange Act of 1934, as amended), directly or indirectly, of more than fifty percent (50%) of the Company’s then outstanding voting securities. Notwithstanding the foregoing, and with respect to Company restricted stock units and other Company full value awards only, a transaction will not be deemed a Change in Control unless the transaction qualifies as a change in control event within the meaning of Section 409A.

In the event that you remain employed by the Company on the date that a Change in Control occurs, upon the request of the acquiring or surviving corporation, you continue to agree that you will remain employed with such buying or acquiring corporation for a period of ninety (90) days following the consummation of such Change in Control.

The Company continues to agree that other than any right of first refusal set forth in any documentation applicable to your Company options or other stock awards, the shares of Company Common Stock acquired by you as a result of the exercise, vesting, or settlement of your Company options and other stock awards shall not be subject to repurchase rights in favor of any person or entity.

The Company, and its successors and/or assigns, shall continue to indemnify and defend you to the fullest extent provided by the By-Laws and Certificate of Incorporation of the Company with respect to any claims that may be brought against you arising out of any action taken or not taken in your capacity as an officer or director of any the Company or any of its affiliates. In addition, you will continue to be covered as an insured in respect of your activities as an officer and director of the Company or any of its affiliates by the Company’s Directors and Officers liability policy or other comparable policies obtained by any affiliate of the Company or any of the Company’s or such affiliates’ successors, to the fullest extent provided by such policies. The Company’s indemnification obligations under this paragraph shall continue to remain in effect following your termination of employment with the Company.

The Company looks forward to continuing its beneficial and productive relationship with you. Nevertheless, you should continue to be aware that your employment with the Company is for no specified period and constitutes at-will employment. As a result, you continue to be free to resign at any time, for any reason or for no reason. Similarly, the Company continues to be free to conclude its employment relationship with you at any time, with or without Cause, and with or without notice. We continue to request that, in the event of a resignation without Good Reason, you give the Company at least two weeks’ notice.

If your employment with the Company is terminated for any reason, you will continue to be paid any accrued but unpaid annual salary through the date of termination, any accrued but unpaid vacation pay and any earned but unpaid Annual Bonus for the year preceding the year in which the termination of your employment occurs. In addition, if you experience a Qualifying Termination outside of the Post-Change in Control Period (as defined below), then you will continue to receive the following severance benefits (the “**Severance Benefits**”):

(i) the Company will continue to pay you your then-current annual salary, less applicable withholdings, for twelve (12) months from the date of such termination, which will be paid in accordance with the Company's regular payroll procedures, with the first installment being paid on the first regularly scheduled payroll date of the Company following the date on which the Release (as defined below) becomes irrevocable (subject to the paragraph below regarding Section 409A);

(ii) the Company will pay you an amount equal to (a) your target Annual Bonus opportunity *multiplied by* (b) the quotient of (x) the number of days you were employed by the Company during the year in which such termination occurs *divided by* (y) 365 days, which amount will be paid in a single lump sum on the first regularly scheduled payroll date of the Company following the date on which the Release becomes irrevocable (subject to the paragraph below regarding Section 409A); and

(iii) if you elect continuation coverage pursuant to the Consolidated Omnibus Budget Reconciliation Act of 1985, as amended ("**COBRA**"),within the time period prescribed pursuant to COBRA for you and your eligible dependents, the Company will reimburse you for the premiums necessary to continue group health insurance benefits under COBRA for you and your eligible dependents (such reimbursements, "**COBRA Reimbursements**") until the earlier of (a) a period of twelve (12) months from the date of such termination, (b) the date upon which you and your eligible dependents become covered under similar plans or (c) the date upon which you cease to be eligible for coverage under COBRA. However, if the Company determines in its sole discretion that it cannot pay the COBRA Reimbursements without potentially violating applicable law (including, without limitation, Section 2716 of the Public Health Service Act), the Company will in lieu thereof provide to you a taxable monthly payment in an amount equal to the monthly COBRA premium that you would be required to pay to continue your group health coverage in effect on the date of such termination, which payments will be made regardless of whether you elect COBRA continuation coverage (each such payment, a "**COBRA Replacement Payment**") and will commence on the month following the date of such termination and will end on the earlier of (a) the date upon which you become eligible for group health coverage from a new employer or (b) the date the Company has paid an amount equal to twelve (12) COBRA Replacement Payments. For the avoidance of doubt, the COBRA Replacement Payments may be used for any purpose, including, but not limited to, continuation coverage under COBRA, and will be subject to all applicable withholdings.

In the event that, on or within twenty-four (24) months after a Change in Control (such period, the "**Post-Change in Control Period**"), you have a Qualifying Termination, then you will receive the following severance benefits (the "**Change in Control Severance Benefits**"):

(i) the Company will pay you an amount equal to twenty-four (24) months of your then-current annual salary, less applicable withholdings, which amount will be paid in a single lump sum on the first regularly scheduled payroll date of the Company following the date on which the Release becomes irrevocable (subject to the paragraph below regarding Section 409A);

(ii) the Company will pay you an amount equal to 200% of your target Annual Bonus opportunity, which amount will be paid in a single lump sum on the first regularly scheduled payroll date of the Company following the date on which the Release becomes irrevocable (subject to the paragraph below regarding Section 409A); and

(iii) if you elect continuation coverage pursuant to COBRA within the time period prescribed pursuant to COBRA for you and your eligible dependents, the Company will provide you with COBRA Reimbursements until the earlier of (a) a period of twenty-four (24) months from the date of such termination, (b) the date upon which you and your eligible dependents become covered under similar plans or (c) the date upon which you cease to be eligible for coverage under COBRA. However, if the Company determines in its sole discretion that it cannot pay the COBRA Reimbursements without potentially violating applicable law (including, without limitation, Section 2716 of the Public Health Service Act), the Company will in lieu thereof provide to you COBRA Replacement Payments, commencing on the month following the date of such termination and ending on the earlier of (a) the date upon which you become eligible for group health coverage from a new employer or (b) the date the Company has paid an amount equal to twenty-four (24) COBRA Replacement Payments. For the avoidance of doubt, the COBRA Replacement Payments may be used for any purpose, including, but not limited to, continuation coverage under COBRA, and will be subject to all applicable withholdings.

Notwithstanding anything in this letter to the contrary, your receipt of the Change in Control Vesting Benefits, Equity Vesting Benefits, the Severance Benefits, and the Change in Control Severance Benefits as applicable, will be subject to your signing and not revoking a release of claims substantially in the form of Exhibit B attached hereto (the **"Release**"); provided, that such Release becomes effective and irrevocable no later than sixty (60) days following the date your employment terminates (such 60-day period, the "**Release Period**"). If the Release does not become effective and irrevocable by the expiration of the Release Period, you will forfeit any rights to the Change in Control Vesting Benefits, Equity Vesting Benefits, the Severance Benefits, and the Change in Control Severance Benefits. In no event will severance payments or benefits be paid or provided until the Release becomes effective and irrevocable. Notwithstanding anything to the contrary herein, to the extent required to comply with Section 409A (as defined below), if the Release Period spans two (2) calendar years, payment of any Severance Benefits or Change in Control Severance Benefits and any Change in Control Vesting Benefits or Equity Vesting Benefits (in each case, solely with respect to stock awards other than stock options) shall commence on the first regularly scheduled payroll date that occurs in the second calendar year (and the first installment of the Severance Benefit described in clause (i) of the second paragraph immediately preceding this paragraph shall include all installment payments that would otherwise have been paid prior to such date).

You shall have no duty to mitigate your damages by seeking other employment and, should you actually receive compensation from any such other employment, the Severance Benefits or the Change in Control Severance Benefits, as applicable, shall not be reduced or offset by any other compensation.

Notwithstanding anything to the contrary in this letter, if you are a "specified employee" within the meaning of Section 409A of the Internal Revenue Code (as it has been and may be amended from time to time, the "**Code**") and any regulations and guidance that has been promulgated or may be promulgated from time to time thereunder (collectively, "**Section 409A**") at the time of your "separation from service" (within the meaning of Section 409A), then the severance and any other separation benefits payable to you upon your separation from service, to the extent that the same constitute deferred compensation under Section 409A (the "**Deferred Payments**"),

otherwise due to you on or within the six (6) month period following your separation from service will accrue during such six (6) month period and will become payable in a lump sum payment on the date six (6) months and one (1) day following the date of your termination (such rule, the "**Six Month Delay Rule**"). All subsequent Deferred Payments following the application of the Six Month Delay Rule, if any, will be payable in accordance with the payment schedule applicable to each payment or benefit. Additionally, any Deferred Payments will be paid on, or, in the case of installments, will commence on the first regularly scheduled payroll date of the Company following the date on which the Release becomes irrevocable, or, if later, such time as required by the Six Month Delay Rule. It is the intent of this letter to be exempt from or comply with the requirements of Section 409A so that none of the severance payments or benefits will be subject to the additional tax imposed under Section 409A, and any ambiguities herein will be interpreted consistent with this intent. Each payment and benefit payable under this letter is intended to constitute a separate payment for purposes of Section 1.409A-2(b)(2) of the Treasury Regulations.

Any payments described in this letter or referenced herein which could constitute or result in your receipt of "parachute payments" within the meaning of Code Section 280G are referred to as "**Compensatory Payments**." For purposes of the immediately following paragraphs related to Code Section 280G, unless the Company and you otherwise agree in writing, the determination of your excise tax liability and the amount required to be paid shall continue to be made in writing by an accountant or other professional services firm chosen by the Company and reasonably acceptable to you (an "**Accountant**"). For purposes of its calculations, the Accountant may make reasonable assumptions and approximations concerning applicable taxes and may rely on interpretations of the Code for which there is a "substantial authority" tax reporting position. The Company and you shall furnish to the Accountant such information and documents as the Accountant may reasonably request in order to make its determinations. The Company shall bear all costs the Accountant may reasonably incur in connection with any calculations contemplated hereunder.

If any Compensatory Payment will be subject to the excise taxes under Code Section 4999, then the Compensatory Payments will be payable to you either in full or in such lesser amounts (provided that such reduction shall not exceed $50,000 of the full amount) as would result, after taking into account the applicable federal, state and local income taxes and the excise tax imposed by Code Section 4999, in your receipt on an after-tax basis of the greatest amount of payments and other benefits, by reducing payments by no more than $50,000 in the following order: first a pro rata reduction of (i) cash payments subject to Section 409A as deferred compensation and (ii) cash payments not subject to Section 409A, and second a pro rata cancellation of (i) equity award compensation subject to Section 409A as deferred compensation and (ii) equity award compensation not subject to Section 409A (the "**Best Results Reduction**"). In the event that acceleration of vesting of equity award compensation is to be reduced, such acceleration of vesting shall be cancelled in the reverse order of the date of grant.

In the event that any portion of the Compensatory Payments will be subject to the excise tax imposed by Section 4999 of the Code pursuant to a change in control after applying the Best Results Reduction, you shall receive a payment from the Company equal to the sum of (i) a payment from the Company sufficient to pay such excise tax, and (ii) an additional payment from the Company sufficient to pay the excise tax, employment tax, and federal and state income taxes arising from the payments made by the Company to you pursuant to this sentence (the "**Gross-Up Payment**").

"**Cause**" means the occurrence of any of the following: (i) your engaging in illegal conduct that is materially injurious to the Company or any of its subsidiaries; (ii) your violation of a U.S. federal or state law or regulation or a law or regulation of any other jurisdiction applicable to the Company's business which violation was or is reasonably likely to be materially injurious to the Company or any of its subsidiaries; (iii) your material breach of the terms of the Confidentiality Agreement (as defined below); (iv) your conviction for, or entry of a plea of *nolo contendere* to, a felony involving any act of moral turpitude, dishonesty, fraud against, or the misappropriation of material property belonging to, the Company or any of its subsidiaries; or (v) your gross negligence or willful misconduct in the performance of your duties to the Company or any of its subsidiaries, or continued and willful violations of your obligations to the Company as an employee of the Company or any of its subsidiaries, and your failure to cure such violations within the thirty (30)-day period following written notice from the Board. For any of the stated occurrences to constitute "Cause" hereunder, the Board must find that the stated act or omission occurred, by a resolution duly adopted by the affirmative vote of at least three-quarters of the entire membership of the Board (excluding you if you are a member of the Board), after giving reasonable notice to you and an opportunity for you, together with your counsel, to be heard before the Board.

"**Good Reason**" means your termination of employment with the Company (or any of its subsidiaries) in accordance with the next sentence after the occurrence of one or more of the following events without your prior written consent: (i) a material reduction in your authority, duties, or responsibilities or the assignment to you of any duties materially inconsistent with your position, duties, authority, responsibilities or reporting requirements hereunder; provided, however, that any change that results in you not serving as the Chief Executive Officer of the Company or following a Change in Control, the parent corporation in a group of controlled corporations including the Company or its assets (other than as the result of your voluntary resignation not at the request of the Company or the successor or the parent corporation in a group of controlled corporations including the Company or its assets, as applicable) will be deemed to constitute a material reduction in your authority, duties, and responsibilities; (ii) a change in office location of greater than ten (10) miles from your then current location; (iii) a reduction in your annual salary and/or target Annual Bonus as in effect immediately prior to such reduction; (iv) following an IPO and if you are CEO, the Company's failure to nominate you for election to the Board or, following such nomination, your not being elected as a member of the Board; (v) any material breach by the Company or a subsidiary of the Company of this letter or the terms of any of your Company options or other stock awards; or (vi) the failure by the Company to obtain the assumption of its obligation to perform this letter by a successor. In order for your termination of employment to be for Good Reason, you must not terminate employment with the Company without first providing the Company with written notice of the acts or omissions constituting the grounds for "Good Reason" within 90 days of the initial existence of the grounds for "Good Reason" and a cure period of 30 days following the date of written notice (the "**Cure Period**"), such grounds must not have been cured during the Cure Period, and you must terminate employment within 60 days following the Cure Period.

As a Company employee, you will continue to be expected to abide by the Company's rules and standards.

As an employee of the Company, you will continue to have access to certain confidential information of the Company and you may, during the course of your employment, develop certain information or inventions that will be the property of the Company. To protect the interests of the Company, your acceptance of this letter confirms that the terms of the Company's At-Will Employment, Confidential Information, Invention Assignment and Arbitration Agreement you previously signed with the Company (the "**Confidentiality Agreement**") still apply. In the event of any dispute or claim relating to or arising out of our employment relationship, you and the Company continue to agree that (i) any and all disputes between you and the Company shall be fully and finally resolved by binding arbitration, (ii) you are waiving any and all rights to a jury trial but all court remedies will be available in arbitration, (iii) all disputes shall be resolved by a neutral arbitrator who shall issue a written opinion, (iv) the arbitration shall provide for adequate discovery, and (v) the Company shall pay all the arbitration fees, except an amount equal to the filing fees you would have paid had you filed a complaint in a court of law. In the event that any legal action is brought in good faith at any time to resolve a dispute under or in connection with this letter, the Company shall reimburse you, on a current basis, for all legal fees and expenses, if any, incurred by you in connection with such action. The Company shall make those reimbursement payments to you within thirty (30) days after receiving your statement for such fees and expenses, along with reasonable supporting documentation. In the event, however, that the Company is the prevailing party in the action under circumstances that permit the arbitrator or judge, as applicable, to award attorney's fees to the Company, you shall reimburse the Company for all sums advanced to you pursuant to this paragraph.

To accept the terms and conditions of this letter, please sign and date this letter in the space provided below. A duplicate original is enclosed for your records. This letter, along with any agreements relating to proprietary rights between you and the Company, the Confidentiality Agreement, and the Company equity plans and the equity award agreements that you have been or are in the future granted Company equity awards under set forth the terms of your employment with the Company and supersede any prior representations or agreements including, but not limited to, any representations made during your recruitment, interviews or pre-employment negotiations, whether written or oral. This letter, including, but not limited to, its at-will employment provision, may not be modified or amended except by a written agreement signed by the Company and you that explicitly states the intent of both parties hereto to supplement the terms herein.

We look forward to continue working with you at Allakos Inc.

Sincerely,

ALLAKOS INC.

By: /s/ Dan Janney
Dan Janney, Chair of the Board

Agreed to and accepted:

Signature: /s/ Robert Alexander

Printed Name: Robert Alexander

Date: July 6, 2018

Exhibit A

Notwithstanding anything in the employment letter to which this Exhibit A is attached (the "**Employment Letter**"), nothing shall preclude you from (i) continuing to serve as a member of the board of directors of Allena Pharmaceuticals, Inc., (ii) with the prior written consent of the Board, serving on the board of directors of other for-profit companies that do not compete with the Company, (iii) serving on civic or charitable boards or committees and (iv) managing personal investments, so long as all such activities described in (ii) through (iv) above do not materially interfere with the performance of your duties and responsibilities under the Employment Letter.

Exhibit B

Release of Claims

SEPARATION AGREEMENT AND RELEASE

This Separation Agreement and Release ("Agreement") is made by and between Robert Alexander ("Employee") and Allakos Inc. (the "Company") (collectively referred to as the "Parties" or individually referred to as a "Party").

RECITALS

WHEREAS, Employee was employed by the Company;

WHEREAS, Employee signed an employment letter with the Company on [Insert Date] (the "Employment Letter");

WHEREAS, Employee signed an At-Will Employment, Confidential Information, Invention Assignment, and Arbitration Agreement with the Company on April 25, 2017 (the "Confidentiality Agreement");

WHEREAS, Employee's employment with the Company terminated effective [Insert Date] (the "Termination Date"); and

WHEREAS, the Parties wish to resolve any and all disputes, claims, complaints, grievances, charges, actions, petitions, and demands that the Employee may have against the Company and any of the Releasees as defined below, including, but not limited to, any and all claims arising out of or in any way related to Employee's employment with or separation from the Company.

NOW, THEREFORE, in consideration of the mutual promises made herein, the Company and Employee hereby agree as follows:

COVENANTS

1. Consideration. [For Termination Outside the Post-Change in Control Period: As consideration for the promises contained herein, [the Company agrees to continue to pay Employee's annual salary for twelve (12) months following the Termination Date, and to make a payment to Employee equal to the pro rata portion of Employee's target Annual Bonus opportunity for the year in which the Terminate Date occurred, in each case less applicable tax withholdings. In addition, the Company will [pay Employee a lump-sum payment equal to the premium costs for Employee and Employee's eligible dependents to continue healthcare coverage under the Consolidated Omnibus Budget Reconciliation Act of 1985, as amended ("COBRA"), for a period of twelve (12) months] [reimburse Employee for the premiums necessary to continue healthcare coverage under the Consolidated Omnibus Budget Reconciliation Act of 1985, as amended ("COBRA") for Employee and Employee's eligible dependents until the earliest of: (a) twelve (12) months from the Termination Date, (b) the date upon which Employee and Employee's eligible dependents become covered under similar plans, or (c) the date Employee and Employee's eligible dependents cease to be eligible for coverage under COBRA]]. Employee acknowledges that without this Agreement, Employee is otherwise not entitled to the consideration listed in this paragraph 1.]

[For Termination Within the Post-Change in Control Period: As consideration for the promises contained herein, [the Company agrees to pay Employee an amount equal to twenty-four (24) months of Employee's annual salary, and to make a payment to Employee equal to 200% of Employee's target Annual Bonus opportunity, in each case less applicable tax withholdings. In addition, the Company will [pay Employee a lump-sum payment equal to the premium costs for Employee and Employee's eligible dependents to continue healthcare coverage under the Consolidated Omnibus Budget Reconciliation Act of 1985, as amended ("COBRA"), for a period of twenty-four (24) months] [reimburse Employee for the premiums necessary to continue healthcare coverage under the Consolidated Omnibus Budget Reconciliation Act of 1985, as amended ("COBRA"), for Employee and Employee's eligible dependents until the earliest of: (a) twenty-four (24) months from the Termination Date, (b) the date upon which Employee and Employee's eligible dependents become covered under similar plans, or (c) the date Employee and Employee's eligible dependents cease to be eligible for coverage under COBRA]]. Employee acknowledges that without this Agreement, Employee is otherwise not entitled to the consideration listed in this paragraph 1.]

2. Stock. The Parties agree that for purposes of determining the number of shares of the Company's common stock that Employee is entitled to purchase from the Company, pursuant to the exercise of outstanding options, Employee will be considered to have vested only up to the Termination Date. The parties agree that as of the Termination Date, Employee will have vested in [Insert Number [that also includes the 12 months of acceleration provided pursuant to the "Equity Vesting Benefits" described in the Employment Letter]][1] shares subject to his options and no more. The exercise of Employee's vested options and shares shall continue to be governed by the terms and conditions of the applicable Company equity plans and award agreements (the "Stock Agreements"); provided, however, that, notwithstanding the terms of any document to the contrary, Employee's vested options will be exercisable for a period of twenty-four (24) months following the Termination Date.

3. Benefits. Employee's health insurance benefits shall cease on [Insert Date], subject to Employee's right to continue Employee's health insurance under COBRA. Employee's participation in all benefits and incidents of employment, including, but not limited to, vesting in stock options, and the accrual of bonuses, vacation, and paid time off, ceased as of the Termination Date.

4. Payment of Salary and Receipt of All Benefits. Employee acknowledges and represents that, other than the consideration set forth in this Agreement, the Company has paid or provided all salary, wages, bonuses, accrued vacation/paid time off, premiums, leaves, housing allowances, relocation costs, interest, severance, outplacement costs, fees, reimbursable expenses, commissions, stock, stock options, vesting, and any and all other benefits and compensation due to Employee.

1 The actual accelerated vesting amount, if any, shall be determined based on the circumstances related to termination of employment.

5. Release of Claims.

(a) Employee Release of Claims. Employee agrees that the foregoing consideration represents settlement in full of all outstanding obligations owed to Employee by the Company and its current and former officers, directors, employees, agents, investors, attorneys, shareholders, administrators, affiliates, benefit plans, plan administrators, professional employer organization or co-employer, insurers, trustees, divisions, and subsidiaries, and predecessor and successor corporations and assigns, (collectively, the "Releasees"). Employee, on Employee's own behalf and on behalf of Employee's respective heirs, family members, executors, agents, and assigns, hereby and forever releases the Releasees from, and agrees not to sue concerning, or in any manner to institute, prosecute, or pursue, any claim, complaint, charge, duty, obligation, demand, or cause of action relating to any matters of any kind, whether presently known or unknown, suspected or unsuspected, that Employee may possess against any of the Releasees arising from any omissions, acts, facts, or damages that have occurred up until and including the Effective Date of this Agreement, including, without limitation:

1. any and all claims relating to or arising from. Employee's employment relationship with the Company and the termination of that relationship;

2. any and all claims relating to, or arising from, Employee's right to purchase, or actual purchase of shares of stock of the Company, including, without limitation, any claims for fraud, misrepresentation, breach of fiduciary duty, breach of duty under applicable state corporate law, and securities fraud under any state or federal law;

3. any and all claims for wrongful discharge of employment, termination in violation of public policy, discrimination, harassment, retaliation, breach of contract (both express and implied), breach of covenant of good faith and fair dealing (both express and implied), promissory estoppel, negligent or intentional infliction of emotional distress, fraud, negligent or intentional misrepresentation, negligent or intentional interference with contract or prospective economic advantage, unfair business practices, defamation, libel, slander, negligence, personal injury, assault, battery, invasion of privacy, false imprisonment, conversion, and disability benefits;

4. any and all claims for violation of any federal, state, or municipal statute, including, but not limited to, Title VII of the Civil Rights Act of 1964, the Civil Rights Act of 1991, the Rehabilitation Act of 1973, the Americans with Disabilities Act of 1990, the Equal Pay Act, the Fair Labor Standards Act, the Fair Credit Reporting Act, the Age Discrimination in Employment Act of 1967, the Older Workers Benefit Protection Act, the Employee Retirement Income Security Act of 1974, the Worker Adjustment and Retraining Notification Act, the Family and Medical Leave Act, the Sarbanes-Oxley Act of 2002, Immigration Reform and Control Act, the California Family Rights Act, the California Labor Code, the California Workers' Compensation Act, and the California Fair Employment and Housing Act;

5. any and all claims for violation of the federal or any state constitution;

6. any and all claims arising out of any other laws and regulations relating to employment or employment discrimination;

7. any claim for any loss, cost, damage, or expense arising out of any dispute over the nonwithholding or other tax treatment of any of the proceeds received by Employee as a result of this Agreement; and

8. any and all claims for attorneys' fees and costs.

Employee agrees that the release set forth in this section shall be and remain in effect in all respects as a complete general release as to the matters released. This release does not extend to: (a) any obligations incurred under this Agreement; (b) any vested rights Employee may have under the employee benefit plans, programs, or policies of the Company and its affiliates; or (c) any indemnification rights to which Employee may be entitled under the Company's Articles of Incorporation or Bylaws, by contract, as a matter of law, or otherwise, or under any power that the Company may have to indemnify Employee or hold Employee harmless. This release does not extend to any obligations incurred under this Agreement. This release does not release claims that cannot be released as a matter of law, including any Protected Activity (as defined below). This release does not release claims that cannot be released as a matter of law, including, but not limited to, Employee's right to file a charge with or participate in a charge by the Equal Employment Opportunity Commission, or any other local, state, or federal administrative body or government agency that is authorized to enforce or administer laws related to employment, against the Company (with the understanding that any such filing or participation does not give Employee the right to recover any monetary damages against the Company; Employee's release of claims herein bars Employee from recovering such monetary relief from the Company). Notwithstanding the foregoing, Employee acknowledges that any and all disputed wage claims that are released herein shall be subject to binding arbitration in accordance with this Agreement, except as required by applicable law. Employee represents that he has made no assignment or transfer of any right, claim, complaint, charge, duty, obligation, demand, cause of action, or other matter waived or released by this Section.

(b) Company Release of Claims. The Company hereby and forever releases Employee from any and all claims arising out of or relating to Employee's employment or other relationship with the Company and the conclusion of that employment or other relationship that the Company may possess against Employee arising from any omissions, acts, facts, or damages that have occurred up until and including the Effective Date except as follows: the Company does not release and retains the right to sue for (1) any criminal activity engaged in by Employee, including fraud, embezzlement, assault, or any other violation of a state or federal criminal statute; (2) any breach by the Employee of his obligation to maintain Company confidential information, including any violation of local, state or federal laws relating to the protection of trade secret information; and (3) any breach by the Employee of his fiduciary duties to the Company. The Company is not waiving its rights to enforce the terms of this Agreement.

6. Acknowledgment of Waiver of Claims under ADEA. Employee acknowledges that Employee is waiving and releasing any rights Employee may have under the Age Discrimination in Employment Act of 1967 ("ADEA"), and that this waiver and release is knowing and voluntary. Employee agrees that this waiver and release does not apply to any rights or claims that may arise under the ADEA after the Effective Date of this Agreement. Employee acknowledges that the consideration given for this waiver and release is in addition to anything of value to which Employee

was already entitled. Employee further acknowledges that Employee has been advised by this writing that: (a) Employee should consult with an attorney prior to executing this Agreement; (b) Employee has twenty-one (21) days within which to consider this Agreement; (c) Employee has seven (7) days following Employee's execution of this Agreement to revoke this Agreement; (d) this Agreement shall not be effective until after the revocation period has expired; and (e) nothing in this Agreement prevents or precludes Employee from challenging or seeking a determination in good faith of the validity of this waiver under the ADEA, nor does it impose any condition precedent, penalties, or costs for doing so, unless specifically authorized by federal law. In the event Employee signs this Agreement and returns it to the Company in less than the 21-day period identified above, Employee hereby acknowledges that Employee has freely and voluntarily chosen to waive the time period allotted for considering this Agreement. Employee acknowledges and understands that revocation must be accomplished by a written notification to the person executing this Agreement on the Company's behalf that is received prior to the Effective Date. The Parties agree that changes, whether material or immaterial, do not restart the running of the 21-day period.

7. California Civil Code Section 1542. Each party acknowledges that it has been advised to consult with legal counsel and is familiar with the provisions of California Civil Code Section 1542, a statute that otherwise prohibits the release of unknown claims, which provides as follows:

> A GENERAL RELEASE DOES NOT EXTEND TO CLAIMS WHICH THE CREDITOR DOES NOT KNOW OR SUSPECT TO EXIST IN HIS OR HER FAVOR AT THE TIME OF EXECUTING THE RELEASE, WHICH IF KNOWN BY HIM OR HER MUST HAVE MATERIALLY AFFECTED HIS OR HER SETTLEMENT WITH THE DEBTOR.

Each party, being aware of said code section, agrees to expressly waive any of its respective rights it may have thereunder, as well as under any other statute or common law principles of similar effect.

8. No Pending or Future Lawsuits. Employee represents that Employee has no lawsuits, claims, or actions pending in Employee's name, or on behalf of any other person or entity, against the Company or any of the other Releasees. Employee also represents that Employee does not intend to bring any claims on Employee's own behalf or on behalf of any other person or entity against the Company or any of the other Releasees.

9. Application for Employment. Employee understands and agrees that, as a condition of this Agreement, Employee shall not be entitled to any employment with the Company, and Employee hereby waives any right, or alleged right, of employment or re-employment with the Company. Employee further agrees not to apply for employment with the Company and not otherwise pursue an independent contractor or vendor relationship with the Company.

10. Confidentiality. Subject to paragraph 13 governing Protected Activity, Employee agrees to maintain in complete confidence the existence of this Agreement, the contents and terms of this Agreement, and the consideration for this Agreement (hereinafter collectively referred to as "Separation Information"). Except as required by law, Employee may disclose Separation Information only to Employee's immediate family members, the Court in any proceedings to enforce

the terms of this Agreement, Employee's attorney(s), and Employee's accountant(s) and any professional tax advisor(s) to the extent that they need to know the Separation Information in order to provide advice on tax treatment or to prepare tax returns, and must prevent disclosure of any Separation Information to all other third parties. Employee agrees that Employee will not publicize, directly or indirectly, any Separation Information.

11. Trade Secrets and Confidential Information/Company Property. Employee reaffirms and agrees to observe and abide by the terms of the Confidentiality Agreement, specifically including the provisions therein regarding nondisclosure of the Company's trade secrets and confidential and proprietary information, and nonsolicitation of Company employees. Employee's signature below constitutes Employee's certification under penalty of perjury that Employee has returned all documents and other items provided to Employee by the Company (with the exception of a copy of the Employee Handbook and personnel documents specifically relating to Employee), developed or obtained by Employee in connection with Employee's employment with the Company, or otherwise belonging to the Company.

12. No Cooperation. Subject to paragraph 13 governing Protected Activity, Employee agrees that Employee will not knowingly encourage, counsel, or assist any attorneys or their clients in the presentation or prosecution of any disputes, differences, grievances, claims, charges, or complaints by any third party against any of the Releasees, unless under a subpoena or other court order to do so or as related directly to the ADEA waiver in this Agreement. Employee agrees both to immediately notify the Company upon receipt of any such subpoena or court order, and to furnish, within three (3) business days of its receipt, a copy of such subpoena or other court order. If approached by anyone for counsel or assistance in the presentation or prosecution of any disputes, differences, grievances, claims, charges, or complaints against any of the Releasees, Employee shall state no more than that Employee cannot provide counsel or assistance.

13. Protected Activity Not Prohibited. Employee understands that nothing in this Agreement shall in any way limit or prohibit Employee from engaging in any Protected Activity. For purposes of this Agreement, "Protected Activity" shall mean filing a charge, complaint, or report with, or otherwise communicating, cooperating, or participating in any investigation or proceeding that may be conducted by, any federal, state or local government agency or commission, including the Securities and Exchange Commission, the Equal Employment Opportunity Commission, the Occupational Safety and Health Administration, and the National Labor Relations Board ("Government Agencies"). Employee understands that in connection with such Protected Activity, Employee is permitted to disclose documents or other information as permitted by law, and without giving notice to, or receiving authorization from, the Company. Notwithstanding the foregoing, Employee agrees to take all reasonable precautions to prevent any unauthorized use or disclosure of any information that may constitute Company confidential information under the Confidentiality Agreement to any parties other than the Government Agencies. Employee further understands that "Protected Activity" does not include the disclosure of any Company attorney-client privileged communications. Any language in the Confidentiality Agreement regarding Employee's right to engage in Protected Activity that conflicts with, or is contrary to, this paragraph is superseded by this Agreement. In addition, pursuant to the Defend Trade Secrets Act of 2016, Employee is notified that an individual will not be held criminally or civilly liable under any federal or state trade secret law for the disclosure of a trade secret that (i) is made in confidence to a federal, state, or local

government official (directly or indirectly) or to an attorney *solely* for the purpose of reporting or investigating a suspected violation of law, or (ii) is made in a complaint or other document filed in a lawsuit or other proceeding, if (and only if) such filing is made under seal. In addition, an individual who files a lawsuit for retaliation by an employer for reporting a suspected violation of law may disclose the trade secret to the individual's attorney and use the trade secret information in the court proceeding, if the individual files any document containing the trade secret under seal and does not disclose the trade secret, except pursuant to court order.

14. Nondisparagement. Employee agrees to refrain from any disparagement, defamation, libel, or slander of any of the Releasees, and agrees to refrain from any tortious interference with the contracts and relationships of any of the Releasees. The Company agrees to refrain from any disparagement, defamation, libel, or slander of Employee. Employee understands that the Company's obligations under this paragraph extend only to the Company's executive officers and members of its Board of Directors and only for so long as such individuals are actively providing services to the Company. Employee shall direct any inquiries by potential future employers to the Company's human resources department.

15. Breach. In addition to the rights provided in the "Attorneys' Fees" section below, Employee acknowledges and agrees that any material breach of any material provision of this Agreement, unless such breach constitutes a legal action by Employee challenging or seeking a determination in good faith of the validity of the waiver herein under the ADEA, or of any material provision of the Confidentiality Agreement shall entitle the Company immediately to cease providing the consideration provided to Employee under this Agreement and to seek injunctive relief, except as provided by law.

16. No Admission of Liability. Employee understands and acknowledges that this Agreement constitutes a compromise and settlement of any and all actual or potential disputed claims by Employee. No action taken by the Company hereto, either previously or in connection with this Agreement, shall be deemed or construed to be (a) an admission of the truth or falsity of any actual or potential claims or (b) an acknowledgment or admission by the Company of any fault or liability whatsoever to Employee or to any third party.

17. Costs. The Parties shall each bear their own costs, attorneys' fees, and other fees incurred in connection with the preparation of this Agreement.

18. ARBITRATION. THE PARTIES AGREE THAT ANY AND ALL DISPUTES ARISING OUT OF THE TERMS OF THIS AGREEMENT, THEIR INTERPRETATION, EMPLOYEE'S EMPLOYMENT WITH THE COMPANY OR THE TERMS THEREOF, OR ANY OF THE MATTERS HEREIN RELEASED, SHALL BE SUBJECT TO ARBITRATION IN SANTA CLARA COUNTY, BEFORE JUDICIAL ARBITRATION & MEDIATION SERVICES ("JAMS"), PURSUANT TO ITS EMPLOYMENT ARBITRATION RULES & PROCEDURES ("JAMS RULES"). THE ARBITRATOR MAY GRANT INJUNCTIONS AND OTHER RELIEF IN SUCH DISPUTES. THE ARBITRATOR SHALL ADMINISTER AND CONDUCT ANY ARBITRATION IN ACCORDANCE WITH CALIFORNIA LAW, INCLUDING THE CALIFORNIA CODE OF CIVIL PROCEDURE, AND THE ARBITRATOR SHALL APPLY SUBSTANTIVE AND PROCEDURAL CALIFORNIA LAW TO ANY DISPUTE OR CLAIM,

WITHOUT REFERENCE TO ANY CONFLICT-OF-LAW PROVISIONS OF ANY JURISDICTION. TO THE EXTENT THAT THE JAMS RULES CONFLICT WITH CALIFORNIA LAW, CALIFORNIA LAW SHALL TAKE PRECEDENCE. THE DECISION OF THE ARBITRATOR SHALL BE FINAL, CONCLUSIVE, AND BINDING ON THE PARTIES TO THE ARBITRATION. THE PARTIES AGREE THAT THE PREVAILING PARTY IN ANY ARBITRATION SHALL BE ENTITLED TO INJUNCTIVE RELIEF IN ANY COURT OF COMPETENT JURISDICTION TO ENFORCE THE ARBITRATION AWARD. THE PARTIES TO THE ARBITRATION SHALL EACH PAY AN EQUAL SHARE OF THE COSTS AND EXPENSES OF SUCH ARBITRATION, AND EACH PARTY SHALL SEPARATELY PAY FOR ITS RESPECTIVE COUNSEL FEES AND EXPENSES; PROVIDED, HOWEVER, THAT THE ARBITRATOR SHALL AWARD ATTORNEYS' FEES AND COSTS TO THE PREVAILING PARTY, EXCEPT AS PROHIBITED BY LAW. THE PARTIES HEREBY AGREE TO WAIVE THEIR RIGHT TO HAVE ANY DISPUTE BETWEEN THEM RESOLVED IN A COURT OF LAW BY A JUDGE OR JURY. NOTWITHSTANDING THE FOREGOING, THIS SECTION WILL NOT PREVENT EITHER PARTY FROM SEEKING INJUNCTIVE RELIEF (OR ANY OTHER PROVISIONAL REMEDY) FROM ANY COURT HAVING JURISDICTION OVER THE PARTIES AND THE SUBJECT MATTER OF THEIR DISPUTE RELATING TO THIS AGREEMENT AND THE AGREEMENTS INCORPORATED HEREIN BY REFERENCE. SHOULD ANY PART OF THE ARBITRATION AGREEMENT CONTAINED IN THIS PARAGRAPH CONFLICT WITH ANY OTHER ARBITRATION AGREEMENT BETWEEN THE PARTIES, THE PARTIES AGREE THAT THIS ARBITRATION AGREEMENT SHALL GOVERN.

19. Tax Consequences. The Company makes no representations or warranties with respect to the tax consequences of the payments and any other consideration provided to Employee or made on Employee's behalf under the terms of this Agreement. Employee agrees and understands that Employee is responsible for payment, if any, of local, state, and/or federal taxes on the payments and any other consideration provided hereunder by the Company and any penalties or assessments thereon. Employee further agrees to indemnify and hold the Releasees harmless from any claims, demands, deficiencies, penalties, interest, assessments, executions, judgments, or recoveries by any government agency against the Company for any amounts claimed due on account of (a) Employee's failure to pay or delayed payment of federal or state taxes, or (b) damages sustained by the Company by reason of any such claims, including attorneys' fees and costs.

20. Authority. The Company represents and warrants that the undersigned has the authority to act on behalf of the Company and to bind the Company and all who may claim through it to the terms and conditions of this Agreement. Employee represents and warrants that Employee has the capacity to act on Employee's own behalf and on behalf of all who might claim through Employee to bind them to the terms and conditions of this Agreement. Each Party warrants and represents that there are no liens or claims of lien or assignments in law or equity or otherwise of or against any of the claims or causes of action released herein.

21. Severability. In the event that any provision or any portion of any provision hereof or any surviving agreement made a part hereof becomes or is declared by a court of competent jurisdiction or arbitrator to be illegal, unenforceable, or void, this Agreement shall continue in full force and effect without said provision or portion of provision.

22. Attorneys' Fees. Except with regard to a legal action challenging or seeking a determination in good faith of the validity of the waiver herein under the ADEA or as otherwise set forth in the Employment Letter, in the event that either Party brings an action to enforce or effect its rights under this Agreement, the prevailing Party shall be entitled to recover its costs and expenses, including the costs of mediation, arbitration, litigation, court fees, and reasonable attorneys' fees incurred in connection with such an action.

23. Entire Agreement. This Agreement represents the entire agreement and understanding between the Company and Employee concerning the subject matter of this Agreement and Employee's employment with and separation from the Company and the events leading thereto and associated therewith, and supersedes and replaces any and all prior agreements and understandings concerning the subject matter of this Agreement and Employee's relationship with the Company, with the exception of the Confidentiality Agreement, the Stock Agreements, and any indemnification agreement between you and the Company, except as otherwise modified or superseded herein.

24. No Oral Modification. This Agreement may only be amended in a writing signed by Employee and the Company's Chairman of the Board.

25. Governing Law. This Agreement shall be governed by the laws of the State of California, without regard for choice-of-law provisions.

26. Effective Date. Employee understands that this Agreement shall be null and void if not executed by Employee within twenty one (21) days. Each Party has seven (7) days after that Party signs this Agreement to revoke it. This Agreement will become effective on the eighth (8th) day after Employee signed this Agreement, so long as it has been signed by the Parties and has not been revoked by either Party before that date (the "Effective Date").

27. Counterparts. This Agreement may be executed in counterparts and each counterpart shall be deemed an original and all of which counterparts taken together shall have the same force and effect as an original and shall constitute an effective, binding agreement on the part of each of the undersigned. The counterparts of this Agreement may be executed and delivered by facsimile, photo, email PDF, or other electronic transmission or signature.

28. Voluntary Execution of Agreement. Employee understands and agrees that Employee executed this Agreement voluntarily, without any duress or undue influence on the part or behalf of the Company or any third party, with the full intent of releasing all of Employee's claims against the Company and any of the other Releasees. Employee acknowledges that:

(a) Employee has read this Agreement;

(b) Employee has been represented in the preparation, negotiation, and execution of this Agreement by legal counsel of Employee's own choice or has elected not to retain legal counsel;

(c) Employee understands the terms and consequences of this Agreement and of the releases it contains;

(d) Employee is fully aware of the legal and binding effect of this Agreement; and

(e) Employee has not relied upon any representations or statements made by the Company that are not specifically set forth in this Agreement.

[THE REMAINDER OF THIS PAGE IS INTENTIONALLY LEFT BLANK;
SIGNATURE PAGE FOLLOWS]

IN WITNESS WHEREOF, the Parties have executed this Agreement on the respective dates set forth below.

ROBERT ALEXANDER, an individual

Dated: _____, [Year]

_____
Robert Alexander

ALLAKOS INC.

Dated: _____, [Year]

_____
[Name]
[Title]

Exhibit 10.6

ALLAKOS INC.

July 6, 2018

Adam Tomasi
c/o Allakos Inc.

Dear Adam:

This letter supersedes the April 20, 2017, employment offer letter entered into by Allakos Inc. (the "**Company**") and you. You will continue in your position with the Company as its Chief Operating Officer and Chief Financial Officer ("**COO/CFO**") reporting to the Company's Chief Executive Officer (the "**CEO**"). As COO/CFO, you will continue to have such duties and responsibilities commensurate with those customarily associated with that position, including such duties and responsibilities as reasonably assigned by the CEO. Unless otherwise previously disclosed to the Company's Board of Directors (the "**Board**") in writing or subsequently approved by the Board, you will continue to devote your full business time and attention to the performance of your duties hereunder and shall not engage in any other business, profession or occupation for compensation or otherwise which would conflict or interfere with the rendition of such services, either directly or indirectly, except as otherwise set forth in Exhibit A attached hereto. The principal location of your employment shall continue to be at the Company's principal executive offices located in San Carlos, California, although you understand and continue to agree that you may be required to travel from time to time for business reasons.

You will continue to receive an annual salary of $400,000, which will be paid, less applicable withholdings, semi-monthly in accordance with the Company's normal payroll procedures. You shall continue to be entitled to such increases (but not decreases) in your annual salary, if any, as may be determined from time to time in the sole discretion of the Board. In addition, you will continue to be eligible for an annual bonus targeted at 40% of your annual salary (the "**Annual Bonus**"). The actual Annual Bonus will continue to be based on the achievement of certain performance objectives to be established by mutual agreement between you and the Board. Any actual Annual Bonus earned by you will continue to be paid in accordance with the Company's normal payroll procedures, but no later than March 15 of the calendar year after the calendar year in which any such actual Annual Bonus is earned.

As a Company employee, you will also continue to be eligible to participate in the Company's employee benefit and perquisite plans and programs, in accordance with the terms of such plans and programs, as amended by the Company from time to time, subject to any restrictions imposed by applicable law, on a basis no less favorable than such benefits and perquisites are provided by the Company from time to time to the Company's other senior executives. Please note that the Company continues to reserve the right to cancel or change the benefit and perquisite plans and programs it offers to its employees at any time. You will also continue to be entitled to four (4) weeks' paid vacation.

You shall continue to be entitled to receive prompt reimbursement for all travel and business expenses reasonably incurred and accounted for by you (in accordance with the policies and procedures established from time to time by the Company) in performing services hereunder.

In addition, your existing Company stock options and any future Company stock options granted to you by the Company shall continue to be exercisable for a period of twenty four months (or such longer period as provided in the Company equity plan under which the applicable option was granted) after the earlier of: your termination due to your death or Disability (as defined in applicable Company equity plan) or your Qualifying Termination (as defined below), subject to earlier termination under the terms of the applicable Company equity plan; provided, however, that no Company option of yours shall be exercisable after its expiration date.

Notwithstanding the terms of any document to the contrary, in the event that a Change in Control (as defined below) occurs, one hundred percent (100%) of the total number of shares subject to your Company options or other stock awards shall immediately vest as of the date immediately preceding the Change in Control, subject to your continued employment through such date. Notwithstanding anything herein to the contrary, in the event that, during the period commencing three (3) months prior to a Change in Control and ending upon a Change in Control (the "**Pre-Change in Control Period**"), your employment is terminated (i) by the Company without Cause (as defined below), (ii) due to your death or Disability, or (iii) due to your resignation of your employment with the Company for Good Reason (as defined below), then one hundred percent (100%) of the total number of shares subject to your Company options or other stock awards that have not vested will immediately vest and become exercisable in accordance with this letter (the "**Change in Control Vesting Benefits**"); provided, however, that the Company continues to agree that all future stock awards granted to you shall contain distribution terms and other terms and conditions so that such other stock awards shall be exempt from or comply with the requirements of Section 409A (as defined below) and that none of such other stock awards will be subject to the additional tax imposed under Section 409A. Further, notwithstanding anything herein to the contrary, in the event that your employment is terminated by the Company without Cause (and other than due to your death or Disability) or you resign your employment with the Company for Good Reason (each, a "**Qualifying Termination**"), in either case, outside the Pre-Change in Control Period, then the total number of shares subject to your Company options or other stock awards that have not vested but would have vested if you had remained employed on the first anniversary of the date of your termination will immediately vest and become exercisable in accordance with this letter (such accelerated vesting, the "**Equity Vesting Benefits**").

As used in this letter, the term "Change in Control" means (i) a sale or exclusive license of all or substantially all of the Company's assets, (ii) a merger, consolidation or other capital reorganization or business combination transaction of the Company with or into another corporation, limited liability company or other entity, or (iii) the consummation of a transaction, or series of related transactions, in which any "person" (as such term is used in Sections 13(d) and 14(d) of the Securities Exchange Act of 1934,as amended) becomes the "beneficial owner" (as defined in Rule 13d-3 of the Securities Exchange Act of 1934, as amended), directly or indirectly, of more than fifty percent (50%) of the Company's then outstanding voting securities. Notwithstanding the foregoing, and with respect to Company restricted stock units and other Company full value awards only, a transaction will not be deemed a Change in Control unless the transaction qualifies as a change in control event within the meaning of Section 409A (as defined below).

In the event that you remain employed by the Company on the date that a Change in Control occurs, upon the request of the acquiring or surviving corporation, you continue to agree that you will remain employed with such buying or acquiring corporation for a period of ninety (90) days following the consummation of such Change in Control.

The Company continues to agree that other than any right of first refusal set forth in any documentation applicable to your Company options or other stock awards, the shares of Company Common Stock acquired by you as a result of the exercise, vesting, or settlement of your Company options and other stock awards shall not be subject to repurchase rights in favor of any person or entity.

The Company, and its successors and/or assigns, shall continue to indemnify and defend you to the fullest extent provided by the By-Laws and Certificate of Incorporation of the Company with respect to any claims that may be brought against you arising out of any action taken or not taken in your capacity as an officer or director of any the Company or any of its affiliates. In addition, you will continue to be covered as an insured in respect of your activities as an officer and director of the Company or any of its affiliates by the Company's Directors and Officers liability policy or other comparable policies obtained by any affiliate of the Company or any of the Company's or such affiliates' successors, to the fullest extent provided by such policies. The Company's indemnification obligations under this paragraph shall continue to remain in effect following your termination of employment with the Company.

The Company looks forward to continuing its beneficial and productive relationship with you. Nevertheless, you should continue to be aware that your employment with the Company is for no specified period and constitutes at-will employment. As a result, you continue to be free to resign at any time, for any reason or for no reason. Similarly, the Company continues to be free to conclude its employment relationship with you at any time, with or without Cause, and with or without notice. We continue to request that, in the event of a resignation without Good Reason, you give the Company at least two weeks' notice.

If your employment with the Company is terminated for any reason, you will continue to be paid any accrued but unpaid annual salary through the date of termination, any accrued but unpaid vacation pay and any earned but unpaid Annual Bonus for the year preceding the year in which the termination of your employment occurs. In addition, if you experience a Qualifying Termination outside of the Post-Change in Control Period (as defined below), then you will continue to receive the following severance benefits (the "**Severance Benefits**"):

(i) the Company will continue to pay your then-current annual salary, less applicable withholdings, for twelve (12) months from the date of such termination, which will be paid in accordance with the Company's regular payroll procedures, with the first installment being paid on the first regularly scheduled payroll date of the Company following the date on which the Release (as defined below) becomes irrevocable (subject to the paragraph below regarding Section 409A);

(ii) the Company will pay you an amount equal to (a) your target Annual Bonus opportunity *multiplied by* (b) the quotient of (x) the number of days you were employed by the Company during the year in which such termination occurs *divided by* (y) 365 days, which amount will be paid in a single lump sum on the first regularly scheduled payroll date of the Company following the date on which the Release becomes irrevocable (subject to the paragraph below regarding Section 409A); and

(iii) if you elect continuation coverage pursuant to the Consolidated Omnibus Budget Reconciliation Act of 1985, as amended ("**COBRA**"),within the time period prescribed pursuant to COBRA for you and your eligible dependents, the Company will reimburse you for the premiums necessary to continue group health insurance benefits under COBRA for you and your eligible dependents (such reimbursements, "**COBRA Reimbursements**") until the earlier of (a) a period of twelve (12) months from the date of such termination, (b) the date upon which you and your eligible dependents become covered under similar plans or (c) the date upon which you cease to be eligible for coverage under COBRA. However, if the Company determines in its sole discretion that it cannot pay the COBRA Reimbursements without potentially violating applicable law (including, without limitation, Section 2716 of the Public Health Service Act), the Company will in lieu thereof provide to you a taxable monthly payment in an amount equal to the monthly COBRA premium that you would be required to pay to continue your group health coverage in effect on the date of such termination, which payments will be made regardless of whether you elect COBRA continuation coverage (each such payment, a "**COBRA Replacement Payment**") and will commence on the month following the date of such termination and will end on the earlier of (a) the date upon which you become eligible for group health coverage from a new employer or (b) the date the Company has paid an amount equal to twelve (12) COBRA Replacement Payments. For the avoidance of doubt, the COBRA Replacement Payments may be used for any purpose, including, but not limited to, continuation coverage under COBRA, and will be subject to all applicable withholdings.

In the event that, on or within twenty-four (24) months after a Change in Control (such period, the "**Post-Change in Control Period**"), you have a Qualifying Termination, then you will receive the following severance benefits (the "**Change in Control Severance Benefits**"):

(i) the Company will pay you an amount equal to twenty-four (24) months of your then-current annual salary, less applicable withholdings, which amount will be paid in a single lump sum on the first regularly scheduled payroll date of the Company following the date on which the Release becomes irrevocable (subject to the paragraph below regarding Section 409A);

(ii) the Company will pay you an amount equal to 200% of your target Annual Bonus opportunity, which amount will be paid in a single lump sum on the first regularly scheduled payroll date of the Company following the date on which the Release becomes irrevocable (subject to the paragraph below regarding Section 409A); and

(iii) if you elect continuation coverage pursuant to COBRA within the time period prescribed pursuant to COBRA for you and your eligible dependents, the Company will provide you with COBRA Reimbursements until the earlier of (a) a period of twenty-four (24) months from the date of such termination, (b) the date upon which you and your eligible dependents become covered under similar plans or (c) the date upon which you cease to be eligible for coverage under COBRA.

However, if the Company determines in its sole discretion that it cannot pay the COBRA Reimbursements without potentially violating applicable law (including, without limitation, Section 2716 of the Public Health Service Act), the Company will in lieu thereof provide to you COBRA Replacement Payments, commencing on the month following the date of such termination and ending on the earlier of (a) the date upon which you become eligible for group health coverage from a new employer or (b) the date the Company has paid an amount equal to twenty-four (24) COBRA Replacement Payments. For the avoidance of doubt, the COBRA Replacement Payments may be used for any purpose, including, but not limited to, continuation coverage under COBRA, and will be subject to all applicable withholdings.

Notwithstanding anything in this letter to the contrary, your receipt of the Change in Control Vesting Benefits, Equity Vesting Benefits, the Severance Benefits, and the Change in Control Severance Benefits as applicable, will be subject to your signing and not revoking a release of claims substantially in the form of Exhibit B attached hereto (the **"Release**"); provided, that such Release becomes effective and irrevocable no later than sixty (60) days following the date your employment terminates (such 60-day period, the "**Release Period**"). If the Release does not become effective and irrevocable by the expiration of the Release Period, you will forfeit any rights to the Change in Control Vesting Benefits, Equity Vesting Benefits, the Severance Benefits, and the Change in Control Severance Benefits. In no event will severance payments or benefits be paid or provided until the Release becomes effective and irrevocable. Notwithstanding anything to the contrary herein, to the extent required to comply with Section 409A (as defined below), if the Release Period spans two (2) calendar years, payment of any Severance Benefits or Change in Control Severance Benefits and any Change in Control Vesting Benefits or Equity Vesting Benefits (in each case, solely with respect to stock awards other than stock options) shall commence on the first regularly scheduled payroll date that occurs in the second calendar year (and the first installment of the Severance Benefit described in clause (i) of the second paragraph immediately preceding this paragraph shall include all installment payments that would otherwise have been paid prior to such date).

You shall have no duty to mitigate your damages by seeking other employment and, should you actually receive compensation from any such other employment, the Severance Benefits or the Change in Control Severance Benefits, as applicable, shall not be reduced or offset by any other compensation.

Notwithstanding anything to the contrary in this letter, if you are a "specified employee" within the meaning of Section 409A of the Internal Revenue Code (as it has been and may be amended from time to time, the "**Code**") and any regulations and guidance that has been promulgated or may be promulgated from time to time thereunder (collectively, "**Section 409A**") at the time of your "separation from service" (within the meaning of Section 409A), then the severance and any other separation benefits payable to you upon your separation from service, to the extent that the same constitute deferred compensation under Section 409A (the "**Deferred Payments**"), otherwise due to you on or within the six (6) month period following your separation from service will accrue during such six (6) month period and will become payable in a lump sum payment on the date six (6) months and one (1) day following the date of your termination (such rule, the "**Six Month Delay Rule**"). All subsequent Deferred Payments following the application of the Six Month Delay Rule, if any, will be payable in accordance with the payment schedule applicable to

each payment or benefit. Additionally, any Deferred Payments will be paid on, or, in the case of installments, will commence on the first regularly scheduled payroll date of the Company following the date on which the Release becomes irrevocable, or, if later, such time as required by the Six Month Delay Rule. It is the intent of this letter to be exempt from or comply with the requirements of Section 409A so that none of the severance payments or benefits will be subject to the additional tax imposed under Section 409A, and any ambiguities herein will be interpreted consistent with this intent. Each payment and benefit payable under this letter is intended to constitute a separate payment for purposes of Section 1.409A-2(b)(2) of the Treasury Regulations.

Any payments described in this letter or referenced herein which could constitute or result in your receipt of "parachute payments" within the meaning of Code Section 280G are referred to as "**Compensatory Payments**." For purposes of the immediately following paragraphs related to Code Section 280G, unless the Company and you otherwise agree in writing, the determination of your excise tax liability and the amount required to be paid shall continue to be made in writing by an accountant or other professional services firm chosen by the Company and reasonably acceptable to you (an "**Accountant**"). For purposes of its calculations, the Accountant may make reasonable assumptions and approximations concerning applicable taxes and may rely on interpretations of the Code for which there is a "substantial authority" tax reporting position. The Company and you shall furnish to the Accountant such information and documents as the Accountant may reasonably request in order to make its determinations. The Company shall bear all costs the Accountant may reasonably incur in connection with any calculations contemplated hereunder.

If any Compensatory Payment will be subject to the excise taxes under Code Section 4999, then the Compensatory Payments will be payable to you either in full or in such lesser amounts (provided that such reduction shall not exceed $50,000 of the full amount) as would result, after taking into account the applicable federal, state and local income taxes and the excise tax imposed by Code Section 4999, in your receipt on an after-tax basis of the greatest amount of payments and other benefits, by reducing payments by no more than $50,000 in the following order: first a pro rata reduction of (i) cash payments subject to Section 409A as deferred compensation and (ii) cash payments not subject to Section 409A, and second a pro rata cancellation of (i) equity award compensation subject to Section 409A as deferred compensation and (ii) equity award compensation not subject to Section 409A (the "**Best Results Reduction**"). In the event that acceleration of vesting of equity award compensation is to be reduced, such acceleration of vesting shall be cancelled in the reverse order of the date of grant.

In the event that any portion of the Compensatory Payments will be subject to the excise tax imposed by Section 4999 of the Code pursuant to a change in control after applying the Best Results Reduction, you shall receive a payment from the Company equal to the sum of (i) a payment from the Company sufficient to pay such excise tax, and (ii) an additional payment from the Company sufficient to pay the excise tax, employment tax, and federal and state income taxes arising from the payments made by the Company to you pursuant to this sentence (the "**Gross-Up Payment**").

"**Cause**" means the occurrence of any of the following: (i) your engaging in illegal conduct that is materially injurious to the Company or any of its subsidiaries; (ii) your violation of a U.S. federal or state law or regulation or a law or regulation of any other jurisdiction applicable to the Company's business which violation was or is reasonably likely to be materially injurious to the

Company or any of its subsidiaries; (iii) your material breach of the terms of the Confidentiality Agreement (as defined below); (iv) your conviction for, or entry of a plea of *nolo contendere* to, a felony involving any act of moral turpitude, dishonesty, fraud against, or the misappropriation of material property belonging to, the Company or any of its subsidiaries; or (v) your gross negligence or willful misconduct in the performance of your duties to the Company or any of its subsidiaries, or continued and willful violations of your obligations to the Company as an employee of the Company or any of its subsidiaries, and your failure to cure such violations within the thirty (30)-day period following written notice from the Board. For any of the stated occurrences to constitute "Cause" hereunder, the Board must find that the stated act or omission occurred, by a resolution duly adopted by the affirmative vote of at least three-quarters of the entire membership of the Board (excluding you if you are a member of the Board), after giving reasonable notice to you and an opportunity for you, together with your counsel, to be heard before the Board.

"**Good Reason**" means your termination of employment with the Company (or any of its subsidiaries) in accordance with the next sentence after the occurrence of one or more of the following events without your prior written consent: (i) a material reduction in your authority, duties, or responsibilities or the assignment to you of any duties materially inconsistent with your position, duties, authority, responsibilities or reporting requirements hereunder; provided, however, that any change that results in you not serving as the COO/CFO of the Company or following a Change in Control, the parent corporation in a group of controlled corporations including the Company or its assets (other than as the result of your voluntary resignation not at the request of the Company or the successor or the parent corporation in a group of controlled corporations including the Company or its assets, as applicable) will be deemed to constitute a material reduction in your authority, duties, and responsibilities; (ii) a change in office location of greater than ten (10) miles from your then current location; (iii) a reduction in your annual salary and/or target Annual Bonus as in effect immediately prior to such reduction; (iv) any material breach by the Company or a subsidiary of the Company of this letter or the terms of any of your Company options or other stock awards; or (v) the failure by the Company to obtain the assumption of its obligation to perform this letter by a successor. In order for your termination of employment to be for Good Reason, you must not terminate employment with the Company without first providing the Company with written notice of the acts or omissions constituting the grounds for "Good Reason" within 90 days of the initial existence of the grounds for "Good Reason" and a cure period of 30 days following the date of written notice (the "**Cure Period**"), such grounds must not have been cured during the Cure Period, and you must terminate employment within 60 days following the Cure Period.

As a Company employee, you will continue to be expected to abide by the Company's rules and standards.

As an employee of the Company, you will continue to have access to certain confidential information of the Company and you may, during the course of your employment, develop certain information or inventions that will be the property of the Company. To protect the interests of the Company, your acceptance of this letter confirms that the terms of the Company's At-Will Employment, Confidential Information, Invention Assignment and Arbitration Agreement you previously signed with the Company (the "**Confidentiality Agreement**") still apply. In the event of any dispute or claim relating to or arising out of our employment relationship, you and the Company continue to agree that (i) any and all disputes between you and the Company shall be fully and

finally resolved by binding arbitration, (ii) you are waiving any and all rights to a jury trial but all court remedies will be available in arbitration, (iii) all disputes shall be resolved by a neutral arbitrator who shall issue a written opinion, (iv) the arbitration shall provide for adequate discovery, and (v) the Company shall pay all the arbitration fees, except an amount equal to the filing fees you would have paid had you filed a complaint in a court of law. In the event that any legal action is brought in good faith at any time to resolve a dispute under or in connection with this letter, the Company shall reimburse you, on a current basis, for all legal fees and expenses, if any, incurred by you in connection with such action. The Company shall make those reimbursement payments to you within thirty (30) days after receiving your statement for such fees and expenses, along with reasonable supporting documentation. In the event, however, that the Company is the prevailing party in the action under circumstances that permit the arbitrator or judge, as applicable, to award attorney's fees to the Company, you shall reimburse the Company for all sums advanced to you pursuant to this paragraph.

To accept the terms and conditions of this letter, please sign and date this letter in the space provided below. A duplicate original is enclosed for your records. This letter, along with any agreements relating to proprietary rights between you and the Company, the Confidentiality Agreement, and the Company equity plans and the equity award agreements that you have been or are in the future granted Company equity awards under set forth the terms of your employment with the Company and supersede any prior representations or agreements including, but not limited to, any representations made during your recruitment, interviews or pre-employment negotiations, whether written or oral. This letter, including, but not limited to, its at-will employment provision, may not be modified or amended except by a written agreement signed by the Company and you that explicitly states the intent of both parties hereto to supplement the terms herein.

We look forward to continue working with you at Allakos Inc.

Sincerely,

ALLAKOS INC.

By: /s/ Robert Alexander
Robert Alexander

Agreed to and accepted:

Signature: /s/ Adam Tomasi

Printed Name: Adam Tomasi

Date: July 6, 2018

Exhibit A

Notwithstanding anything in the employment letter to which this Exhibit A is attached (the "**Employment Letter**"), nothing shall preclude you from (i) continuing to serve as a consultant to ZS Pharma, Inc. or as a member of the board of directors of Attune Pharmaceuticals LLC, (ii) with the prior written consent of the Board, serving on the board of directors of other for-profit companies that do not compete with the Company, (iii) serving on civic or charitable boards or committees and (iv) managing personal investments, so long as all such activities described in (i) through (iv) above do not materially interfere with the performance of your duties and responsibilities under the Employment Letter.

Exhibit B

Release of Claims

SEPARATION AGREEMENT AND RELEASE

This Separation Agreement and Release ("Agreement") is made by and between Adam Tomasi ("Employee") and Allakos Inc. (the "Company") (collectively referred to as the "Parties" or individually referred to as a "Party").

RECITALS

WHEREAS, Employee was employed by the Company;

WHEREAS, Employee signed an employment letter with the Company on [Insert Date] (the "Employment Letter");

WHEREAS, Employee signed an At-Will Employment, Confidential Information, Invention Assignment, and Arbitration Agreement with the Company on [ ] (the "Confidentiality Agreement");

WHEREAS, Employee's employment with the Company terminated effective [Insert Date] (the "Termination Date"); and

WHEREAS, the Parties wish to resolve any and all disputes, claims, complaints, grievances, charges, actions, petitions, and demands that the Employee may have against the Company and any of the Releasees as defined below, including, but not limited to, any and all claims arising out of or in any way related to Employee's employment with or separation from the Company.

NOW, THEREFORE, in consideration of the mutual promises made herein, the Company and Employee hereby agree as follows:

COVENANTS

1. Consideration. [For Termination Outside the Post-Change in Control Period: As consideration for the promises contained herein, [the Company agrees to continue to pay Employee's annual salary for twelve (12) months following the Termination Date, and to make a payment to Employee equal to the pro rata portion of Employee's target Annual Bonus opportunity for the year in which the Terminate Date occurred, in each case less applicable tax withholdings. In addition, the Company will [pay Employee a lump-sum payment equal to the premium costs for Employee and Employee's eligible dependents to continue healthcare coverage under the Consolidated Omnibus Budget Reconciliation Act of 1985, as amended ("COBRA"), for a period of twelve (12) months] [reimburse Employee for the premiums necessary to continue healthcare coverage under the Consolidated Omnibus Budget Reconciliation Act of 1985, as amended ("COBRA") for Employee and Employee's eligible dependents until the earliest of: (a) twelve (12) months from the Termination Date, (b) the date upon which Employee and Employee's eligible dependents become covered under similar plans, or (c) the date Employee and Employee's eligible dependents cease to be eligible for coverage under COBRA]]. Employee acknowledges that without this Agreement, Employee is otherwise not entitled to the consideration listed in this paragraph 1.]

[For Termination Within the Post-Change in Control Period: As consideration for the promises contained herein, [the Company agrees to pay Employee an amount equal to twenty-four (24) months of Employee's annual salary, and to make a payment to Employee equal to 200% of Employee's target Annual Bonus opportunity, in each case less applicable tax withholdings. In addition, the Company will [pay Employee a lump-sum payment equal to the premium costs for Employee and Employee's eligible dependents to continue healthcare coverage under the Consolidated Omnibus Budget Reconciliation Act of 1985, as amended ("COBRA"), for a period of twenty-four (24) months] [reimburse Employee for the premiums necessary to continue healthcare coverage under the Consolidated Omnibus Budget Reconciliation Act of 1985, as amended ("COBRA"), for Employee and Employee's eligible dependents until the earliest of: (a) twenty-four (24) months from the Termination Date, (b) the date upon which Employee and Employee's eligible dependents become covered under similar plans, or (c) the date Employee and Employee's eligible dependents cease to be eligible for coverage under COBRA]]. Employee acknowledges that without this Agreement, Employee is otherwise not entitled to the consideration listed in this paragraph 1.]

2. Stock. The Parties agree that for purposes of determining the number of shares of the Company's common stock that Employee is entitled to purchase from the Company, pursuant to the exercise of outstanding options, Employee will be considered to have vested only up to the Termination Date. The parties agree that as of the Termination Date, Employee will have vested in [Insert Number [that also includes the 12 months of acceleration provided pursuant to the "Equity Vesting Benefits" described in the Employment Letter]][1] shares subject to his options and no more. The exercise of Employee's vested options and shares shall continue to be governed by the terms and conditions of the applicable Company equity plans and award agreements (the "Stock Agreements"); provided, however, that, notwithstanding the terms of any document to the contrary, Employee's vested options will be exercisable for a period of twenty-four (24) months following the Termination Date.

3. Benefits. Employee's health insurance benefits shall cease on [Insert Date], subject to Employee's right to continue Employee's health insurance under COBRA. Employee's participation in all benefits and incidents of employment, including, but not limited to, vesting in stock options, and the accrual of bonuses, vacation, and paid time off, ceased as of the Termination Date.

1 The actual accelerated vesting amount, if any, shall be determined based on the circumstances related to termination of employment.

4. Payment of Salary and Receipt of All Benefits. Employee acknowledges and represents that, other than the consideration set forth in this Agreement, the Company has paid or provided all salary, wages, bonuses, accrued vacation/paid time off, premiums, leaves, housing allowances, relocation costs, interest, severance, outplacement costs, fees, reimbursable expenses, commissions, stock, stock options, vesting, and any and all other benefits and compensation due to Employee.

5. Release of Claims.

(a) Employee Release of Claims. Employee agrees that the foregoing consideration represents settlement in full of all outstanding obligations owed to Employee by the Company and its current and former officers, directors, employees, agents, investors, attorneys, shareholders, administrators, affiliates, benefit plans, plan administrators, professional employer organization or co-employer, insurers, trustees, divisions, and subsidiaries, and predecessor and successor corporations and assigns, (collectively, the "Releasees"). Employee, on Employee's own behalf and on behalf of Employee's respective heirs, family members, executors, agents, and assigns, hereby and forever releases the Releasees from, and agrees not to sue concerning, or in any manner to institute, prosecute, or pursue, any claim, complaint, charge, duty, obligation, demand, or cause of action relating to any matters of any kind, whether presently known or unknown, suspected or unsuspected, that Employee may possess against any of the Releasees arising from any omissions, acts, facts, or damages that have occurred up until and including the Effective Date of this Agreement, including, without limitation:

1. any and all claims relating to or arising from. Employee's employment relationship with the Company and the termination of that relationship;

2. any and all claims relating to, or arising from, Employee's right to purchase, or actual purchase of shares of stock of the Company, including, without limitation, any claims for fraud, misrepresentation, breach of fiduciary duty, breach of duty under applicable state corporate law, and securities fraud under any state or federal law;

3. any and all claims for wrongful discharge of employment, termination in violation of public policy, discrimination, harassment, retaliation, breach of contract (both express and implied), breach of covenant of good faith and fair dealing (both express and implied), promissory estoppel, negligent or intentional infliction of emotional distress, fraud, negligent or intentional misrepresentation, negligent or intentional interference with contract or prospective economic advantage, unfair business practices, defamation, libel, slander, negligence, personal injury, assault, battery, invasion of privacy, false imprisonment, conversion, and disability benefits;

4. any and all claims for violation of any federal, state, or municipal statute, including, but not limited to, Title VII of the Civil Rights Act of 1964, the Civil Rights Act of 1991, the Rehabilitation Act of 1973, the Americans with Disabilities Act of 1990, the Equal Pay Act, the Fair Labor Standards Act, the Fair Credit Reporting Act, the Age Discrimination in Employment Act of 1967, the Older Workers Benefit Protection Act, the Employee Retirement Income Security Act of 1974, the Worker Adjustment and Retraining Notification Act, the Family and Medical Leave Act, the Sarbanes-Oxley Act of 2002, Immigration Reform and Control Act, the California Family Rights Act, the California Labor Code, the California Workers' Compensation Act, and the California Fair Employment and Housing Act;

5. any and all claims for violation of the federal or any state constitution;

6. any and all claims arising out of any other laws and regulations relating to employment or employment discrimination;

7. any claim for any loss, cost, damage, or expense arising out of any dispute over the nonwithholding or other tax treatment of any of the proceeds received by Employee as a result of this Agreement; and

8. any and all claims for attorneys' fees and costs.

Employee agrees that the release set forth in this section shall be and remain in effect in all respects as a complete general release as to the matters released. This release does not extend to: (a) any obligations incurred under this Agreement; (b) any vested rights Employee may have under the employee benefit plans, programs, or policies of the Company and its affiliates; or (c) any indemnification rights to which Employee may be entitled under the Company's Articles of Incorporation or Bylaws, by contract, as a matter of law, or otherwise, or under any power that the Company may have to indemnify Employee or hold Employee harmless. This release does not extend to any obligations incurred under this Agreement. This release does not release claims that cannot be released as a matter of law, including any Protected Activity (as defined below). This release does not release claims that cannot be released as a matter of law, including, but not limited to, Employee's right to file a charge with or participate in a charge by the Equal Employment Opportunity Commission, or any other local, state, or federal administrative body or government agency that is authorized to enforce or administer laws related to employment, against the Company (with the understanding that any such filing or participation does not give Employee the right to recover any monetary damages against the Company; Employee's release of claims herein bars Employee from recovering such monetary relief from the Company). Notwithstanding the foregoing, Employee acknowledges that any and all disputed wage claims that are released herein shall be subject to binding arbitration in accordance with this Agreement, except as required by applicable law. Employee represents that he has made no assignment or transfer of any right, claim, complaint, charge, duty, obligation, demand, cause of action, or other matter waived or released by this Section.

(b) Company Release of Claims. The Company hereby and forever releases Employee from any and all claims arising out of or relating to Employee's employment or other relationship with the Company and the conclusion of that employment or other relationship that the Company may possess against Employee arising from any omissions, acts, facts, or damages that have occurred up until and including the Effective Date except as follows: the Company does not release and retains the right to sue for (1) any criminal activity engaged in by Employee, including fraud, embezzlement, assault, or any other violation of a state or federal criminal statute; (2) any breach by the Employee of his obligation to maintain Company confidential information, including any violation of local, state or federal laws relating to the protection of trade secret information; and (3) any breach by the Employee of his fiduciary duties to the Company. The Company is not waiving its rights to enforce the terms of this Agreement.

6. Acknowledgment of Waiver of Claims under ADEA. Employee acknowledges that Employee is waiving and releasing any rights Employee may have under the Age Discrimination in Employment Act of 1967 ("ADEA"), and that this waiver and release is knowing and voluntary. Employee agrees that this waiver and release does not apply to any rights or claims that may arise under the ADEA after the Effective Date of this Agreement. Employee acknowledges that the consideration given for this waiver and release is in addition to anything of value to which Employee was already entitled. Employee further acknowledges that Employee has been advised by this writing that: (a) Employee should consult with an attorney prior to executing this Agreement; (b) Employee has twenty-one (21) days within which to consider this Agreement; (c) Employee has seven (7) days following Employee's execution of this Agreement to revoke this Agreement; (d) this Agreement shall not be effective until after the revocation period has expired; and (e) nothing in this Agreement prevents or precludes Employee from challenging or seeking a determination in good faith of the validity of this waiver under the ADEA, nor does it impose any condition precedent, penalties, or costs for doing so, unless specifically authorized by federal law. In the event Employee signs this Agreement and returns it to the Company in less than the 21-day period identified above, Employee hereby acknowledges that Employee has freely and voluntarily chosen to waive the time period allotted for considering this Agreement. Employee acknowledges and understands that revocation must be accomplished by a written notification to the person executing this Agreement on the Company's behalf that is received prior to the Effective Date. The Parties agree that changes, whether material or immaterial, do not restart the running of the 21-day period.

7. California Civil Code Section 1542. Each party acknowledges that it has been advised to consult with legal counsel and is familiar with the provisions of California Civil Code Section 1542, a statute that otherwise prohibits the release of unknown claims, which provides as follows:

> A GENERAL RELEASE DOES NOT EXTEND TO CLAIMS WHICH THE CREDITOR DOES NOT KNOW OR SUSPECT TO EXIST IN HIS OR HER FAVOR AT THE TIME OF EXECUTING THE RELEASE, WHICH IF KNOWN BY HIM OR HER MUST HAVE MATERIALLY AFFECTED HIS OR HER SETTLEMENT WITH THE DEBTOR.

Each party, being aware of said code section, agrees to expressly waive any of its respective rights it may have thereunder, as well as under any other statute or common law principles of similar effect.

8. No Pending or Future Lawsuits. Employee represents that Employee has no lawsuits, claims, or actions pending in Employee's name, or on behalf of any other person or entity, against the Company or any of the other Releasees. Employee also represents that Employee does not intend to bring any claims on Employee's own behalf or on behalf of any other person or entity against the Company or any of the other Releasees.

9. Application for Employment. Employee understands and agrees that, as a condition of this Agreement, Employee shall not be entitled to any employment with the Company, and Employee hereby waives any right, or alleged right, of employment or re-employment with the Company. Employee further agrees not to apply for employment with the Company and not otherwise pursue an independent contractor or vendor relationship with the Company.

10. Confidentiality. Subject to paragraph [13] governing Protected Activity, Employee agrees to maintain in complete confidence the existence of this Agreement, the contents and terms of this Agreement, and the consideration for this Agreement (hereinafter collectively referred to as "Separation Information"). Except as required by law, Employee may disclose Separation Information only to Employee's immediate family members, the Court in any proceedings to enforce the terms of this Agreement, Employee's attorney(s), and Employee's accountant(s) and any professional tax advisor(s) to the extent that they need to know the Separation Information in order to provide advice on tax treatment or to prepare tax returns, and must prevent disclosure of any Separation Information to all other third parties. Employee agrees that Employee will not publicize, directly or indirectly, any Separation Information.

11. Trade Secrets and Confidential Information/Company Property. Employee reaffirms and agrees to observe and abide by the terms of the Confidentiality Agreement, specifically including the provisions therein regarding nondisclosure of the Company's trade secrets and confidential and proprietary information, and nonsolicitation of Company employees. Employee's signature below constitutes Employee's certification under penalty of perjury that Employee has returned all documents and other items provided to Employee by the Company (with the exception of a copy of the Employee Handbook and personnel documents specifically relating to Employee), developed or obtained by Employee in connection with Employee's employment with the Company, or otherwise belonging to the Company.

12. No Cooperation. Subject to paragraph 13 governing Protected Activity, Employee agrees that Employee will not knowingly encourage, counsel, or assist any attorneys or their clients in the presentation or prosecution of any disputes, differences, grievances, claims, charges, or complaints by any third party against any of the Releasees, unless under a subpoena or other court order to do so or as related directly to the ADEA waiver in this Agreement. Employee agrees both to immediately notify the Company upon receipt of any such subpoena or court order, and to furnish, within three (3) business days of its receipt, a copy of such subpoena or other court order. If approached by anyone for counsel or assistance in the presentation or prosecution of any disputes, differences, grievances, claims, charges, or complaints against any of the Releasees, Employee shall state no more than that Employee cannot provide counsel or assistance.

13. Protected Activity Not Prohibited. Employee understands that nothing in this Agreement shall in any way limit or prohibit Employee from engaging in any Protected Activity. For purposes of this Agreement, "Protected Activity" shall mean filing a charge, complaint, or report with, or otherwise communicating, cooperating, or participating in any investigation or proceeding that may be conducted by, any federal, state or local government agency or commission, including the Securities and Exchange Commission, the Equal Employment Opportunity Commission, the Occupational Safety and Health Administration, and the National Labor Relations Board ("Government Agencies"). Employee understands that in connection with such Protected Activity, Employee is permitted to disclose documents or other information as permitted by law, and without giving notice to, or receiving authorization from, the Company. Notwithstanding the foregoing,

Employee agrees to take all reasonable precautions to prevent any unauthorized use or disclosure of any information that may constitute Company confidential information under the Confidentiality Agreement to any parties other than the Government Agencies. Employee further understands that "Protected Activity" does not include the disclosure of any Company attorney-client privileged communications. Any language in the Confidentiality Agreement regarding Employee's right to engage in Protected Activity that conflicts with, or is contrary to, this paragraph is superseded by this Agreement. In addition, pursuant to the Defend Trade Secrets Act of 2016, Employee is notified that an individual will not be held criminally or civilly liable under any federal or state trade secret law for the disclosure of a trade secret that (i) is made in confidence to a federal, state, or local government official (directly or indirectly) or to an attorney *solely* for the purpose of reporting or investigating a suspected violation of law, or (ii) is made in a complaint or other document filed in a lawsuit or other proceeding, if (and only if) such filing is made under seal. In addition, an individual who files a lawsuit for retaliation by an employer for reporting a suspected violation of law may disclose the trade secret to the individual's attorney and use the trade secret information in the court proceeding, if the individual files any document containing the trade secret under seal and does not disclose the trade secret, except pursuant to court order.

14. Nondisparagement. Employee agrees to refrain from any disparagement, defamation, libel, or slander of any of the Releasees, and agrees to refrain from any tortious interference with the contracts and relationships of any of the Releasees. The Company agrees to refrain from any disparagement, defamation, libel, or slander of Employee. Employee understands that the Company's obligations under this paragraph extend only to the Company's executive officers and members of its Board of Directors and only for so long as such individuals are actively providing services to the Company. Employee shall direct any inquiries by potential future employers to the Company's human resources department.

15. Breach. In addition to the rights provided in the "Attorneys' Fees" section below, Employee acknowledges and agrees that any material breach of any material provision of this Agreement, unless such breach constitutes a legal action by Employee challenging or seeking a determination in good faith of the validity of the waiver herein under the ADEA, or of any material provision of the Confidentiality Agreement shall entitle the Company immediately to cease providing the consideration provided to Employee under this Agreement and to seek injunctive relief, except as provided by law.

16. No Admission of Liability. Employee understands and acknowledges that this Agreement constitutes a compromise and settlement of any and all actual or potential disputed claims by Employee. No action taken by the Company hereto, either previously or in connection with this Agreement, shall be deemed or construed to be (a) an admission of the truth or falsity of any actual or potential claims or (b) an acknowledgment or admission by the Company of any fault or liability whatsoever to Employee or to any third party.

17. Costs. The Parties shall each bear their own costs, attorneys' fees, and other fees incurred in connection with the preparation of this Agreement.

18. ARBITRATION. THE PARTIES AGREE THAT ANY AND ALL DISPUTES ARISING OUT OF THE TERMS OF THIS AGREEMENT, THEIR INTERPRETATION, EMPLOYEE'S EMPLOYMENT WITH THE COMPANY OR THE TERMS THEREOF, OR ANY OF THE MATTERS HEREIN RELEASED, SHALL BE SUBJECT TO ARBITRATION IN SANTA CLARA COUNTY, BEFORE JUDICIAL ARBITRATION & MEDIATION SERVICES ("JAMS"), PURSUANT TO ITS EMPLOYMENT ARBITRATION RULES & PROCEDURES ("JAMS RULES"). THE ARBITRATOR MAY GRANT INJUNCTIONS AND OTHER RELIEF IN SUCH DISPUTES. THE ARBITRATOR SHALL ADMINISTER AND CONDUCT ANY ARBITRATION IN ACCORDANCE WITH CALIFORNIA LAW, INCLUDING THE CALIFORNIA CODE OF CIVIL PROCEDURE, AND THE ARBITRATOR SHALL APPLY SUBSTANTIVE AND PROCEDURAL CALIFORNIA LAW TO ANY DISPUTE OR CLAIM, WITHOUT REFERENCE TO ANY CONFLICT-OF-LAW PROVISIONS OF ANY JURISDICTION. TO THE EXTENT THAT THE JAMS RULES CONFLICT WITH CALIFORNIA LAW, CALIFORNIA LAW SHALL TAKE PRECEDENCE. THE DECISION OF THE ARBITRATOR SHALL BE FINAL, CONCLUSIVE, AND BINDING ON THE PARTIES TO THE ARBITRATION. THE PARTIES AGREE THAT THE PREVAILING PARTY IN ANY ARBITRATION SHALL BE ENTITLED TO INJUNCTIVE RELIEF IN ANY COURT OF COMPETENT JURISDICTION TO ENFORCE THE ARBITRATION AWARD. THE PARTIES TO THE ARBITRATION SHALL EACH PAY AN EQUAL SHARE OF THE COSTS AND EXPENSES OF SUCH ARBITRATION, AND EACH PARTY SHALL SEPARATELY PAY FOR ITS RESPECTIVE COUNSEL FEES AND EXPENSES; PROVIDED, HOWEVER, THAT THE ARBITRATOR SHALL AWARD ATTORNEYS' FEES AND COSTS TO THE PREVAILING PARTY, EXCEPT AS PROHIBITED BY LAW. THE PARTIES HEREBY AGREE TO WAIVE THEIR RIGHT TO HAVE ANY DISPUTE BETWEEN THEM RESOLVED IN A COURT OF LAW BY A JUDGE OR JURY. NOTWITHSTANDING THE FOREGOING, THIS SECTION WILL NOT PREVENT EITHER PARTY FROM SEEKING INJUNCTIVE RELIEF (OR ANY OTHER PROVISIONAL REMEDY) FROM ANY COURT HAVING JURISDICTION OVER THE PARTIES AND THE SUBJECT MATTER OF THEIR DISPUTE RELATING TO THIS AGREEMENT AND THE AGREEMENTS INCORPORATED HEREIN BY REFERENCE. SHOULD ANY PART OF THE ARBITRATION AGREEMENT CONTAINED IN THIS PARAGRAPH CONFLICT WITH ANY OTHER ARBITRATION AGREEMENT BETWEEN THE PARTIES, THE PARTIES AGREE THAT THIS ARBITRATION AGREEMENT SHALL GOVERN.

19. Tax Consequences. The Company makes no representations or warranties with respect to the tax consequences of the payments and any other consideration provided to Employee or made on Employee's behalf under the terms of this Agreement. Employee agrees and understands that Employee is responsible for payment, if any, of local, state, and/or federal taxes on the payments and any other consideration provided hereunder by the Company and any penalties or assessments thereon. Employee further agrees to indemnify and hold the Releasees harmless from any claims, demands, deficiencies, penalties, interest, assessments, executions, judgments, or recoveries by any government agency against the Company for any amounts claimed due on account of (a) Employee's failure to pay or delayed payment of federal or state taxes, or (b) damages sustained by the Company by reason of any such claims, including attorneys' fees and costs.

20. Authority. The Company represents and warrants that the undersigned has the authority to act on behalf of the Company and to bind the Company and all who may claim through it to the terms and conditions of this Agreement. Employee represents and warrants that Employee has the capacity to act on Employee's own behalf and on behalf of all who might claim through Employee to bind them to the terms and conditions of this Agreement. Each Party warrants and represents that there are no liens or claims of lien or assignments in law or equity or otherwise of or against any of the claims or causes of action released herein.

21. Severability. In the event that any provision or any portion of any provision hereof or any surviving agreement made a part hereof becomes or is declared by a court of competent jurisdiction or arbitrator to be illegal, unenforceable, or void, this Agreement shall continue in full force and effect without said provision or portion of provision.

22. Attorneys' Fees. Except with regard to a legal action challenging or seeking a determination in good faith of the validity of the waiver herein under the ADEA or as otherwise set forth in the Employment Letter, in the event that either Party brings an action to enforce or effect its rights under this Agreement, the prevailing Party shall be entitled to recover its costs and expenses, including the costs of mediation, arbitration, litigation, court fees, and reasonable attorneys' fees incurred in connection with such an action.

23. Entire Agreement. This Agreement represents the entire agreement and understanding between the Company and Employee concerning the subject matter of this Agreement and Employee's employment with and separation from the Company and the events leading thereto and associated therewith, and supersedes and replaces any and all prior agreements and understandings concerning the subject matter of this Agreement and Employee's relationship with the Company, with the exception of the Confidentiality Agreement, the Stock Agreements, and any indemnification agreement between you and the Company, except as otherwise modified or superseded herein.

24. No Oral Modification. This Agreement may only be amended in a writing signed by Employee and the Company's Chairman of the Board.

25. Governing Law. This Agreement shall be governed by the laws of the State of California, without regard for choice-of-law provisions.

26. Effective Date. Employee understands that this Agreement shall be null and void if not executed by Employee within twenty one (21) days. Each Party has seven (7) days after that Party signs this Agreement to revoke it. This Agreement will become effective on the eighth (8th) day after Employee signed this Agreement, so long as it has been signed by the Parties and has not been revoked by either Party before that date (the "Effective Date").

27. Counterparts. This Agreement may be executed in counterparts and each counterpart shall be deemed an original and all of which counterparts taken together shall have the same force and effect as an original and shall constitute an effective, binding agreement on the part of each of the undersigned. The counterparts of this Agreement may be executed and delivered by facsimile, photo, email PDF, or other electronic transmission or signature.

28. Voluntary Execution of Agreement. Employee understands and agrees that Employee executed this Agreement voluntarily, without any duress or undue influence on the part or behalf of the Company or any third party, with the full intent of releasing all of Employee's claims against the Company and any of the other Releasees. Employee acknowledges that:

(a) Employee has read this Agreement;

(b) Employee has been represented in the preparation, negotiation, and execution of this Agreement by legal counsel of Employee's own choice or has elected not to retain legal counsel;

(c) Employee understands the terms and consequences of this Agreement and of the releases it contains;

(d) Employee is fully aware of the legal and binding effect of this Agreement; and

(e) Employee has not relied upon any representations or statements made by the Company that are not specifically set forth in this Agreement.

[THE REMAINDER OF THIS PAGE IS INTENTIONALLY LEFT BLANK; SIGNATURE PAGE FOLLOWS]

IN WITNESS WHEREOF, the Parties have executed this Agreement on the respective dates set forth below.

ADAM TOMASI, an individual

Dated: _____, [Year]

_____
Adam Tomasi

ALLAKOS INC.

Dated: _____, [Year]

_____
[Name]
[Title]

EXHIBIT 10.7

July 6, 2018

Henrik Rasmussen
c/o Allakos Inc.

Re: Confirmatory Employment Letter

Dear Henrik:

This letter agreement (the "Agreement") is entered into between you and Allakos Inc. (the "Company" or "we"), effective as of the date set forth above (the "Effective Date"), to confirm the terms and conditions of your employment with the Company as of the Effective Date. This Agreement supersedes and replaces any and all employment terms, compensation, or benefits you may have had or to which you may have been entitled prior to the Effective Date.

1. *Title; Position.* You will continue to serve as the Company's Chief Medical Officer. You also will continue to report to the Company's Chief Executive Officer and will perform the duties and responsibilities customary for such position and such other related duties as are lawfully assigned by the Company's Chief Executive Officer. While you render services to the Company, you will not engage in any other employment, consulting or other business activity (whether full-time or part-time) that would create a conflict of interest with the Company. You may engage in civic and not-for-profit activities as long as such activities do not interfere with the performance of your duties under this Agreement. By signing this Agreement, you confirm that you have no contractual commitments or other legal obligations that would prohibit you from performing your duties for the Company.

2. *Base Salary.* As of the Effective Date, your annual base salary will be $326,510, which will be payable, less any applicable withholdings, in accordance with the Company's normal payroll practices. Your annual base salary will be subject to review and adjustment from time to time by our Board or its Compensation Committee (the "Committee"), as applicable, in its sole discretion.

3. *Annual Bonus.* You will have the opportunity to earn an annual target cash bonus equal to 30% of your annual base salary, based on achieving performance objectives established by the Board or Committee, as applicable, in its sole discretion and payable upon achievement of those objectives as determined by the Committee. Unless determined otherwise by the Board or Committee, as applicable, any such bonus will be subject to your continued employment through and until the date of payment. Your annual bonus opportunity and the applicable terms and conditions may be adjusted from time to time by our Board or the Committee, as applicable, in its sole discretion.

4. *Employee Benefits.* You will continue to be eligible to participate in the benefit plans and programs established by the Company for its employees from time to time, subject to their applicable terms and conditions, including without limitation any eligibility requirements. The Company reserves the right to modify, amend, suspend or terminate the benefit plans and programs it offers to its employees at any time.

5. *Severance.* You will be eligible to participate in the Company's Change in Control and Severance Policy (the "Policy") based on your position within the Company. The Policy and a participation agreement thereunder (the "Participation Agreement") will specify the severance payments and benefits you may become entitled to receive in connection with certain qualifying terminations of your employment with the Company. These protections will supersede all other severance payments and benefits to which you otherwise may be entitled, or may become entitled in the future, under any plan, program or policy that the Company may have in effect from time to time. For purposes of clarification, any severance plans, programs, agreements or arrangements that may have applied to you before the Effective Date no longer will apply and you no longer will have any rights or entitlements under any such plans, programs, agreements or arrangements.

6. *Confidentiality Agreement.* As an employee of the Company, you will continue to have access to certain confidential information of the Company and you may, during the course of your employment, develop certain information or inventions that will be the property of the Company. To protect the interests of the Company, your acceptance of this Agreement confirms that the terms of the Company's At-Will Employment, Confidential Information, Invention Assignment, Nonsolicitation, and Arbitration Agreement you previously signed with the Company (the "Confidentiality Agreement") still apply.

7. *At-Will Employment.* This Agreement does not imply any right to your continued employment for any period with the Company or any of its affiliates. Your employment with the Company will continue to be "at will." It is for no specified term, and may be terminated by you or the Company at any time, with or without cause or advance notice.

8. *Miscellaneous.* This Agreement, together with the Confidentiality Agreement, the Policy, the Participation Agreement, and any outstanding equity awards granted to you by the Company under its equity plans(s) and the applicable award agreements thereunder, constitute the entire agreement between you and the Company regarding the material terms and conditions of your employment, and they supersede and replace all prior negotiations, representations or agreements between you and the Company. This Agreement may be modified only by a written agreement signed by you and a duly authorized officer of the Company.

To confirm the current terms and conditions of your employment, please sign and date in the spaces indicated and return this Agreement to me.

Sincerely,

Allakos Inc.

By: /s/ Robert Alexander
Robert Alexander

Agreed to and accepted:

/s/ Henrik Rasmussen
Henrik Rasmussen

Dated: July 6, 2018

Exhibit 10.8

EMPLOYMENT AGREEMENT

This **EMPLOYMENT AGREEMENT** (the "**Agreement**") is made and entered into effective as of December 5, 2012 by and between Allakos Inc. (the "**Company**") and Dr. Christopher Bebbington (the "**Employee**"). The Company and the Employee are hereinafter collectively referred to as the "**Parties**", and individually referred to as a "**Party**".

AGREEMENT

In consideration of the foregoing recitals and the mutual promises and covenants herein contained, and for other good and valuable consideration, the Parties, intending to be legally bound, agree as follows:

1. EMPLOYMENT.

1.1 Term. The term of this Agreement shall begin on the date first set forth above (the "**Effective Date**") and shall continue until terminated in accordance with Section 4 herein.

1.2 Title. The Employee shall have the title of President and Chief Executive Officer, and shall report to the board of directors of the Company (the "**Board**").

1.3 Duties. The Employee shall do and perform all services, acts or things necessary or advisable to manage and conduct the business of the Company and which are normally associated with his position. As a Company employee, the Employee will be expected to comply with Company policies and acknowledge in writing that the Employee has read the Company's Employee Handbook, if any. The Company's Employee Handbook may be established or modified from time to time at the sole discretion of the Company.

2. COMPENSATION.

2.1 Base Salary. The Company shall pay the Employee a base salary of $320,000 per year, less payroll deductions and all required withholdings, payable in regular periodic payments in accordance with Company policy. Such base salary shall be prorated for any partial year of employment on the basis of a 365-day fiscal year. The Company shall review the Employee's base salary periodically relative to the Employee's contributions to the success of the Company, the Employee's level of performance as it relates to the Employee's official duties, and the labor market for similarly situated professionals and may increase Employee's base salary accordingly.

2.2 Bonus. Employee shall be eligible to receive an annual bonus equal to twenty-five percent (25%) of the Employee's base salary at the sole discretion of the Board.

2.3 Employment Taxes. All of the Employee's compensation and any other payments under this Agreement shall be subject to customary withholding taxes and any other employment taxes as are required to be collected or withheld by the Company.

2.4 Stock Options. All options to purchase shares of the Company's common stock which the Company shall grant to the Employee (the "**Options**") shall contain provisions permitting the Employee to exercise the vested shares subject to such Options for the term of such Options which shall be ten (10) years following the date of grant of such Options even if the date of termination of Employee's employment with the Company occurs before the end of such ten (10) year period; provided, however, if the Employee, at the time of grant of the Options, is a holder of more than ten percent (10%) of the voting power of all classes of stock of the Company, the term of such Options shall be five (5) years from the date of grant of the Options. The Employee agrees that he has sought the counsel of his personal tax advisor regarding the tax implications of such Options to the extent that he feels necessary and in no way is relying on the Company for tax advice in connection with this Agreement.

3. TERMINATION.

3.1 Termination for Death or Disability. The Employee's employment with the Company shall terminate automatically effective upon the date of the Employee's death or Disability (as defined below).

3.2 Termination By the Company. The Employee's employment with the Company is at will. The Company may terminate the employment relationship at any time and for any reason or no reason, including, but not limited to, under the following conditions:

3.2.1 Termination by the Company For Cause. The Company may terminate the Employee's employment under this Agreement for Cause (as defined below) by delivery of written notice to the Employee specifying the Cause or Causes relied upon for such termination. Any notice of termination given pursuant to this Section 3.2.1 shall effect termination as of the date of the notice, or as of such other date as specified in the notice.

3.2.2 Termination by the Company Without Cause. The Company may terminate the Employee's employment under this Agreement without Cause at any time and for any reason, or for no reason. Such termination shall be effective on the date the Employee is so informed, or as otherwise specified by the Company.

3.3 Termination By The Employee. The Employee may terminate the employment relationship at any time and for any reason or no reason, including, but not limited to, under the following conditions:

3.3.1 Good Reason. The Employee may terminate the Employee's employment under this Agreement for Good Reason (as defined below) by delivery of written notice to the Company specifying the Good Reason relied upon for such termination. Any notice of termination given pursuant to this Section 4.3.1 shall effect termination as of the date of the notice, or as of such other date as specified in the notice.

3.3.2 Without Good Reason. The Employee may terminate the Employee's employment under this Agreement for other than Good Reason upon thirty (30) days written notice to the Company, delivered to the President, Chief Executive Officer or a member of the Board.

3.4 Termination by Mutual Agreement of the Parties. The Employee's employment pursuant to this Agreement may be terminated at any time upon the mutual agreement in writing of the Employee and the Company. Any such termination of employment shall have the consequences specified in such agreement.

3.5 Compensation Upon Termination.

3.5.1 Death or Disability. If the Employee's employment is terminated by death or Disability as provided in Section 3.1, the Company shall pay to the Employee or to the Employee's heirs all base salary and accrued and unused vacation benefits earned through the date of termination at the rate in effect at the time of termination, less standard deductions and withholdings. The Company shall thereafter have no further obligations to the Employee and/or to the Employee's heirs under this Agreement, except as otherwise provided by law.

3.5.2 For Cause or Without Good Reason. If the Employee's employment is terminated by the Company for Cause as provided in Section 3.2.1, or if the Employee terminates the Employee's employment hereunder without Good Reason as provided in Section 3.3.2, the Company shall pay the Employee all base salary and accrued and unused vacation benefits earned through the date of termination at the rate in effect at the time of termination, less standard deductions and withholdings. The Company shall thereafter have no further obligations to the Employee under this Agreement, except as provided by law.

3.5.3 Without Cause or For Good Reason. If at any time the Company terminates the Employee's employment without Cause as provided in Section 3.2.2, or the Employee terminates the Employee's employment for Good Reason as provided in Section 3.3.1, the Company shall pay the Employee all base salary and accrued and unused vacation earned through the date of termination, at the rate in effect at the time of termination, less standard deductions and withholdings. In addition, subject to Employee's delivery to the Company of a Release and Waiver of Claims in the form attached hereto as **Exhibit A** (the "**Release**") within the applicable time period set forth therein, but in no event later than forty-five (45) days following termination of Employee's employment, and permitting such Release to become fully effective in accordance with its terms, (the date Employee's Release becomes fully effective, the "**Release Effective Date**"), the Company shall provide the Employee with the following benefits, as applicable:

(i) The equivalent of six months of the Employee's base salary in effect at the time of termination (not taking into account any reduction in the Employee's base salary that would give rise to the Employee's right to resign for Good Reason pursuant to Section 3.6.2(i)), less standard deductions and withholdings, to be paid periodically in accordance with the Company's normal payroll policies; and

(ii) in the event the Employee is eligible for and timely elects continued coverage under COBRA, payment of the same portion of the Employee's COBRA health

insurance premiums as the Company paid during the Employee's employment, for the period commencing on the first day of the first full calendar month following the Release Effective Date and ending on the earlier of: (a) the last day of the sixth full calendar month following the Release Effective Date; or (b) the date on which the Employee becomes eligible to become enrolled in the group health insurance plan of another employer.

3.5.4 Without Cause or For Good Reason Following a Change of Control. If, within twelve months after the consummation of a Change of Control (as defined below), the Company terminates the Employee's employment without Cause as provided in Section 3.2.2, or the Employee terminates the Employee's employment for Good Reason as provided in Section 3.3.1, the Company shall pay the Employee all base salary and accrued and unused vacation earned through the date of termination, at the rate in effect at the time of termination, less standard deductions and withholdings. In addition, subject to Employee's delivery to the Company the Release within the Release Effective Date, the Company shall provide the Employee with the following benefits, as applicable:

(i) The equivalent of nine months of the Employee's base salary in effect at the time of termination (not taking into account any reduction in the Employee's base salary that would give rise to the Employee's right to resign for Good Reason pursuant to Section 3.6.2(i)), less standard deductions and withholdings, to be paid periodically in accordance with the Company's normal payroll policies; and

(ii) in the event the Employee is eligible for and timely elects continued coverage under COBRA, payment of the same portion of the Employee's COBRA health insurance premiums as the Company paid during the Employee's employment, for the period commencing on the first day of the first full calendar month following the Release Effective Date and ending on the earlier of: (a) the last day of the ninth full calendar month following the Release Effective Date; or (b) the date on which the Employee becomes eligible to become enrolled in the group health insurance plan of another employer.

3.6 Definitions. For purposes of this Agreement, the following terms shall have the following meanings:

3.6.1 Disability. "**Disability**" has the meaning set forth under the longterm disability policy of the Company or a related entity to which the Employee provides services regardless of whether the Employee is covered by such policy. If the Company or the related entity to which the Employee provides service does not have a long-term disability plan in place, "Disability" means that the Employee is unable to carry out the responsibilities and functions of the position held by the Employee by reason of any medically determinable physical or mental impairment for a period of not less than ninety (90) consecutive days. The Employee will not be considered to have incurred a Disability unless he furnishes proof of such impairment sufficient to satisfy the Board in its discretion.

3.6.2 Good Reason. "**Good Reason**" for the Employee to terminate the Employee's employment hereunder shall mean the occurrence of any of the following events without the Employee's consent: (i) a material reduction in Employee's salary or benefits

(excluding the substitution of substantially equivalent compensation and benefits), other than as a result of a reduction in compensation affecting employees of the Company, or its successor entity, generally; (ii) a material diminution of Employee's duties or responsibilities, provided however, that, a mere change in title or reporting relationship alone shall not constitute "Good Reason;" and (iii) relocation of Employee's place of employment to a location more than 50 miles from the Company's office location. If any of the events set forth above shall occur, Employee shall give prompt written notice of such event to the Company, or its successor entity, and if such event is not cured within thirty (30) days from such notice Employee may exercise Employee's rights to resign for Good Reason, provided that if Employee has not exercised such right within 45 days of the date of such notice Employee shall be deemed to have agreed to the occurrence of such event.

3.6.3 Cause. "**Cause**" for the Company to terminate the Employee's employment hereunder shall mean the occurrence of any of the following events, as determined by the Board or a committee designated by the Board, in its sole and absolute discretion: (i) the Employee's failure to perform his or her assigned duties or responsibilities (other than a failure resulting from the Employee's Disability) after notice thereof from the Company describing the Employee's failure to perform such duties or responsibilities; (ii) the Employee engaging in any act of dishonesty, fraud or misrepresentation or physical violence in connection with his employment; (iii) the Employee's violation of any federal or state law or regulation applicable to the business of the Company or its affiliates; (iv) the Employee's breach of any confidentiality agreement or invention assignment agreement between the Employee and the Company (or any affiliate of the Company); or (v) the Employee being convicted of, or entering a plea of *nolo contendere* to, any crime or committing any act of moral turpitude.

The determination whether a termination is for "Cause" under the foregoing definition shall be made by the Company in its sole and absolute discretion.

3.6.4 Change of Control. For purposes of this Agreement, a "**Change of Control**" means any of the following transactions, provided, however, that the Board shall determine under parts (iii) and (iv) whether multiple transactions are related, and its determination shall be final, binding and conclusive:

(i) a merger or consolidation in which the Company is not the surviving entity, except for a transaction the principal purpose of which is to change the state in which the Company is incorporated;

(ii) the sale, transfer or other disposition of all or substantially all of the assets of the Company;

(iii) any reverse merger or series of related transactions culminating in a reverse merger (including, but not limited to, a tender offer followed by a reverse merger) in which the Company is the surviving entity but (A) the shares of Common Stock outstanding immediately prior to such merger are converted or exchanged by virtue of the merger into other property, whether in the form of securities, cash or otherwise, or (B) in which securities possessing more than fifty percent (50%) of the total combined voting power of the Company's outstanding securities are transferred to a person or persons different from those who held such securities immediately prior to such merger or the initial transaction culminating in such merger, but excluding any such transaction or series of related transactions that the Board determines shall not be a Change of Control; or

(iv) acquisition in a single or series of related transactions by any person or related group of persons (other than the Company or by a Company-sponsored employee benefit plan) of beneficial ownership (within the meaning of Rule 13d-3 of the Securities Exchange Act of 1934, as amended) of securities possessing more than fifty percent (50%) of the total combined voting power of the Company's outstanding securities but excluding any such transaction or series of related transactions that the Board determines shall not be a Change of Control.

3.7 Survival of Certain Sections. Sections 3, 4, 5, 6, 7, 11, 14 and 16 of this Agreement shall survive the termination of this Agreement.

3.8 Parachute Payment. If any payment or benefit the Employee would receive pursuant to this Agreement or otherwise in connection with a change in control of the Company ("**Payment**") would (i) constitute a "**Parachute Payment**" within the meaning of Section 280G of Internal Revenue Code of 1986, as amended (the "**Code**"), and (ii) but for this sentence, be subject to the excise tax imposed by Section 4999 of the Code (the "**Excise Tax**"), then such Payment shall be reduced to the Reduced Amount (as defined herein). The "**Reduced Amount**" shall be either (x) the largest portion of the Payment that would result in no portion of the Payment being subject to the Excise Tax or (y) the largest portion, up to and including the total, of the Payment, which such amount, after taking into account all applicable federal, state and local employment taxes, income taxes, and the Excise Tax (all computed at the highest applicable marginal rate), results in the Employee's receipt, on an after-tax basis, of the greater amount of the Payment notwithstanding that all or some portion of the Payment may be subject to the Excise Tax. If a reduction in payments or benefits constituting Parachute Payments is necessary so that the Payment equals the Reduced Amount, reduction shall occur in the following order: (1) reduction of cash payments; (2) cancellation of accelerated vesting of equity awards other than stock options; (3) cancellation of accelerated vesting of stock options; and (4) reduction of other benefits paid to the Employee. In the event that acceleration of vesting of stock award compensation is to be reduced, such acceleration of vesting shall be cancelled in the reverse order of the date of grant of the Employee's stock awards.

The accounting firm then engaged by the Company for general audit purposes shall perform the foregoing calculations. The Company shall bear all expenses with respect to the determinations by such accounting firm required to be made hereunder.

The accounting firm engaged to make the determinations hereunder shall provide its calculations, together with detailed supporting documentation, to the Employee and the Company within fifteen (15) calendar days after the date on which the Employee's right to a Payment is triggered (if requested at that time by the Employee or the Company) or such other time as requested by the Employee or the Company. If the accounting firm determines that no Excise Tax is payable with respect to a Payment, either before or after the application of the Reduced Amount, it shall furnish the Employee and the Company with an opinion reasonably acceptable to the Employee that no Excise Tax will be imposed with respect to such Payment. Any good faith determinations of the accounting firm made hereunder shall be final, binding and conclusive upon the Employee and the Company.

3.9 Application of Internal Revenue Code Section 409A.

Notwithstanding anything to the contrary set forth herein, any payments and benefits provided under this Agreement (the "**Severance Benefits**") that constitute "deferred compensation" within the meaning of Section 409A of the Code and the regulations and other guidance thereunder and any state law of similar effect (collectively "**Section 409A**") shall not commence in connection with the Employee's termination of employment unless and until the Employee has also incurred a "separation from service" (as such term is defined in Treasury Regulation Section 1.409A-1(h) ("**Separation From Service**"), unless the Company reasonably determines that such amounts may be provided to the Employee without causing the Employee to incur the additional 20% tax under Section 409A.

It is intended that each installment of the Severance Benefits payments provided for in this Agreement is a separate "payment" for purposes of Treasury Regulation Section 1.409A-2(b)(2)(i). For the avoidance of doubt, it is intended that payments of the Severance Benefits set forth in this Agreement satisfy, to the greatest extent possible, the exemptions from the application of Section 409A provided under Treasury Regulation Sections 1.409A-1(b)(4), 1.409A-1(b)(5) and 1.409A-1(b)(9). However, if the Company (or, if applicable, the successor entity thereto) determines that the Severance Benefits constitute "deferred compensation" under Section 409A and the Employee is, on the termination of his service, a "specified employee" of the Company or any successor entity thereto, as such term is defined in Section 409A(a)(2)(B)(i) of the Code, then, solely to the extent necessary to avoid the incurrence of the adverse personal tax consequences under Section 409A, the timing of the Severance Benefit payments shall be delayed until the earlier to occur of: (i) the date that is six months and one day after the Employee's Separation From Service or (ii) the date of the Employee's death (such applicable date, the "**Specified Employee Initial Payment Date**"), the Company (or the successor entity thereto, as applicable) shall (A) pay to the Employee a lump sum amount equal to the sum of the Severance Benefit payments that the Employee would otherwise have received through the Specified Employee Initial Payment Date if the commencement of the payment of the Severance Benefits had not been so delayed pursuant to this Section and (B) commence paying the balance of the Severance Benefits in accordance with the applicable payment schedules set forth in this Agreement.

4. CONFIDENTIAL AND PROPRIETARY INFORMATION.

The Employee agrees to abide by the terms of that certain At-Will Employment, Confidential Information, Invention Assignment and Arbitration Agreement between the Employee and the Company (the "**Invention Assignment Agreement**").

5. ASSIGNMENT AND BINDING EFFECT.

This Agreement shall be binding upon and inure to the benefit of the Employee and the Employee's heirs, executors, personal representatives, assigns, administrators and legal representatives. Because of the unique and personal nature of the Employee's duties under this Agreement, neither this Agreement nor any rights or obligations under this Agreement shall be assignable by the Employee. This Agreement shall be binding upon and inure to the benefit of the Company and its successors, assigns and legal representatives.

6. CHOICE OF LAW.

This Agreement shall be construed and interpreted in accordance with the internal laws of the state of California.

7. INTEGRATION.

This Agreement, including the Invention Assignment Agreement and Exhibits A and B, contains the complete, final and exclusive agreement of the parties hereto relating to the terms and conditions of the Employee's employment and the termination of the Employee's employment, and supersedes all prior and contemporaneous oral and written employment agreements or arrangements between the parties hereto. To the extent this Agreement conflicts with the Invention Assignment Agreement, the Invention Assignment Agreement controls.

8. AMENDMENT.

This Agreement cannot be amended or modified except by a written agreement signed by the Employee and the Company.

9. WAIVER.

No term, covenant or condition of this Agreement or any breach thereof shall be deemed waived, except with the written consent of the party hereto against whom the wavier is claimed, and any waiver or any such term, covenant, condition or breach shall not be deemed to be a waiver of any preceding or succeeding breach of the same or any other term, covenant, condition or breach.

10. SEVERABILITY.

The finding by a court of competent jurisdiction of the unenforceability, invalidity or illegality of any provision of this Agreement shall not render any other provision of this Agreement unenforceable, invalid or illegal. Such court shall have the authority to modify or replace the invalid or unenforceable term or provision with a valid and enforceable term or provision which most accurately represents the intention of the parties hereto with respect to the invalid or unenforceable term or provision.

11. INTERPRETATION; CONSTRUCTION.

The headings set forth in this Agreement are for convenience of reference only and shall not be used in interpreting this Agreement. This Agreement shall be deemed as mutually drafted by and between the respective parties hereto, and the Employee has been encouraged to consult with, and have consulted with, the Employee's own independent counsel and tax advisors with respect to the terms of this Agreement. The parties hereto acknowledge that each party hereto and its counsel has reviewed and revised, or had an opportunity to review and revise, this Agreement, and any rule of construction to the effect that any ambiguities are to be resolved against the drafting party shall not be employed in the interpretation of this Agreement.

12. REPRESENTATIONS AND WARRANTIES.

The Employee represents and warrants that the Employee is not restricted or prohibited, contractually or otherwise, from entering into and performing each of the terms and covenants contained in this Agreement, and that the Employee's execution and performance of this Agreement will not violate or breach any other agreements between the Employee and any other person or entity.

13. COUNTERPARTS; FACSIMILE.

This Agreement may be executed in two counterparts, each of which shall be deemed an original, all of which together shall contribute one and the same instrument. Facsimile signatures shall be treated the same as original signatures.

14. LITIGATION COSTS.

Should any claim be commenced between the parties hereto or their personal representatives concerning any provision of this Agreement or the rights and duties of any person in relation to this Agreement, the party hereto prevailing in such action shall be entitled, in addition to such other relief as may be granted, to a reasonable sum as and for that party's attorney's fees in such action.

15. ELIGIBILITY.

As required by law, this offer and Agreement is subject to satisfactory proof of the Employee's right to work in the United States.

16. TRADE SECRETS.

It is the understanding of both the Company and the Employee that the Employee shall not divulge to the Company any confidential information or trade secrets belonging to others, including the Employee's former employers, nor shall the Company seek to elicit from the Employee any such information. Consistent with the foregoing, the Employee shall not provide to the Company, and the Company shall not request, any documents or copies of documents containing such information.

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IN WITNESS WHEREOF, the Parties have executed this Agreement as of the date first written.

ALLAKOS INC.

By: /s/ Nenad Tomasevic

Name: Nenad Tomasevic

Title: Treasurer

/s/ C.R. Bebbington
Dr. Christopher Bebbington

EXHIBIT A

RELEASE AND WAIVER OF CLAIMS

TO BE SIGNED FOLLOWING TERMINATION WITHOUT CAUSE OR RESIGNATION FOR GOOD REASON

In consideration of the payments and other benefits set forth in the Employment Agreement dated as of December 5, 2012, to which this form is attached, I, Christopher Bebbington, hereby furnish **ALLAKOS INC.** (the "**Company**"), with the following release and waiver ("**Release and Waiver**").

In exchange for the consideration provided to me by the Employment Agreement that I am not otherwise entitled to receive, I hereby generally and completely release the Company and its directors, officers, employees, shareholders, partners, agents, attorneys, predecessors, successors, parent and subsidiary entities, insurers, affiliates, and assigns from any and all claims, liabilities and obligations, both known and unknown, that arise out of or are in any way related to events, acts, conduct, or omissions occurring prior to my signing this Release and Waiver. This general release includes, but is not limited to: (1) all claims arising out of or in any way related to my employment with the Company or the termination of that employment; (2) all claims related to my compensation or benefits from the Company, including, but not limited to, salary, bonuses, commissions, vacation pay, expense reimbursements, severance pay, fringe benefits, stock, stock options, or any other ownership interests in the Company; (3) all claims for breach of contract, wrongful termination, and breach of the implied covenant of good faith and fair dealing; (4) all tort claims, including, but not limited to, claims for fraud, defamation, emotional distress, and discharge in violation of public policy; and (5) all federal, state, and local statutory claims, including, but not limited to claims for discrimination, harassment, retaliation, attorneys' fees, or other claims arising under the federal Civil Rights Act of 1964 (as amended), the federal Americans with Disabilities Act of 1990, the federal Age Discrimination in Employment Act of 1967 (as amended) ("***ADEA***").

I also acknowledge that I have read and understand Section 1542 of the California Civil Code which reads as follows: "**A general release does not extend to claims which the creditor does not know or suspect to exist in his or her favor at the time of executing the release, which if known by him or her must have materially affected his or her settlement with the debtor.**" I hereby expressly waive and relinquish all rights and benefits under that section and any law of any jurisdiction of similar effect with respect to any claims I may have against the Company.

I acknowledge that, among other rights, I am waiving and releasing any rights I may have under ADEA, that this Release and Waiver is knowing and voluntary, and that the consideration given for this Release and Waiver is in addition to anything of value to which I was already entitled as an employee of the Company. If I am 40 years of age or older upon execution of this Release and Waiver, I further acknowledge that I have been advised, as required by the Older Workers Benefit Protection Act, that: (a) the release and waiver granted herein does not relate to claims under the ADEA which may arise after this Release and Waiver is executed; (b) I should consult with an attorney prior to executing this Release and Waiver; and (c) I have twenty-one (21) days

from the date of termination of my employment with the Company in which to consider this Release and Waiver (although I may choose voluntarily to execute this Release and Waiver earlier); (d) I have seven (7) days following the execution of this Release and Waiver to revoke my consent to this Release and Waiver; and (e) this Release and Waiver shall not be effective until the seven (7) day revocation period has expired.

I acknowledge my continuing obligations under my Invention Assignment Agreement. Pursuant to the Invention Assignment Agreement I understand that among other things, I must not use or disclose any confidential or proprietary infolination of the Company and I must immediately return all Company property and documents (including all embodiments of proprietary information) and all copies thereof in my possession or control. I understand and agree that my right to the severance pay I am receiving in exchange for my agreement to the terms of this Release and Waiver is contingent upon my continued compliance with my Invention Assignment Agreement.

This Release and Waiver constitutes the complete, final and exclusive embodiment of the entire agreement between the Company and me with regard to the subject matter hereof I am not relying on any promise or representation by the Company that is not expressly stated herein. This Release and Waiver may only be modified by a writing signed by both me and a duly authorized officer of the Company.

Date: _____

By: _____

Christopher Bebbington

Exhibit 10.10

ALLAKOS INC.

OUTSIDE DIRECTOR COMPENSATION POLICY

Allakos Inc. (the "**Company**") believes that the granting of equity and cash compensation to its members of the Board of Directors (the "**Board**," and members of the Board, the "**Directors**") represents an effective tool to attract, retain and reward Directors who are not employees of the Company (the "**Outside Directors**"). This Outside Director Compensation Policy (the "**Policy**") is intended to formalize the Company's policy regarding cash compensation and grants of equity to its Outside Directors. Unless otherwise defined herein, capitalized terms used in this Policy will have the meaning given such term in the Company's 2018 Equity Incentive Plan (the "**Plan**"). Each Outside Director will be solely responsible for any tax obligations incurred by such Outside Director as a result of any equity or cash payments such Outside Director receives under this Policy.

This Policy will be effective as of the business day immediately prior to the Registration Date (the "**Effective Date**").

1. CASH COMPENSATION

Annual Cash Retainer

Each Outside Director will be paid an annual cash retainer of $40,000. There are no per-meeting attendance fees for attending Board meetings. This cash compensation will be paid quarterly in arrears on a prorated basis.

Committee Annual Cash Retainer

As of the Effective Date, each Outside Director who serves as the chairman of the Board or the chairman or a member of a committee of the Board will be eligible to earn additional annual fees (paid quarterly in arrears on a prorated basis) as follows:

Chair of the Board:	$30,000
Chair of Audit Committee:	$15,000
Member of Audit Committee:	$ 7,500
Chair of Compensation Committee:	$10,000
Member of Compensation Committee:	$ 5,000
Chair of Nominating and Governance Committee:	$ 8,000
Member of Nominating and Governance Committee:	$ 4,000

For clarity, each Outside Director who serves as the chairman of a committee will not receive the additional annual fee as a member of the committee.

2. EQUITY COMPENSATION

Outside Directors will be entitled to receive all types of Awards (except Incentive Stock Options) under the Plan (or the applicable equity plan in place at the time of grant), including discretionary Awards not covered under this Policy. All grants of Awards to Outside Directors pursuant to this Section 2 will be automatic and nondiscretionary, except as otherwise provided herein, and will be made in accordance with the following provisions:

(a) Initial Option. Each person who first becomes an Outside Director on or following the Effective Date will be granted a Nonstatutory Stock Option to purchase 32,000 Shares (the "**Initial Option**"), provided, however, that a Director who is an Employee (an "**Inside Director**") who ceases to be an Inside Director, but who remains a Director, will not receive an Initial Option. The Initial Option will be granted no later than the date of the first Board or Compensation Committee of the Board (the "**Compensation Committee**") meeting occurring on or after the date on which such individual first becomes an Outside Director, whether through election by the stockholders of the Company or appointment by the Board to fill a vacancy.

(b) Annual Option. On the date of each annual meeting of the Company's stockholders (the "**Annual Meeting**"), each Outside Director will be automatically granted a Nonstatutory Stock Option to purchase 16,000 Shares (an "**Annual Option**").

(c) No Discretion. No person will have any discretion to select which Outside Directors will be granted an Initial Option or Annual Option under this Policy or to determine the number of Shares to be covered by such Initial Option or Annual Option, as applicable (except as provided in Sections 5 and 7 below).

(d) Terms. The terms and conditions of each Initial Option or Annual Option will be as follows:

(i) Subject to Section 14 of the Plan and Section 2(e) of this Policy, each Initial Option will vest as to 1/36th of the Shares subject to the Initial Option each month following the commencement of the applicable Outside Director's service as an Outside Director (the "**Vesting Commencement Date**") on the same day of the month as the Vesting Commencement Date (or if there is no corresponding day on the last day of the month), in each case subject to the Outside Director remaining a Service Provider through such date.

(ii) Subject to Section 14 of the Plan and Section 2(e) of this Policy, each Annual Option will become fully vested on the earlier of (i) the one-year anniversary of the date of grant of such Annual Option or (ii) the date of the next Annual Meeting that occurs following the grant of such Annual Option, in each case subject to the Outside Director remaining a Service Provider through such date.

(iii) The term of each Initial Option and Annual Option granted under the Policy will be ten years, subject to earlier termination as provided in the Plan.

(iv) Each Initial Option and Annual Option granted under the Policy will have an exercise price per Share equal to 100% of the Fair Market Value per Share on the grant date.

(e) Change in Control. In the event of a Change in Control, all of an Outside Director's outstanding Awards (including his or her Initial Option and his or her Annual Options, as applicable) will become fully vested and exercisable (if applicable) immediately prior to such Change in Control.

3. TRAVEL EXPENSES

Each Outside Director's reasonable, customary, and documented travel expenses to Board meetings will be reimbursed by the Company.

4. ADDITIONAL PROVISIONS

All provisions of the Plan not inconsistent with this Policy will apply to Awards granted to Outside Directors.

5. ADJUSTMENTS

In the event that any dividend or other distribution (whether in the form of cash, Shares, other securities or other property), recapitalization, stock split, reverse stock split, reorganization, merger, consolidation, split-up, spin-off, combination, repurchase, or exchange of Shares or other securities of the Company, or other change in the corporate structure of the Company affecting the Shares occurs, the Administrator, in order to prevent diminution or enlargement of the benefits or potential benefits intended to be made available under this Policy, will adjust the number of Shares issuable pursuant to Awards granted under this Policy.

6. SECTION 409A

In no event will cash compensation or expense reimbursement payments under this Policy be paid after the later of (i) the 15th day of the 3rd month following the end of the Company's fiscal year in which the compensation is earned or expenses are incurred, as applicable, or (ii) the 15th day of the 3rd month following the end of the calendar year in which the compensation is earned or expenses are incurred, as applicable, in compliance with the "short-term deferral" exception under Section 409A of the Internal Revenue Code of 1986, as amended, and the final regulations and guidance thereunder, as may be amended from time to time (together, "**Section 409A**"). It is the intent of this Policy that this Policy and all payments hereunder be exempt from or otherwise comply with the requirements of Section 409A so that none of the compensation to be provided hereunder will be subject to the additional tax imposed under Section 409A, and any ambiguities or ambiguous terms herein will be interpreted to be so exempt or comply. In no event will the Company reimburse an Outside Director for any taxes imposed or other costs incurred as a result of Section 409A.

7. REVISIONS

The Board may amend, alter, suspend or terminate this Policy at any time and for any reason. No amendment, alteration, suspension or termination of this Policy will materially impair the rights of an Outside Director with respect to compensation that already has been paid or awarded, unless otherwise mutually agreed between the Outside Director and the Company. Termination of this Policy will not affect the Board's or the Compensation Committee's ability to exercise the powers granted to it under the Plan with respect to Awards granted under the Plan pursuant to this Policy prior to the date of such termination.

Exhibit 10.11

Allakos Inc.

Change in Control and Severance Policy

This Change in Control and Severance Policy (the "**Policy**") is designed to provide certain protections to a select group of key employees of Allakos Inc. ("**Allakos**" or the "**Company**") or any of its subsidiaries if their employment is involuntary terminated under the circumstances described in this Policy. The Policy is designed to be an "employee welfare benefit plan" (as defined in Section 3(1) of the Employee Retirement Income Security Act of 1974, as amended ("**ERISA**")), and this document is both the formal plan document and the required summary plan description for the Policy.

Eligible Employee: An individual is only eligible for protection under this Policy if he or she is an Eligible Employee and complies with its terms (including any terms in the Eligible Employee's Participation Agreement (as defined below)). An "**Eligible Employee**," is an employee of the Company or any subsidiary of the Company who has (a) been designated by the Board or an authorized committee of the Board (in either case, the "**Committee**") as eligible to participate in the Policy, whether individually or by position or category of position and (b) executed a participation agreement in the form attached hereto as Exhibit A (a "**Participation Agreement**").

Policy Benefits: An Eligible Employee will be eligible to receive the payments and benefits under this Policy and his or her Participation Agreement upon his or her Qualified Termination or CIC Qualified Termination, as applicable. The amount and terms of any Equity Vesting Acceleration, Salary Severance, Target Bonus Severance, and COBRA Benefit that an Eligible Employee may receive upon his or her Qualified Termination or CIC Qualified Termination, as applicable, will be set forth in his or her Participation Agreement. All benefits under this Policy payable upon a Qualified Termination or CIC Qualified Termination, as applicable, will be subject to the Eligible Employee's compliance with the Release Requirement and any timing modifications required to avoid adverse taxation under Section 409A. For the avoidance of doubt, if an Eligible Employee's termination of employment occurs outside the Change in Control Period, he or she will not be eligible to receive any severance payments or benefits in this Policy or his or her Participation Agreement that require a CIC Qualified Termination. Likewise, if an Eligible Employee's termination of employment occurs within the Change in Control Period, he or she will not be eligible to receive any severance payments or benefits in this Policy or his or her Participation Agreement that require a Qualified Termination**.**

Equity Vesting Acceleration: Upon a CIC Qualified Termination, an Eligible Employee will be eligible to receive the vesting acceleration benefits with respect to his or her Company equity awards that are set forth in his or her Participation Agreement (if any).

Salary Severance: Upon a Qualified Termination or CIC Qualified Termination, as applicable, an Eligible Employee will be eligible to receive salary severance payment(s) in the amount set forth in his or her Participation Agreement. The Eligible Employee's salary severance payment(s) will be paid in cash at the time(s) specified in his or her Participation Agreement.

Target Bonus Severance: Upon a Qualified Termination or CIC Qualified Termination, as applicable, an Eligible Employee will be eligible to receive a target bonus severance payment in the amount set forth in his or her Participation Agreement (if any). The Eligible Employee's target bonus severance payment will be paid in cash at the time(s) specified in his or her Participation Agreement.

COBRA Benefit: Upon a Qualified Termination or a CIC Qualified Termination, as applicable, if an Eligible Employee makes a valid election under COBRA to continue his or her health coverage, the Company will pay or reimburse the Eligible Employee for the cost of such continuation coverage for the Eligible

Employee and any eligible dependents that were covered under the Company's health care plans immediately prior to the date of his or her Qualified Termination or CIC Qualified Termination, as applicable, until the earliest of (a) the end of the applicable period set forth in the Eligible Employee's Participation Agreement, (b) the date upon which the Eligible Employee and/or the Eligible Employee's eligible dependents become covered under similar plans or (c) the date upon which the Eligible Employee ceases to be eligible for coverage under COBRA (the "**COBRA Coverage**"). Notwithstanding the preceding, if the Company determines in its sole discretion that it cannot provide the COBRA Coverage without potentially violating applicable law (including, without limitation, Section 2716 of the Public Health Service Act), the Company will instead provide the Eligible Employee a taxable lump-sum payment in an amount equal to the applicable number of months of COBRA Coverage specified in the Eligible Employee's Participation Agreement multiplied by the monthly COBRA premium that the Eligible Employee would be required to pay to continue his or her group health coverage in effect on the date of his or her Qualified Termination, based on the premium for the first month of COBRA coverage (whichever of such taxable payment or the COBRA Coverage, the "**COBRA Benefit**"). If the Company provides for a taxable cash payment in lieu of the COBRA Coverage, then such cash payment will be made regardless of whether the Eligible Employee elects COBRA continuation coverage and such payment will be made in full on the 61st day following the Eligible Employee's Qualified Termination or CIC Qualified Termination, as applicable.

Death of Eligible Employee: If an Eligible Employee dies before all payments or benefits he or she is entitled to receive have been paid, such unpaid amounts will be paid to his or her designated beneficiary, if living, or otherwise to his or her personal representative in a lump-sum payment as soon as possible following his or her death.

Release: An Eligible Employee's receipt of any severance payments or benefits upon his or her Qualified Termination or CIC Qualified Termination, as applicable, under this Policy is subject to the Eligible Employee signing and not revoking the Company's then-standard separation agreement and release of claims (which may include an agreement not to disparage the Company, non-solicit provisions, and other standard terms and conditions) (the "**Release**" and such requirement, the "**Release Requirement**"), which must become effective and irrevocable no later than the 60th day following the Eligible Employee's Qualified Termination or CIC Qualified Termination, as applicable, (the "**Release Deadline**"). If the Release does not become effective and irrevocable by the Release Deadline, the Eligible Employee will forfeit any right to severance payments or benefits under this Policy. In no event will severance payments or benefits under the Policy be paid or provided until the Release actually becomes effective and irrevocable. Notwithstanding any other payment schedule set forth in this Policy or the Eligible Employee's Participation Agreement, none of the severance payments and benefits payable upon such Eligible Employee's Qualified Termination or CIC Qualified Termination, as applicable, under this Policy will be paid or otherwise provided prior to the 60th day following the Eligible Employee's Qualified Termination or CIC Qualified Termination, as applicable. Except as otherwise set forth in an Eligible Employee's Participation Agreement or to the extent that payments are delayed under the paragraph below entitled "Section 409A," on the first regular payroll date following the 60th day following the Eligible Employee's Qualified Termination or CIC Qualified Termination, as applicable, the Company will pay or provide the Eligible Employee the severance payments and benefits that the Eligible Employee would otherwise have received under this Policy on or prior to such date, with the balance of such severance payments and benefits being paid or provided as originally scheduled.

Section 409A: The Company intends that all payments and benefits provided under this Policy or otherwise are exempt from, or comply with, the requirements of Section 409A of the Code and any guidance promulgated thereunder (collectively, "**Section 409A**") so that none of the payments or benefits will be subject to the additional tax imposed under Section 409A, and any ambiguities herein will be interpreted in accordance with this intent. No payment or benefits to be paid to an Eligible Employee, if

any, under this Policy or otherwise, when considered together with any other severance payments or separation benefits that are considered deferred compensation under Section 409A (together, the "**Deferred Payments**"), will be paid or otherwise provided until such Eligible Employee has a "separation from service" within the meaning of Section 409A. If, at the time of the Eligible Employee's termination of employment, the Eligible Employee is a "specified employee" within the meaning of Section 409A, then the payment of the Deferred Payments will be delayed to the extent necessary to avoid the imposition of the additional tax imposed under Section 409A, which generally means that the Eligible Employee will receive payment on the first payroll date that occurs on or after the date that is 6 months and 1 day following his or her termination of employment. The Company reserves the right to amend the Policy as it deems necessary or advisable, in its sole discretion and without the consent of any Eligible Employee or any other individual, to comply with any provision required to avoid the imposition of the additional tax imposed under Section 409A or to otherwise avoid income recognition under Section 409A prior to the actual payment of any benefits or imposition of any additional tax. Each payment, installment, and benefit payable under this Policy is intended to constitute a separate payment for purposes of U.S. Treasury Regulation Section 1.409A-2(b)(2). In no event will the Company reimburse any Eligible Employee for any taxes that may be imposed on him or her as a result of Section 409A.

Parachute Payments:

Reduction of Severance Benefits. Notwithstanding anything set forth herein to the contrary, if any payment or benefit that an Eligible Employee would receive from the Company or any other party whether in connection with the provisions herein or otherwise (the "**Payment**") would (a) constitute a "parachute payment" within the meaning of Section 280G of the Code, and (b) but for this sentence, be subject to the excise tax imposed by Section 4999 of the Code (the "**Excise Tax**"), then such Payment will be equal to the Best Results Amount. The "**Best Results Amount**" will be either (x) the full amount of such Payment or (y) such lesser amount as would result in no portion of the Payment being subject to the Excise Tax, whichever of the foregoing amounts, taking into account the applicable federal, state and local employment taxes, income taxes and the Excise Tax, results in the Eligible Employee's receipt on an after-tax basis of the greater amount, notwithstanding that all or some portion of the Payment may be subject to the Excise Tax. If a reduction in payments or benefits constituting parachute payments is necessary so that the Payment equals the Best Results Amount, reduction will occur in the following order: reduction of cash payments; cancellation of accelerated vesting of stock awards; and reduction of employee benefits. In the event that acceleration of vesting of stock award compensation is to be reduced, such acceleration of vesting will be cancelled in the reverse order of the date of grant of the Eligible Employee's equity awards.

Determination of Excise Tax Liability. The Company will select a professional services firm to make all of the determinations required to be made under these paragraphs relating to parachute payments. The Company will request that firm provide detailed supporting calculations both to the Company and the Eligible Employee prior to the date on which the event that triggers the Payment occurs if administratively feasible, or subsequent to such date if events occur that result in parachute payments to the Eligible Employee at that time. For purposes of making the calculations required under these paragraphs relating to parachute payments, the firm may make reasonable assumptions and approximations concerning applicable taxes and may rely on reasonable, good faith determinations concerning the application of the Code. The Company and the Eligible Employee will furnish to the firm such information and documents as the firm may reasonably request in order to make a determination under these paragraphs relating to parachute payments. The Company will bear all costs the firm may reasonably incur in connection with any calculations contemplated by these paragraphs relating to parachute payments. Any such determination by the firm will be binding upon the Company and the Eligible Employee, and the Company will have no liability to the Eligible Employee for the determinations of the firm.

Administration: The Policy will be administered by the Committee or its delegate (in each case, the "**Administrator**"). The Administrator will have full discretion to administer and interpret the Policy. Any decision made or other action taken by the Administrator with respect to the Policy and any interpretation by the Administrator of any term or condition of the Policy or any related document will be conclusive and binding on all persons and be given the maximum possible deference allowed by applicable laws. The Administrator is the "plan administrator" of the Policy for purposes of ERISA and will be subject to the fiduciary standards of ERISA when acting in such capacity.

Attorneys Fees: The Company and each Eligible Employee will bear their own attorneys' fees incurred in connection with any disputes between them.

Exclusive Benefits: Except as may be set forth in an Eligible Employee's Participation Agreement, this Policy is intended to be the only agreement between the Eligible Employee and the Company regarding any change in control or severance payments or benefits to be paid to the Eligible Employee on account of a termination of employment, whether unrelated to, concurrent with, or following, a change in control. Accordingly, by executing a Participation Agreement, an Eligible Employee hereby forfeits and waives any rights to any severance or change in control benefits set forth in any employment agreement, offer letter, and/or equity award agreement, except as set forth in this Policy and in the Eligible Employee's Participation Agreement.

Tax Withholding: All payments and benefits under this Policy will be paid less applicable withholding taxes. The Company or the subsidiary employing the Eligible Employee, as applicable, is authorized to withhold from any payments or benefits all federal, state, local and/or foreign taxes required to be withheld therefrom and any other required payroll deductions. The Company or the subsidiary employing the Eligible Employee, as applicable, will not pay, reimburse the Eligible Employee for, or be liable or responsible for any of the Eligible Employee's taxes arising from or relating to any payments or benefits under this Policy; instead, any such taxes will be solely the responsibility of the Eligible Employee.

Amendment or Termination: The Committee may amend or terminate the Policy at any time without advance notice to any Eligible Employee or other individual and without regard to the effect of the amendment or termination on any Eligible Employee or on any other individual, except that any amendment or termination of the Policy that is adverse to an Eligible Employee who was designated by the Committee as eligible to participate in the Policy on a date prior to such amendment or termination of the Policy will not be effective with respect to such Eligible Employee without such Eligible Employee's prior written consent. Notwithstanding the preceding, (a) any amendment to the Policy that causes an individual to cease to be an Eligible Employee will not be effective with respect to a Qualified Termination or CIC Qualified Termination, as applicable, unless it is both approved by the Administrator and communicated to the affected Eligible Employee in writing at least 6 months prior to the effective date of the amendment or termination, and (b) no amendment or termination of the Policy will be made within 12 months following a Change in Control if such amendment or termination would reduce the benefits provided hereunder or impair an Eligible Employee's eligibility under the Policy (unless the affected Eligible Employee consents to such amendment or termination). Any action in amending or terminating the Policy will be taken in a non-fiduciary capacity.

Claims Procedure: Any Eligible Employee who believes he or she is entitled to any payment under the Policy may submit a claim in writing to the Administrator. If the claim is denied (in full or in part), the claimant will be provided a written notice explaining the specific reasons for the denial and referring to the provisions of the Policy on which the denial is based. The notice will also describe any additional

information needed to support the claim and the Policy's procedures for appealing the denial. The denial notice will be provided within 90 days after the claim is received. If special circumstances require an extension of time (up to 90 days), written notice of the extension will be given within the initial 90-day period. This notice of extension will indicate the special circumstances requiring the extension of time and the date by which the Administrator expects to render its decision on the claim.

Appeal Procedure: If the claimant's claim is denied, the claimant (or his or her authorized representative) may apply in writing to the Administrator for a review of the decision denying the claim. Review must be requested within 60 days following the date the claimant received the written notice of their claim denial or else the claimant loses the right to review. The claimant (or representative) then has the right to review and obtain copies of all documents and other information relevant to the claim, upon request and at no charge, and to submit issues and comments in writing. The Administrator will provide written notice of the decision on review within 60 days after it receives a review request. If additional time (up to 60 days) is needed to review the request, the claimant (or representative) will be given written notice of the reason for the delay. This notice of extension will indicate the special circumstances requiring the extension of time and the date by which the Administrator expects to render its decision. If the claim is denied (in full or in part), the claimant will be provided a written notice explaining the specific reasons for the denial and referring to the provisions of the Policy on which the denial is based. The notice will also include a statement that the claimant will be provided, upon request and free of charge, reasonable access to, and copies of, all documents and other information relevant to the claim and a statement regarding the claimant's right to bring an action under Section 502(a) of ERISA.

Successors: Any successor to the Company of all or substantially all of the Company's business and/or assets (whether direct or indirect and whether by purchase, merger, consolidation, liquidation or other transaction) will assume the obligations under the Policy and agree expressly to perform the obligations under the Policy in the same manner and to the same extent as the Company would be required to perform such obligations in the absence of a succession. For all purposes under the Policy, the term "Company" will include any successor to the Company's business and/or assets which becomes bound by the terms of the Policy by operation of law, or otherwise.

Applicable Law: The provisions of the Policy will be construed, administered, and enforced in accordance with ERISA and, to the extent applicable, the internal substantive laws of the state of California (but not its conflict of laws provisions).

Definitions: Unless otherwise defined in an Eligible Employee's Participation Agreement, the following terms will have the following meanings for purposes of this Policy and the Eligible Employee's Participation Agreement:

"**Base Salary**" means the Eligible Employee's annual base salary as in effect immediately prior to his or her Qualified Termination or CIC Qualified Termination, as applicable, (in the case of a CIC Qualified Termination, if such termination is due to a resignation for Good Reason based on a material reduction in annual base salary, then the Eligible Employee's annual base salary in effect immediately prior to such reduction) or, in the case of a CIC Qualified Termination, and if such amount is greater, at the level in effect immediately prior to the Change in Control.

"**Board**" means the Board of Directors of the Company.

"**Cause**" means the occurrence of any of the following: (a) the Eligible Employee's engaging in illegal conduct that is determined by the Committee to be materially injurious to the Company or any of its subsidiaries; (b) the Eligible Employee's violation of a U.S. federal or state law or regulation or a law or regulation of any other jurisdiction applicable to the Company's business

which violation was or is reasonably likely to be injurious to the Company or any of its subsidiaries; (c) the Eligible Employee's material breach of the terms of any confidentiality agreement or invention assignment agreement between the Eligible Employee and the Company or any of its subsidiaries, as determined in good faith by the Committee; (d) the Eligible Employee's conviction for, or entry of a plea of *nolo contendere* to, a felony involving any act of moral turpitude, dishonesty, fraud against, or the misappropriation of material property belonging to, the Company or any of its subsidiaries; (e) the Eligible Employee's gross negligence or willful misconduct in the performance of his or her duties to the Company that has resulted or is likely to result in material damage to the Company, or continued and willful violations of his or her obligations to the Company as an employee of the Company or any of its subsidiaries, as determined in good faith by the Committee, and the Eligible Employee's failure to cure such violations within the thirty (30)-day period following written notice from the Committee; (f) any breach by the Eligible Employee of any material provision of the terms of his or her employment or engagement by the Company or any of its subsidiaries that is determined by the Committee to be materially injurious to the Company or any of its subsidiaries.

"**Change in Control**" has the meaning set forth in the Company's 2018 Equity Incentive Plan, as hereinafter may be amended from time to time.

"**Change in Control Period**" means the period beginning upon a Change in Control and ending 24 months following the Change in Control.

"**CIC Qualified Termination**" means, except as otherwise provided in a Participation Agreement, a termination of the Eligible Employee's employment during the Change in Control Period either (i) by the Company (or any of its subsidiaries) other than for Cause, death, or Disability or (ii) by the Eligible Employee for Good Reason.

"**COBRA**" means the Consolidated Omnibus Budget Reconciliation Act of 1985, as amended.

"**Code**" means the Internal Revenue Code of 1986, as amended.

"**Disability**" means the total and permanent disability as defined in Section 22(e)(3) of the Code unless the Company maintains a long-term disability plan at the time of the Eligible Employee's Qualified Termination, in which case, the determination of disability under such plan also will be considered "Disability" for purposes of this Policy.

"**Good Reason**" means the Eligible Employee's termination of employment with the Company (or any of its subsidiaries) in accordance with the next sentence after the occurrence of one or more of the following events without the Eligible Employee's prior written consent: (a) a material reduction in the Eligible Employee's authority, duties, or responsibilities or the assignment to the Eligible Employee of any duties materially inconsistent with the Eligible Employee's position, duties, authority, responsibilities or reporting requirements, provided, however, that continued employment following a Change in Control with substantially different duties, authorities, or responsibilities with respect to the Company's (or any of its subsidiaries') business and operations will constitute "Good Reason"; (b) a change in office

location of greater than thirty (30) miles from the Eligible Employee's then current location; (c) a material reduction in the Eligible Employee's annual salary and/or target annual bonus opportunity as in effect immediately prior to such reduction; provided, however, that, a reduction of annual base salary that also applies to substantially all other similarly situated employees of the Company or its subsidiaries will not constitute "Good Reason"; (d) any material breach by the Company (or any of its subsidiaries) of the Eligible Employee's employment letter with the Company (or any of its subsidiaries), the Policy or any equity award agreement with the Company; or (e) the failure by the Company to obtain the assumption of its obligations under the Policy by a successor to the Company. In order for the Eligible Employee's termination of employment to be for Good Reason, the Eligible Employee must not terminate employment with the Company without first providing the Company with written notice of the acts or omissions constituting the grounds for "Good Reason" within 90 days of the initial existence of the grounds for "Good Reason" and a cure period of 30 days following the date of written notice (the "**Cure Period**"), such grounds must not have been cured during the Cure Period, and the Eligible Employee must terminate employment within 60 days following the Cure Period.

"**Qualified Termination**" means, except as otherwise provided in a Participation Agreement, a termination of the Eligible Employee's employment outside of the Change in Control Period by the Company (or any of its subsidiaries) other than for Cause, death, or Disability.

Additional Information:

Plan Name:	Allakos Inc. Change in Control and Severance Policy
Plan Sponsor:	Allakos Inc. 75 Shoreway Road, Suite A San Carlos, California 94070
Identification Numbers:	
Plan Year:	Company's Fiscal Year
Plan Administrator:	Allakos Inc. *Attention:* Chief Executive Officer 75 Shoreway Road, Suite A San Carlos, California 94070
Agent for Service of Legal Process:	Allakos Inc. *Attention:* Chief Executive Officer 75 Shoreway Road, Suite A San Carlos, California 94070
Type of Plan:	Severance Plan/Employee Welfare Benefit Plan
Plan Costs:	The cost of the Policy is paid by the Company.

Statement of ERISA Rights:

Eligible Employees have certain rights and protections under ERISA:

They may examine (without charge) all Policy documents, including any amendments and copies of all documents filed with the U.S. Department of Labor, such as the Policy's annual report (Internal Revenue Service Form 5500). These documents are available for review in the Company's Human Resources Department.

They may obtain copies of all Policy documents and other Policy information upon written request to the Plan Administrator. A reasonable charge may be made for such copies.

In addition to creating rights for Eligible Employees, ERISA imposes duties upon the people who are responsible for the operation of the Policy. The people who operate the Policy (called "fiduciaries") have a duty to do so prudently and in the interests of Eligible Employees. No one, including the Company or any other person, may fire or otherwise discriminate against an Eligible Employee in any way to prevent them from obtaining a benefit under the Policy or exercising rights under ERISA. If an Eligible Employee's claim for a severance benefit is denied, in whole or in part, they must receive a written explanation of the reason for the denial. An Eligible Employee has the right to have the denial of their claim reviewed. (The claim review procedure is explained above.)

Under ERISA, there are steps Eligible Employees can take to enforce the above rights. For instance, if an Eligible Employee requests materials and does not receive them within 30 days, they may file suit in a federal court. In such a case, the court may require the Plan Administrator to provide the materials and to pay the Eligible Employee up to $147 a day until they receive the materials, unless the materials were not sent because of reasons beyond the control of the Plan Administrator. If an Eligible Employee has a claim which is denied or ignored, in whole or in part, he or she may file suit in a state or federal court. If it should happen that an Eligible Employee is discriminated against for asserting their rights, he or she may seek assistance from the U.S. Department of Labor, or may file suit in a federal court.

In any case, the court will decide who will pay court costs and legal fees. If the Eligible Employee is successful, the court may order the person sued to pay these costs and fees. If the Eligible Employee loses, the court may order the Eligible Employee to pay these costs and fees, for example, if it finds that the claim is frivolous.

If an Eligible Employee has any questions regarding the Policy, please contact the Plan Administrator. If an Eligible Employee has any questions about this statement or about their rights under ERISA, they may contact the nearest area office of the Employee Benefits Security Administration (formerly the Pension and Welfare Benefits Administration), U.S. Department of Labor, listed in the telephone directory, or the Division of Technical Assistance and Inquiries, Employee Benefits Security Administration, U.S. Department of Labor, 200 Constitution Avenue, N.W. Washington, D.C. 20210. An Eligible Employee may also obtain certain publications about their rights and responsibilities under ERISA by calling the publications hotline of the Employee Benefits Security Administration.

EXHIBIT A

Change in Control and Severance Policy
Participation Agreement

This Participation Agreement ("**Agreement**") is made and entered into by and between _____ and Allakos Inc. (the "**Company**"). Unless otherwise defined herein, the terms defined in the Change in Control and Severance Policy (the "**Policy**") will have the same defined meanings in this Agreement.

You have been designated as eligible to participate in the Policy, a copy of which is attached hereto, under which you are eligible to receive the following severance payments and benefits upon a Qualified Termination, subject to the terms and conditions of the Policy:

- **Salary Severance**: You will be paid your Base Salary for ____ months following your Qualified Termination, in accordance with the Company's regular payroll procedures. Such amount shall commence on the 61st day following your Qualified Termination.
- **Target Bonus Severance:** An amount equal to the product of (i) your target annual bonus opportunity for the year in which your Qualified Termination occurs multiplied by (ii) a fraction, the numerator of which is the number of days of your active employment with the Company (or any of its subsidiaries) during such year and the denominator of which is the number of days in such year. Such amount shall be payable in a lump sum on the 61st day following your Qualified Termination.
- **COBRA Coverage**: Payment or reimbursement of the COBRA Coverage for up to ____ months following your Qualified Termination.

In addition, you are eligible to receive the following severance payments and benefits upon a CIC Qualified Termination, subject to the terms and conditions of the Policy:

- **Equity Vesting Acceleration**: 100% of the then-unvested shares subject to each of your then-outstanding equity awards will immediately vest and, in the case of options and stock appreciation rights, will become exercisable (for avoidance of doubt, no more than 100% of the shares subject to the outstanding portion of an equity award may vest and become exercisable under this provision). In the case of equity awards with performance-based vesting, unless otherwise determined by the Company and set forth in your equity award agreement, all performance goals and other vesting criteria will be deemed achieved at 100% of target levels.
- **Salary Severance**: ____ months of your Base Salary, payable in a lump sum on the 61st day following your CIC Qualified Termination.
- **Target Bonus Severance:** An amount equal to 100% of your target annual bonus opportunity for the year in which your CIC Qualified Termination occurs, payable in a lump sum on the 61st day following your CIC Qualified Termination.
- **COBRA Coverage**: Payment or reimbursement of the COBRA Coverage for up to ____ months following your CIC Qualified Termination.

Other Provisions

You agree that the Policy and the Agreement constitute the entire agreement of the parties hereto and supersede in their entirety all prior representations, understandings, undertakings or agreements (whether oral or written and whether expressed or implied) of the parties, and will specifically supersede any severance and/or change in control provisions of any offer letter, employment agreement, or equity award agreement entered into between you and the Company and/or any of its subsidiaries.

This Agreement may be executed in counterparts, each of which will be deemed an original, but all of which together will constitute one and the same instrument.

By signing below, each of the parties signifies his, her, or its acceptance of the terms of this Agreement, in the case of the Company by its duly authorized officer, effective as of the last date set forth below.

ALLAKOS INC.	**ELIGIBLE EMPLOYEE**
By: _____	Signature: _____
Date: _____	Date: _____

[Signature Page of the Participation Agreement]

Exhibit 10.14

SPECIFIC TERMS IN THIS EXHIBIT HAVE BEEN REDACTED BECAUSE CONFIDENTIAL TREATMENT FOR THOSE TERMS HAS BEEN REQUESTED. THE REDACTED MATERIAL HAS BEEN SEPARATELY FILED WITH THE SECURITIES AND EXCHANGE COMMISSION, AND THE TERMS HAVE BEEN MARKED AT THE APPROPRIATE PLACE WITH THREE ASTERISKS [***].

NON-EXCLUSIVE LICENSE AGREEMENT

THIS NON-EXCLUSIVE LICENSE AGREEMENT (the "Agreement"), effective as of October 31, 2013 (the "Effective Date"), is entered into by and between **BioWa, Inc.**, with a principal place of business at 9420 Athena Circle, La Jolla, California 92037 USA ("BioWa"), **Lonza Sales AG** a Swiss corporation, with a principal place of business at Munchensteinerstrasse 38, Basel, CH-4002 Switzerland ("Lonza") (together "the Licensor") and **Allakos, Inc.** with its principal place of business located at 75 Shoreway Road, Suite A San Carlos CA 94070 ("Licensee"). Lonza, BioWa, Licensor or Licensee may hereafter be referred to as a "Party" and collectively as the "Parties."

BACKGROUND

WHEREAS, Lonza and BioWa have combined Lonza's GS System and BioWa's Potelligent® Technology and their related intellectual property to jointly create Potelligent® CHOK1SV for use in combination with the Vectors (all as herein defined) (the "Technology"); and

WHEREAS, Licensee is engaged in the business of researching, developing, manufacturing and/or commercializing recombinant protein products containing monoclonal antibodies for use as pharmaceutical products; and

WHEREAS, Licensee wishes to acquire certain nonexclusive rights to the Technology to research and develop monoclonal antibodies capable of specifically binding to targets which shall be identified and mutually agreed upon as specified in this Agreement; and

WHEREAS, Licensor is willing to grant such license to the Technology and the Licensee desires to take such license, subject to the terms and conditions in this Agreement.

NOW, THEREFORE, in consideration of the mutual covenants and agreements contained herein, the Parties, intending to be legally bound, agree as follows:

ARTICLE 1
DEFINITIONS

Words or phrases having their initial letter capitalized shall, except as clearly provided otherwise in this Agreement or in the context in which they are used, have the respective meanings set forth below. A cross-reference below to a defined term in this Agreement is for the convenience of the reader of this document, and this Article 1 may not contain an exhaustive list of all words or phrases defined elsewhere in this Agreement.

1.1 "Activities" means the Research, development, manufacturing and commercialization of a Product performed by Licensee or any permitted Sublicensee under this Agreement.

1.2 "ADCC" means Antibody Dependent Cellular Cytotoxicity.

1.3 "Affiliate" means any corporation, company, partnership, joint venture, firm or other business entity which controls, is controlled by, or is under common control with a Party. For purposes of this definition, "control" shall be presumed to exist if one of the following conditions is met: (a) in the case of corporate entities, direct or indirect ownership of at least fifty percent (50%) of the stock or shares having the right to vote for the election of directors, and (b) in the case of non-corporate entities, direct or indirect ownership of at least fifty percent (50%) of the equity interest with the power to direct the management and policies of such non-corporate entities. The Parties acknowledge that in the case of certain entities organized under the laws of certain countries, the maximum percentage ownership permitted by law for a foreign investor may be less than fifty percent (50%), and that in such case such lower percentage shall be substituted in the preceding sentence, provided that such foreign investor has the power to direct the management and policies of such entities.

1.4 "Antibody" means a monoclonal antibody, antibody fragment or any composition of matter derived therefrom, made through use of the Technology. For purposes of this Agreement, "derived" shall mean obtained, developed, created, synthesized, designed, derived or resulting from, based upon or otherwise generated (whether directly or indirectly, or in whole or in part). For purpose of clarity, the foregoing shall include any monoclonal antibody, any CDR (complementarity determining region), variable or constant region, any single chain antibody, any partially or fully humanized antibody, any peptides identified through antibody phage display, and any peptide derived from one or more antibodies based on the sequence and structure information of the antibodies, e.g. binding site information of the antibodies.

1.5 "Approval" means, with respect to a Product in a particular jurisdiction, the technical, medical and scientific licenses, registrations, authorizations and approvals (including, without limitation, approval of a BLA, and pricing and Third Party reimbursement approvals, and labeling approvals with respect thereto) of any national, supra-national, regional, state or local regulatory agency, necessary for the commercial manufacture, distribution, marketing, promotion, offer for sale, use, import, export and sale of a Product.

1.6 [***]

1.7 "Bankruptcy Code" means Title 11 of the United States Code.

1.8 "Base Powder" means the powder set out in Exhibit 3.

1.9 "Biologics License Application" or "BLA" means a Biologics License Application and amendments thereto filed pursuant to the requirements of the FDA, as defined in 21 C.F.R. Section 600 et seq., for FDA approval of a Product and "sBLA" means a supplemental BLA, and any equivalent or a New Drug Application, as defined in the U.S. Federal Food, Drug and Cosmetic Act, as amended, and the regulations promulgated thereunder, and any corresponding non-U.S. marketing authorization application, registration or certification, necessary to market a Product in any country outside the U.S., but not including applications for pricing and reimbursement approvals.

*** Certain information in this agreement has been omitted and filed separately with the Securities and Exchange Commission. [***] indicates that text has been omitted and is the subject of a confidential treatment request.

1.10 “Business Day” means any day that is not a Saturday, Sunday or other day on which commercial banks in New York, New York, United States are required or authorized by law to be closed.

1.11 “Calendar Quarter” means each three-month period commencing on January 1, April 1, July 1 or October 1 of each year during the Term.

1.12 “CHOK1SV Cell Line” means Lonza’s suspension variant host Chinese Hamster Ovary (CHO) cell line.

1.13 “Claims” has the meaning set forth in Section 11.1.

1.14 “Commencement” means the first dosing of the first patient in the applicable clinical trial.

1.15 “Commercial License” has the meaning set forth in Section 2.1.

1.16 “Commercial License Fee” has the meaning set forth in Section 6.3.

1.17 “Commercial Target” means [***] in accordance with [***].

1.18 [***].

1.19 “Confidential Information” means all confidential or other proprietary information of a Party, whether written, oral or otherwise, and including, but not limited to, Know-How or other information, whether or not patentable, regarding a Party’s technology, products, business information or objectives that is designated as confidential, or which under the circumstances surrounding disclosure or given the nature of the information would reasonably be believed to be confidential.

1.20 “Control” or “Controlled” means, with respect to a Know-How or Patent right, that a Party has the ability to grant a license or a sublicense to such intellectual property without violating the terms of any agreement with a Third Party.

1.21 “Effective Date” has the meaning set forth in the preamble to this Agreement.

1.22 “Enforcement Action” has the meaning set forth in Section 8.3.

1.23 “FDA” means the U.S. Food and Drug Administration and any successors thereto and its foreign counterparts throughout the world.

1.24 “Field” means the prevention, diagnosis and treatment of human diseases.

1.25 “First Commercial Sale” means, with respect to any Product in any country, the first bona fide commercial sale by Licensee or its Sublicensee (or Strategic Partner, if applicable) of such Product following an Approval in such country.

*** Certain information in this agreement has been omitted and filed separately with the Securities and Exchange Commission. [***] indicates that text has been omitted and is the subject of a confidential treatment request.

1.26 “GS System” means Lonza’s glutamine synthetase gene expression system consisting of the CHOK1SV Cell Line, the Transfection Medium & Supplements System, the Vectors, and the related Know-How and Patents, whether used individually, or in combination with each other. For the avoidance of doubt, any gene proprietary to Licensee inserted into the GS System for the purpose of producing Product does not form part of the GS System.

“IND” means an Investigational New Drug application, as defined in the U.S. Federal Food, Drug and Cosmetic Act, as amended, and the regulations promulgated thereunder, or any corresponding non-U.S. application, registration or certification necessary to transport or distribute investigational new drugs for clinical testing in any country outside the U.S.

1.27 “Indemnitee” and “Indemnitor” have the respective meanings set forth in Section 11.2.

1.28 “IP” means intellectual property.

1.29 “Know-How” means any proprietary technical or other information whether patentable or not and whether in written or verbal form, including technology, experience, formulae, concepts, discoveries, trade secrets, inventions, modifications, improvements, data (including all chemical, preclinical, pharmacological, clinical, pharmacokinetic, toxicological, analytical and quality control data), results, designs, ideas, analyses, methods, techniques, assays, research plans, procedures, tests, processes (including manufacturing processes, specifications and techniques), laboratory records, reports and summaries.

1.30 “Licensor IP Rights” means the Licensor Know-How and the Licensor Patent Rights.

1.31 “Licensor Know-How” means Know-How owned or Controlled by Licensor that relates directly to the Technology which may be provided to Licensee hereunder. Licensor Know-How includes Potelligent® CHOK1SV, Vectors, and any composition or formulation incorporating Potelligent® CHOK1SV and/or Vectors.

1.32 “Licensor Patent Rights” means the Patents set out in Exhibit 1 hereto, solely to the extent that such Patents relate to the Technology and are necessary or reasonably useful for researching, developing, commercializing, making, having made, using, having sold, offering for sale, selling or otherwise disposing of a Product pursuant to this Agreement.

1.33 “Losses” has the meaning set forth in Section 11.1.

1.34 [***].

1.35 “Management Representatives” has the meaning set forth in Section 12.1.

1.36 “Milestone Payments” means the payments set forth in Section 6.4.

1.37 “Net Sales” means the gross amount invoiced by Licensee or its Sublicensees (or Strategic Partner, if applicable) for sales of a Product [***] in the Territory [***], less the following (to the extent applicable):

[***]

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If a sale, transfer or other disposition with respect to the Product involves consideration other than cash or is not at arm's length, then the Net Sales from such sale, transfer or other disposition shall be [***].

In the event a Product is sold in any country in the form of a combination product [***] shall be determined by [***].

1.38 "Patents" means all patents and patent applications existing as of the Effective Date and all patent applications thereafter filed, including any continuation, continuation-in-part, division, provisional or any substitute applications, any patent issued with respect to any such patent applications, any reissue, reexamination, renewal or extension (including any supplemental patent certificate) of any such patent, and any confirmation patent or registration patent or patent of addition based on any such patent, and all foreign counterparts of any of the foregoing.

1.39 [***].

1.40 "Phase I Clinical Trial" means a human clinical trial in any country that is intended to collect data on safety of a Product for a particular indication or indications in patients with the disease or indication under study or that would otherwise satisfy the requirements of 21 Code of Federal Regulations ("CFR") §312.21(a) (U.S.) or its non-U.S. equivalent.

1.41 "Phase II Clinical Trial" means a human clinical trial in any country that is intended to collect data on dosage and evaluate the safety and the effectiveness of a Product for a particular indication or indications in patients with the disease or indication under study or that would otherwise satisfy the requirements of 21 Code of Federal Regulations ("CFR") §312.21(b) (U.S.) or its non-U.S. equivalent.

1.42 "Phase III Clinical Trial" means a human clinical trial in any country that is intended to be a pivotal trial the result of which would be used to establish safety and efficacy of a Product as a basis for a BLA or that would otherwise satisfy the requirements of 21 CFR 312.21(c) or its non-U.S. equivalent.

1.43 "Potelligent® CHOK1SV" means the FUT8 (-/-) knock-out CHOK1SV Cell Line jointly created by Lonza's Affiliate, Lonza Biologics plc, and BioWa's Affiliate, Kyowa Hakko Kirin Co., Ltd., by combining the CHOK1SV Cell Line and the Potelligent® Technology.

1.44 "Potelligent® Technology" means BioWa's proprietary technology directly relating to the use of Potelligent® Cells to produce Antibodies with enhanced ADCC activity by reducing the amount of fucose linked to the carbohydrate chains, including (i) Potelligent® Cells; (ii) cell transfection methods, including methods for selection of transfected cells; (iii) protein expression, production or purification methods; (iv) therapeutic compositions, formulations or uses of, and other modifications to, Antibodies with enhanced ADCC activity produced by transfected cells; and (v) any modifications to host cells producing glycoproteins with a reduced amount of fucose linked to such glycoproteins. For the purposes of clarity general technology that relates solely to the growth of cells or applies generally to antibodies

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that have not been fucose-reduced, even if it also applies to Potelligent® Cells, is not included. For the purposes of further clarity, a combined technology comprising Potelligent® Technology offered in combination with technology owned or Controlled by one or more Third Parties is also not Potelligent® Technology.

1.45 “Product” means any composition or formulation in the Field containing or comprising an Antibody owned or controlled by Licensee, which alone or in combination with other active or inactive ingredients, components or materials is designed to bind to or modulate the Commercial Target and whose development, manufacture, use or sale would but for a license under the Licensor IP Rights infringe the Licensor IP Rights.

1.46 “Progress Report” has the meaning set forth in Article 5.

1.47 “Prosecution and Maintenance” has the meaning set forth in Section 8.2.

1.48 “Regulatory Authority” means any federal, national, multinational, state, provincial or local regulatory agency, department, bureau or other governmental entity with authority over the research, development, manufacture, commercialization or use (including the granting of a BLA) of any Product in any jurisdiction, including the FDA, the European Commission or the European Agency for the Evaluation of Medicinal Products, and the Ministry of Health, Labor and Welfare in Japan.

1.49 “Research” means research and non-clinical development activities performed up to the date of the Commencement of Phase I Clinical Trial for any Product, but does not include human clinical studies or other commercialization activities, such as the manufacture, use, marketing and sale of any Product or any product containing or derived from a Product.

1.50 “Royalty” and “Royalties” has the meaning set forth in Section 6.5.

1.51 “Strategic Partner” means a party with whom [***]. In no event may any entity that is [***] be deemed a Strategic Partner for the purposes of this Agreement.

1.52 “Sublicensee” means any Third Party or an Affiliate of Licensee, to whom Licensee has granted any of its rights under Article 2.

1.53 “Target” means a polypeptide, carbohydrate chain or other molecule to which an Antibody binds and/or which an Antibody modulates.

1.54 “Technology” means Antibody expression and ADCC enhancing technology using Potelligent® CHOK1SV in combination with the Transfection Medium & Supplements System, the Vectors and related Know-How and Patents, including but not limited to (i) Potelligent® CHOK1SV; (ii) cell transfection methods, including methods for selection of transfected cells; (iii) protein expression, production or purification methods; (iv) therapeutic compositions, formulations or uses of, and other modifications to, Antibodies with enhanced ADCC activity produced by transfected cells; and (v) any modifications to host cells producing glycoproteins with a reduced amount of fucose linked to such glycoproteins.

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1.55 “Technology Improvements” means any inventions or other intellectual property (including all Patent, Know-How and other intellectual property rights therein) that relates specifically to the Technology made by, or under authority of, the Licensee or any authorized Sublicensee during the Term in conducting the Activities contemplated by this Agreement. For the avoidance of doubt, any invention or other intellectual property (including Patent, Know-How and other intellectual property rights therein) relating to any Antibody or any Product shall not constitute a Technology Improvement under this Agreement to the extent that it is severable from and does not comprise of (in whole or part) or disclose or reveal any Licensor IP Rights.

1.56 “Term” has the meaning set forth in Section 7.1.

1.57 “Territory” means all countries and territories in the world.

1.58 “Third Party” means any entity other than Licensee, BioWa, or Lonza.

1.59 “Transfected Cells” means Potelligent® CHOK1SV Cells transfected by Licensee with recombinant DNA encoding a monoclonal antibody.

1.60 “Transfection Medium” means the solutions of nutrients used in mammalian cell culture, as more fully set out in Exhibit 3.

1.61 “Transfection Supplements” means the supplement solutions used in the Transfection Medium, as more fully set out in Exhibit 3.

1.62 “Transfection Medium Know-How” means any Know-How specifically relating to the Transfection Medium, as set out in Exhibit 3.

1.63 “Transfection Medium & Supplements System” means the Base Powder, the Supplements, the Transfection Medium, and Transfection Medium Know-How used either in combination or individually.

1.64 “U.S.” means the United States of America, including all commonwealths, territories, and possessions of the United States.

1.65 “Valid Claim” means an issued and unexpired claim of a Licensor Patent Right that has not been canceled, withdrawn, or rejected and has not lapsed or become abandoned or been declared invalid or unenforceable or been revoked by a court or agency of competent jurisdiction from which no appeal can be or has been taken.

1.66 “Vectors” means Lonza’s vectors identified in Section 6.1 below.

1.67 “Withholding Taxes” means the amount of taxes required to be paid or withheld pursuant to any applicable law, including U.S. federal, state or local tax law.

ARTICLE 2
LICENSE GRANTS AND COVENANTS

2.1 Grant of Commercial License. Subject to the terms and conditions of this Agreement and upon payment of the Commercial License Fee, Licensor hereby grants to Licensee a fee- and royalty-bearing, non-exclusive license in and to the Licensor IP Rights, with the limited right to sublicense in accordance with Section 2.2, to Research, develop, commercialize, make, use, import, have imported, sell, have sold, offer for sale and otherwise dispose of Product in the Field in the Territory (the “Commercial License”).

2.2 Sublicense. Licensee shall have the right to grant sublicenses to Third Parties under the terms of this Section 2.2, provided that no sublicense shall provide for the right to grant further sublicenses without Licensor's prior written consent, such consent not to be unreasonably withheld or delayed.

2.2.1 Licensee may grant sublicenses to and transfer [***] for the purpose of [***] , provided that [***] provided however that to the extent that such proposed sublicense is regarded as the [***] . In any agreement to sublicense or transfer [***].

2.2.2 Licensee shall have the right [***], provided that prior to entering into any agreement [***] and, provided further, that [***].

2.2.3 If Licensee desires to [***]. Notwithstanding the foregoing, the Parties acknowledge that [***].

2.2.4 Any sublicense permitted under Sections 2.2.1, 2.2.2 and 2.2.3 above shall be [***] the terms of this Agreement and [***]. In each sublicense agreement, Licensee shall [***].

2.2.5 In the event that Licensee fails to make payments pursuant to this Agreement, all payments due to Licensee from its Sublicensees under the sublicense agreements shall, upon notice from Licensor to Sublicensees, become payable directly to Licensor for the account of Licensee, but solely to the extent of payments due to Licensor under this Agreement.

2.3 **Performance by Sublicensees.** Licensee's execution of a sublicense agreement shall not relieve Licensee of any of its obligations under this Agreement. Licensee shall remain jointly and severally liable to Licensor for any performance or non-performance of a Sublicensee that would be a breach of this Agreement if performed or omitted by Licensee, and Licensee shall be deemed to be in breach of this Agreement as a result of such Sublicensee performance or non-performance.

2.4 **Licensor's Rights**. Except for the rights granted to Licensee under this Agreement, all right, title and interest in and to the Technology shall at all times remain with and be vested in Licensor. Neither Licensee nor its Sublicensees shall use the Technology for any purpose other than as expressly granted to Licensee under this Agreement.

2.5 **Third Party Rights and Licenses**. Licensee shall be responsible for obtaining all rights from Third Parties or Licensor's Affiliates that are necessary to research, develop and commercialize Product in the Field.

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2.6 **Permitted Uses of the Technology; Prohibition on Modifications or Adaptations**. Licensee's use of the Technology is limited to inserting gene(s) coding for Licensee's proprietary antibodies into the Vectors and then into Potelligent® CHOK1SV for the purpose of generating Antibodies. Licensee hereby undertakes not to make any modifications or adaptations to the Technology during the subsistence of this Agreement except as explicitly provided under this Section 2.6 hereto. Licensee is specifically prohibited from performing any analysis, test, experiment or reverse-engineering of the Technology, provided that Licensee may test Potelligent® CHOK1SV and Transfected Cells as necessary for Allakos' quality assurance, quality control or compliance with Applicable Laws.

ARTICLE 3 – USE OF TECHNOLOGY

3.1 Sole Uses of Technology. Licensee shall not use, nor shall it permit any authorized Sublicensee to use, the Vectors, Potelligent® CHOK1SV or Licensor IP Rights for any purpose other than that permitted in Section 2.1. Upon transfection, Licensee shall have the right to use the Transfected Cells solely to Research, develop, commercialize, make, have made, use, import, have imported, export, have exported, sell, have sold, offer for sale, and otherwise dispose of Product pursuant to the terms and subject to the conditions of this Agreement. Except as permitted in accordance with Section 2.2, Licensee shall not offer for sale, sell, transfer or otherwise distribute Potelligent® CHOK1SV, Transfected Cells, or Licensor IP Rights to any Third Party. Licensee shall store, handle, transport, use and dispose of Potelligent® CHOK1SV and Transfected Cells in accordance with all applicable country, state and local laws and regulations.

3.2 Rights in Transfected Cells. Subject to the Licensor IP Rights and rights in Technology Improvements set forth in this Agreement, Licensor shall have no rights to the Transfected Cells and Licensee shall be the exclusive owner of the Transfected Cells, Antibodies and Product, provided that Licensee's use of the Transfected Cells is subject to the licenses granted under this Agreement.

ARTICLE 4 – TARGET DESIGNATION

4.1 Target Designation. [***].

4.2 Notification of Commencement of Phase I Clinical Trials. Within thirty (30) days of Commencement of the first Phase I Clinical Trial for each Product, Licensee shall provide Licensor written notice of such Commencement and such notice shall (i) specifically identify the Commercial Target for such Product and (ii) specifically identify the Product being developed.

ARTICLE 5
PROGRESS REPORTS

During the Term Licensee shall deliver to Licensor annual, written, reasonably detailed progress reports, following the format set forth in Exhibit 2, of Activities conducted in the preceding calendar year, including Licensee's progress towards the achievement of milestone events set forth in Section 6.3 (the "Progress Report"). The first Progress Report shall be due on the first anniversary of the Effective Date, and subsequent Progress Reports on each anniversary of the Effective Date thereafter.

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ARTICLE 6 – FINANCIAL TERMS

6.1 Reservation of Research License Fee. It is acknowledged between Lonza and Licensee that it is the intention of such parties that upon or shortly after the Effective Date Lonza and Licensee shall [***]. On the basis of such understanding it is agreed that Lonza shall [***]. If for whatever reason Licensee wishes to [***] Licensee shall be entitled to [***].

[***]

Licensor shall (a) provide Licensee with [***].

6.2 BioWa Target Reservation Fee [***], Licensee shall pay to BioWa an upfront and annual non-refundable, non-creditable Target reservation fee ("Target Reservation Fee") in the amount of [***], within [***] days of the Effective Date and [***].

6.3 BioWa Commercial License Fee. In partial consideration of the Commercial License granted under this Agreement, Licensee shall pay to BioWa an annual, nonrefundable, non-creditable commercial license fee of Forty Thousand U.S. Dollars (US $40,000) (the "Commercial License Fee"). The initial payment of the Commercial License Fee shall be due and payable within [***] shall end on the anniversary of the Effective Date immediately preceding BioWa's receipt of the first royalty payment pursuant to Section 6.5.1 below

6.4 Milestone Payments.

6.4.1 **BioWa Milestone Payments.** [***], Licensee shall make the following [***] milestone payments to BioWa, [***]:

[***].

6.5 Royalty Payments.

6.5.1 BioWa Royalty Payments. As [***], during the BioWa Royalty Term (as defined below), Licensee shall pay to BioWa running royalties ("BioWa Royalties") [***].

BioWa Royalties shall be payable on a country-by-country basis until the later of: (i) (x) ten (10) years from the date of First Commercial Sale of the Product for the Commercial Target in such country or (y) the expiration of one or more regulatory exclusivity periods that would apply to such product in such country, whichever of (x) and (y) is later; and (ii) the expiration of the last to expire Valid Claim within the Licensor Patent Rights in such county ("BioWa Royalty Term"). Thereafter, subject to Sections 6.5.2 and 6.5.3 below the license under this Agreement for the Commercial Target shall become fully paid up.

6.5.2 Lonza Royalty Payments. As [***] during the Lonza Royalty Term (as defined below), Licensee shall pay to Lonza royalties ("Lonza Royalties") on a country-by-country basis and Product-by-Product basis at the following rates:

[***].

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Lonza Royalties will be payable by Licensee until the later of (i) ten (10) years from the date of First Commercial Sale of the first Product for the Commercial Target, or (ii) the expiration of the last-to-expire patent within the Licensor IP Rights ("Lonza Royalty Term"). Thereafter, subject to Section 6.5.1 above and 6.5.3 below, the license under this Agreement for the Product shall become fully paid up.

6.5.3 Product sold in Countries not Protected by a Valid Claim. In the event Product is sold in a country in which there is no Valid Claim [***] covering such Product, or [***] Valid Claims covering such Product have expired [***], royalties shall be due only in respect of [***].

6.5.4 [***]. If Licensee, [***], then Licensee may [***]; provided that, in no event shall [***]. For clarity, Licensee shall not be entitled to [***].

6.6 Notification Obligations and Payment Dates for Milestone Payments and Royalties. Licensee shall inform Licensor in writing within [***]. Licensee shall make the relevant Milestone Payment within [***]. All Royalty payments under Section 6.5 shall be due and payable [***] and within [***]. Together with any such payment, Licensee shall [***].

6.7 Late Payment. Any payments or portions thereof due to Licensor hereunder which are not paid when due [***]. This Section 6.7 shall in no way limit any other remedies available to Licensor for late payments. Failure to make any payments pursuant to the terms of this Agreement hereunder shall constitute a breach of this Agreement.

6.8 Mode of Payment.

6.8.1 Mode of Payment to BioWa. All payments to BioWa hereunder shall be made in [***] in the stated amount by wire transfer to such bank account as BioWa may from time to time designate by notice in writing to Licensee. Until otherwise designated by notice, the fees payable under this Article 6 to BioWa shall be paid to [***]. Payments shall be [***].

6.8.2 Mode of Payment to Lonza. All payments to Lonza hereunder shall be made in [***] in the stated amount by wire transfer to such bank account as Lonza may from time to time designate by notice in writing to Licensee. Until otherwise designated by notice, the fees payable to Lonza under this Article 6 to Lonza shall be paid to: [***].

6.9 Records Retention and Audit. With respect to the Product, Licensee shall keep, and shall cause its Sublicensees (or Strategic Partner, if applicable), and their respective agents, to keep for as long as legally required and in no event less than [***], complete, true and accurate books of accounts and records of all quantities of Product manufactured and sold (or otherwise distributed) in sufficient detail to confirm the accuracy of the Net Sales and Royalty calculations hereunder. Upon reasonable prior written notice from Licensor, during the Term and for [***] thereafter, Licensee shall permit an independent certified public

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accountant, appointed and paid by Licensor, and reasonably acceptable to Licensee, at reasonable times during normal business hours and under a written confidentiality agreement between the accountant and Licensee executed prior to the inspection, to examine these records solely to the extent reasonably necessary to verify such calculations for any Calendar Year ending not more than [***] prior to the date of such request. Such investigation shall be at the expense of [***]. If such investigation shows [***], Licensee shall promptly (but in no event later than [***]. Licensee shall ensure that [***] obligations under this provision.

6.10 Tax Withholding. All payments required under this Agreement shall be without deduction or withholding for, or on account of, any taxes or similar governmental charge imposed by any jurisdiction. Any withholding taxes shall be the sole responsibility of the paying Party. The Party receiving payment agrees to elect to claim a tax credit for any such withholding taxes paid by the paying Party for which the receiving Party is entitled to so elect, and at the time the receiving Party actually realizes a reduction in its regular income tax liability by utilizing any such withholding taxes as a credit against its regular income tax liability (determined on a "first in first out" basis pro rata with other available foreign tax credits), then the amount of such credit shall be promptly reimbursed to the paying Party, to the extent such withholding taxes were paid by the paying Party.

6.11 Blocked Payments. In the event that, by reason of applicable laws or regulations in any country, it becomes impossible or illegal for Licensee or its Sublicensees to transfer, or have transferred on its or their behalf, Royalties or other payments to Licensor, such Royalties or other payments shall be deposited in local currency in the relevant country to the credit of Licensor in a recognized banking institution designated by Licensor or, if none is designated by Licensor within a period of thirty (30) days, in a recognized banking institution selected by Licensee or its Sublicensees, as the case may be, and identified in a written notice to Licensor.

ARTICLE 7 – TERM AND TERMINATION

7.1 Term and Expiration. This Agreement shall become effective on the Effective Date and unless earlier terminated pursuant to this Article 7, shall remain in full force and effect until there are no remaining Royalty payment obligations with respect to any Product in any country (the "Term").

7.2 Termination at Will by Licensee. Licensee shall have the right to terminate this Agreement in its entirety for any reason upon ninety (90) days prior written notice to Licensor. Upon termination in accordance with this Section 7.2, the licenses granted by Licensor pursuant to Article 2 shall terminate in its entirety. Licensee shall remain obligated for all payments due at the time of such notice and for any continuing obligations otherwise surviving and owed under this Agreement pursuant to Section 7.9.

7.3 Termination for Breach. Without prejudice to any other remedies that may be available under this Agreement, in the event that Licensee, on the one hand, or Licensor, on the other hand, has materially breached this Agreement, and the breaching Party has not cured such breach within thirty (30) days following its receipt of written notice thereof from the non-breaching Party, the non-breaching Party may terminate this Agreement by providing written notice to the other Party with immediate effect.

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7.4 Termination for Insolvency. Either Licensor or Licensee may terminate this Agreement by written notice with immediate effect if the other becomes insolvent, makes a general assignment for the benefit of creditors, is the subject of proceedings in a voluntary or involuntary bankruptcy proceeding instituted on behalf of or against such Party (except for involuntary bankruptcies which are dismissed within ninety (90) days), or has a receiver or trustee appointed for substantially all of its property.

7.5 Accrued Rights and Obligations. Termination or expiration of this Agreement for any reason shall not (a) release any Licensor or Licensee from any liability which, at the time of such termination or expiration, has already accrued or which is attributable to a period prior to such termination or expiration or (b) preclude any Licensor or Licensee from pursuing any rights and remedies it may have hereunder, or at law or in equity, with respect to any breach of, or default under, this Agreement. Licensor or Licensee understand and agree that monetary damages may not be a sufficient remedy for a breach of this Agreement and that the Licensor or Licensee may be entitled to injunctive relief as a partial remedy for any such breach.

7.6 Inventory on Hand. Upon termination or expiration of this Agreement for any reason other than for non-payment of Royalties and Milestone Payments, Licensee and its Sublicensees may sell or otherwise distribute the inventory of any Product then on hand until the first anniversary of the date of such termination. All such sale or distribution shall be subject to the relevant terms of this Agreement (including the payment of Royalties thereon).

7.7 Destruction of Biological Materials. Upon termination [***] of this Agreement, [***] shall provide [***] with a [***] provided, however, that [***]. For the avoidance of doubt [***] shall not be [***]**.**

7.8 Licenses. The license(s) granted to Licensee in this Agreement shall terminate upon any termination of this Agreement and, in such event, Licensee shall cease, and cause its Sublicensees to cease, all uses of Licensor IP Rights or the Technology for any purposes, including but not limited to, the Research, development, manufacturing and commercialization of any Product. Upon expiration of this Agreement, all license(s) granted to Licensee in this Agreement shall survive as paid-up, irrevocable, non-exclusive licenses.

7.9 Survival. The following provisions of this Agreement shall survive expiration or termination of this Agreement: Article 1; Section 2.4 (regarding Licensor's retained rights); Section 3.1 (regarding sole uses of Technology); Article 6 (regarding payment obligations incurred prior to termination or expiration, record retention and audit rights); Sections 7.6 through 7.9; Section 8.1 (regarding the ownership of any IP rights); Section 8.2 (regarding Patent prosecution); Article 9 (regarding confidentiality); Sections 11.4, 11.5 and 11.6 (regarding warranty disclaimers); Article 11 (regarding indemnifications); Article 12 (regarding dispute resolution); and Article 13 (regarding miscellaneous provisions).

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Article 8 INTELLECTUAL PROPERTY

8.1 Ownership of IP.

8.1.1 Background IP. Except as expressly otherwise provided herein, neither Party will, as a result of this Agreement, acquire any right, title, or interest in any intellectual property either (i) owned or controlled by another Party prior to the Effective Date or (ii) developed or acquired by another Party independently from, and in the case of Licensee without the use or reliance on the Technology.

8.1.2 General. Subject to Section 8.1.4, all [***] shall be owned by [***] and [***] hereby assigns to [***] its entire right, title and interest in and to any [***] contemplated by this Agreement. [***] shall disclose or cause to be disclosed to [***] contemplated by this Agreement [***].

8.1.3 Subject to the terms and conditions set forth herein, Licensor hereby grants to Licensee a non-exclusive, world-wide, fully paid-up, irrevocable, transferable license, including the right to grant sublicenses as provided under Section 2.2, under the Technology Improvements, to research, develop, make, use, sell and import the Product**.**

8.1.4 Licensee Product Improvements. [***].

8.2 Patent Prosecution. As between Licensor and Licensee, [***] shall have the right, [***] as provided under [***]. As used in this Article 8, [***] shall mean [***].

8.3 Infringement by Third Party. Subject to the provisions of this Section 8.3, in the event that [***] pursuant to this Section 8.3.

8.4 Third Party Infringement Claims. [***] pursuant to this Section 8.4. [***] described in this Section 8.4 [***].

8.5 Product Markings and Trademarks. To the extent required by law, each Product marketed and sold by Licensee or Sublicensees under this Agreement shall be marked with all patents and other intellectual property notices relating to the Licensor Patent Rights. Subject to the terms and conditions of this Agreement, Licensor hereby grants to Licensee a non-exclusive, revocable license, with the limited right to Licensee to sublicense to its Sublicensees, to use and display the "POTELLIGENT® CHOK1SV™" trademark solely for marking the Product, if required, under this Section 8.5.

Article 9 CONFIDENTIALITY AND PUBLICATION

9.1 Confidential Information. The Parties recognize that each Party's Confidential Information constitutes highly valuable and proprietary assets of the disclosing Party.

9.1.1 The Parties agree that Confidential Information shall not be deemed to include information that the receiving Party can demonstrate by written documentation:

(a) is now, or hereafter becomes, through no act or failure to act on the part of the receiving Party, in the public domain;

(b) is known by the receiving Party or its Affiliates at the time of receiving such information, as evidenced by credible evidence;

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(c) is furnished to the receiving Party or its Affiliates by a Third Party under no obligation of confidentiality, as a matter of right and without restriction on disclosure; or

(d) is independently discovered or developed by the receiving Party or its Affiliates without reference to the disclosing Party's Confidential Information.

9.1.2 Each Party agrees that, notwithstanding the termination or expiration of this Agreement, the receiving Party shall maintain all Confidential Information of a disclosing Party in confidence and shall not publish, disseminate or otherwise disclose a disclosing Party's Confidential Information to any Third Party, nor use any Confidential Information of a disclosing Party, without the written consent of the disclosing Party, except for the purpose of this Agreement as provided in this Article 9. Notwithstanding the foregoing, the receiving Party may disclose and disseminate Confidential Information of the disclosing Party only to those Affiliates, Sublicensees, employees or contractors, professional advisers, finance-providers, and potential and actual acquirers of the receiving Party who have a bona fide need to know for the purpose of this Agreement, or an applicable financing or acquisition, and only after such Affiliates, employees, contractors, professional advisers, finance-providers, and potential and actual acquirers have been advised of the confidential nature of such information and are bound in writing by an obligation of confidentiality under terms substantially similar to the confidentiality obligations in this Agreement; and further provided that potential acquirers will only be entitled to received information on the material terms of this Agreement.

9.2 Permitted Use and Disclosures. Each receiving Party may use or disclose Confidential Information of a disclosing Party to the extent such use or disclosure is reasonably necessary in complying with applicable governmental regulations or otherwise submitting information to governmental authorities, conducting clinical trials, applying for regulatory approvals, negotiating or making a permitted sublicense or otherwise exercising its rights hereunder, provided that if a receiving Party is required to make any such disclosure of a disclosing Party's Confidential Information, it shall make commercially reasonable efforts to: (a) give prompt written notice to the disclosing Party of the proposed disclosure to the relevant governmental authority, and allow the disclosing Party at least thirty (30) days to object to all or any portion of the disclosure before it is disclosed; (b) if advance notice is not possible, provide written notice of disclosure immediately thereafter; (c) to the extent possible, minimize the extent of such disclosure; and (d) secure confidential treatment of such information prior to its disclosure (whether through protective orders or otherwise), it being understood that any information so disclosed shall otherwise remain subject to the limitations on use and disclosure hereunder. The Party proposing to disclose any Confidential Information under this provision shall take into reasonable consideration any comments and objections raised by the disclosing Party.

9.3 Press Releases. The text of any press release or other communication to be published by or presented in the media concerning the subject matter of this Agreement shall require the prior written approval of all Parties, except as may be required by law or regulation.

9.4 Disclosures Required by Law. If a public disclosure is required by law, rule or regulation, including in a filing with the Securities and Exchange Commission, the disclosing Party shall provide copies of the disclosure reasonably in advance of such filing or other disclosure, but not later than ten (10) Business Days prior to the filing, for a non-disclosing Party's prior review and comment and to allow a non-disclosing Party a reasonable time to object to any such disclosure or to request confidential treatment thereof. Notwithstanding the foregoing, the Parties hereby agree to issue a press release subsequent to the Effective Date, the content of which shall be approved by the Parties as soon as practical.

9.5 Review of Proposed Publications, Presentations or Patent Applications. No Party shall publish any manuscript, abstract, specification, text and/or any other material that includes information about the Agreement, the Technology or a Party's Confidential Information without providing a copy of the materials to the receiving Parties and obtaining such other Parties' consent pursuant to this Section 9.5. A receiving Party shall review any such materials provided to it by the publishing Party to determine if Confidential Information is or may be disclosed. A receiving Party shall notify the publishing Party [***] after receipt of the proposed publication if the receiving Party determines that [***]. If it is determined by the receiving Party that [***]. In the event that the delay needed to complete the [***], the Parties shall discuss the need for [***]. If it is determined by the receiving Party that [***], the publishing Party shall [***]. The publishing Party shall [***], unless otherwise instructed by such other Party.

9.6 Confidential Terms. Except as expressly permitted in this Agreement, no Party shall disclose any terms of this Agreement to any Third Party without the prior written consent of the other Parties; except that such consent shall not be required for disclosure to actual or prospective investors or to a Party's accountants, attorneys and other professional advisors (provided that such disclosures shall be subject to continued confidentiality obligations at least as strict as are set forth herein).

9.7 Return or Destruction of Confidential Information. Upon termination or expiration of this Agreement, Licensor and Licensee shall each, at its sole discretion, either promptly return to the other all Confidential Information of the other or destroy all tangible items comprising, bearing or containing any Confidential Information and provide a written certification of such destruction; provided, however, that each Party may retain one (1) copy of such Confidential Information for archival purposes and for ensuring compliance with this Article 9.

Article 10 REPRESENTATIONS, WARRANTIES AND COVENANTS

10.1 Mutual Representations, Warranties and Covenants. Licensor and Licensee each warrants, represents and covenants to the other that:

10.1.1 *Organization.* It is duly organized and validly existing under the laws of its jurisdiction of incorporation, and has full corporate power and authority to enter into this Agreement and to perform its obligations hereunder;

10.1.2 *Authority.* This Agreement has been duly authorized, executed and delivered by such Party and constitutes valid and binding obligations of such Party, enforceable in accordance with their respective terms, subject to applicable bankruptcy, insolvency, reorganization, and other laws of general application limiting the enforcement of creditors' rights;

*** Certain information in this agreement has been omitted and filed separately with the Securities and Exchange Commission. [***] indicates that text has been omitted and is the subject of a confidential treatment request.

10.1.3 *Consents and Approvals.* Such Party has obtained all necessary consents, approvals and authorizations of all governmental authorities and Third Parties required to be obtained by such Party in connection with the execution of this Agreement;

10.1.4 *No Conflicts*. The execution, delivery and performance of this Agreement does not conflict with, or constitute a breach or default under any of the charter or organizational documents of such Party, any law, order, judgment or governmental rule or regulation applicable to such Party, or any material agreement, contract, commitment or instrument to which such Party is a party.

10.1.5 *Assignment of IP Rights.* Each employee, consultant, agent or Sublicensee of such Party performing work under this Agreement has, and during the Term will have, a legally binding and outstanding obligation to assign the rights of such employee, consultant, agent or Sublicensee to any Technology Improvements to such Party.

10.2 Licensor's Representations, Warranties and Covenants. Licensor represents, warrants and covenants to Licensee that:

10.2.1 it has the right to grant the rights and licenses granted herein;

10.2.2 in the performance of this Agreement, or the exercise of any rights obtained hereunder, Licensor will comply with all applicable laws, regulations, rules, orders and other requirements, now or hereafter in effect;

10.2.3 to its knowledge, except as otherwise disclosed to Licensee, there are as at the Effective Date no claims asserted or threatened that any of the Licensor IP Rights or Licensor Technology infringe, misappropriate or violate any Third Party intellectual property rights; and

10.2.4 Licensor will notify Licensee in writing promptly if it receives or is notified of a claim from a Third Party that the use by Licensee of the Potelligent Technology infringes any intellectual or industrial property rights vested in such Third Party.

10.3 Licensee's Representations, Warranties and Covenants. Licensee represents, warrants and covenants to Licensor that in the performance of this Agreement, or the exercise of any rights obtained hereunder, Licensee will comply with and will cause its Sublicensees to comply with, all applicable laws, regulations, rules, orders and other requirements, now or hereafter in effect.

10.4 DISCLAIMER OF WARRANTIES. EXCEPT AS SET FORTH IN THIS AGREEMENT, LICENSOR AND LICENSEE MAKE NO REPRESENTATIONS AND EXTEND NO WARRANTIES OR CONDITIONS OF ANY KIND, EITHER EXPRESS OR IMPLIED (IN THE CASE OF LICENSOR, INCLUDING WITH RESPECT TO THE TECHNOLOGY), INCLUDING, BUT NOT LIMITED TO, WARRANTIES OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE, VALIDITY OF THE PATENTS LICENSED HEREUNDER, OR NONINFRINGEMENT OF THE IP RIGHTS OF THIRD PARTIES. IN PARTICULAR, LICENSOR OFFERS NO REPRESENTATION OR WARRANTIES THAT THE USE OF ALL OR ANY PART OF THE TECHNOLOGY WILL RESULT IN THE SUCCESSFUL COMMERCIALIZATION OF ANY PRODUCT FOR ANY PURPOSE. EXCEPT AS EXPRESSLY PROVIDED IN THIS AGREEMENT AND WITHOUT LIMITING LICENSEE'S REMEDIES FOR ANY BREACH OF THIS AGREEMENT BY LICENSOR, LICENSOR SHALL NOT BE LIABLE TO LICENSEE FOR ANY DAMAGES INCLUDING INCIDENTAL OR CONSEQUENTIAL DAMAGES OR COST OF PROCUREMENT OF SUBSTITUTE GOODS SERVICES OR TECHNOLOGY BY REASON OF THE LICENSEE'S USE AND APPLICATION OF THE TECHNOLOGY, WHICH USE AND APPLICATION IS UNDERTAKEN AT LICENSEE'S SOLE RISK.

10.5 MATERIALS DISCLAIMER. THE VECTORS AND POTELLIGENT® CHOK1SV TRANSFERRED PURSUANT TO THIS AGREEMENT, WHEN COMBINED WITH AN ANTIBODY, ARE IN THE DEVELOPMENTAL STAGE AND MAY HAVE HAZARDOUS PROPERTIES. THE VECTORS, BASE POWDERS, SUPPLEMENTS AND TRANSFECTION MEDIUM AND POTELLIGENT® CHOK1SV ARE UNTESTED AND, EXCEPT AS SET FORTH IN THIS AGREEMENT, PROVIDED "AS IS" WITH NO WARRANTIES, EXPRESS OR IMPLIED, INCLUDING WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE. LICENSEE SHALL BEAR ALL RISK RELATING TO THE VECTORS OR POTELLIGENT® CHOK1SV, BASE POWDER, SUPPLEMENTS AND TRANSFECTION MEDIUM TRANSFERRED TO LICENSEE.

10.6 IP DISCLAIMER. EXCEPT AS OTHERWISE EXPLICITLY PROVIDED IN THIS AGREEMENT, NOTHING IN THIS AGREEMENT IS OR SHALL BE CONSTRUED AS: (i) A WARRANTY OR REPRESENTATION BY LICENSOR AS TO THE VALIDITY, ENFORCEABILITY OR SCOPE OF ANY CLAIM WITHIN LICENSOR IP RIGHTS; (ii) A WARRANTY OR REPRESENTATION THAT ANYTHING MADE, USED, OFFERED FOR SALE, SOLD OR OTHERWISE DISPOSED OF UNDER ANY LICENSE GRANTED IN THIS AGREEMENT IS OR SHALL BE FREE FROM INFRINGEMENT OF ANY PATENT RIGHTS OR OTHER IP RIGHT OF A THIRD PARTY; (iii) AN OBLIGATION TO BRING OR PROSECUTE ACTIONS OR SUITS AGAINST THIRD PARTIES FOR INFRINGEMENT OF ANY OF THE LICENSOR IP RIGHTS; OR (iv) GRANTING BY IMPLICATION, ESTOPPEL, OR OTHERWISE ANY LICENSES OR RIGHTS UNDER IP RIGHTS OF LICENSEE OR LICENSOR OR THIRD PARTIES, REGARDLESS OF WHETHER SUCH IP OR OTHER RIGHTS ARE DOMINANT OR SUBORDINATE TO ANY LICENSOR IP RIGHTS.

Article 11 INDEMNIFICATION

11.1 Indemnification by Licensee. Licensee shall defend, indemnify and hold harmless Licensor, its Affiliates, licensees and their respective directors, officers, employees and agents from all claims, losses, damages and expenses, including reasonable legal expenses ("Losses") resulting from suits, claims, actions, demands or other proceedings, in each case brought by a Third Party ("Claims") arising out of or relating to (i) the negligence, unlawful acts or willful misconduct of Licensee (including its Sublicensees) in connection with its or their performance of this Agreement; (ii) Licensee's material breach of any of its covenants, warranties or representations made under this Agreement; or (iii) the making, having made, distribution, sale, offer for sale or use of any Antibody or Product or the use of Licensor IP Rights or the Technology) by Licensee or its Sublicensees, except to the extent that such Losses are a direct result of Licensor's gross negligence, willful misconduct or unlawful act or its breach of any covenant, representation or warranty made by it in this Agreement.

11.2 Indemnification by Licensor. Licensor shall defend, indemnify and hold harmless Licensee, its Affiliates, and their respective directors, officers, employees and agents from all Losses resulting from all Claims arising out of or relating to (i) the gross negligence, unlawful acts or willful misconduct of Licensor in connection with its performance of this Agreement; or (ii) Licensor's material breach of any of its covenants, warranties or representations made under this Agreement, except in each case to the extent that such Losses are a direct result of Licensee's gross negligence, willful misconduct or unlawful act or its breach of any covenant, representation or warranty made by it in this Agreement.

11.3 Procedure. If an indemnified Party (the "Indemnitee") intends to claim indemnification under this Article 11, it shall promptly notify the indemnifying Party (the "Indemnitor") in writing of any Claims of Third Party for which the Indemnitee intends to claim such indemnification, and the Indemnitor shall have the right to participate in, and, to the extent the Indemnitor so desires, to assume the defense thereof with counsel mutually satisfactory to the Parties; provided, however, that an Indemnitee shall have the right to retain its own counsel, with the fees and expenses to be paid by the Indemnitor, if representation of such Indemnitee by the counsel retained by the Indemnitor would be inappropriate due to actual or potential differing interests between the Indemnitee and any other Party represented by such counsel in such proceeding. The obligations of this Article 11 shall not apply to amounts paid in settlement of any Claims of Third Party if such settlement is effected without the consent of the Indemnitor, which consent shall not be withheld or delayed unreasonably. The failure to deliver written notice to the Indemnitor within a reasonable time after the commencement of any such action, if prejudicial to its ability to defend such action, shall relieve the Indemnitor of any obligation to the Indemnitee under this Article 11, but the failure to so deliver written notice to the Indemnitor shall not relieve it of any obligation that it may have to any Party claiming indemnification otherwise than under this Article 11. The Indemnitee, its employees and agents, shall reasonably cooperate with the Indemnitor and its legal representatives in the investigation of any Claim covered by this Article 11.

11.4 Insurance Proceeds. Any indemnification hereunder shall be made net of any insurance proceeds recovered by the Indemnitee; provided, however, that if, following the payment to the Indemnitee of any amount under this Article 11, such Indemnitee recovers any insurance proceeds in respect of the Claim for which such indemnification payment was made, the Indemnitee shall promptly pay an amount equal to the amount of such proceeds (but not exceeding the amount of such indemnification payment) to the Indemnitor.

11.5 Insurance. Each Party shall procure and maintain insurance policies underwritten by a reputable insurance company or self-insurance, including clinical trial and product liability insurance, and providing adequate coverage for its respective obligations and activities hereunder. Notwithstanding the foregoing, Licensee shall procure and/or maintain policies of insurance for comprehensive general liability, clinical trials and products liability coverage in a minimum amount of [***] with respect to Licensee's performance under this Agreement provided however that the Licensee need only maintain insurance to the value of [***] until commencement of clinical trials for the Product whereupon the coverage shall be increased to [***] as per the above .

11.6 Limitation of Liability. LICENSOR SHALL NOT BE LIABLE TO LICENSEE AND LICENSEE SHALL NOT BE LIABLE TO LICENSOR FOR ANY CONSEQUENTIAL, INCIDENTAL, PUNITIVE, SPECIAL OR INDIRECT DAMAGES, INCLUDING LOSS OF ANTICIPATED PROFITS, EXCEPT TO THE EXTENT SUCH DAMAGES WERE CAUSED BY THE GROSS NEGLIGENCE OR WILLFUL MISCONDUCT OR UNLAWFUL ACT OF THAT PARTY OR ITS AFFILIATES OR SUBLICENSEES. LICENSOR'S LIABILITY TO LICENSEE ARISING OUT OF THIS AGREEMENT SHALL BE LIMITED TO THE AGGREGATE VALUE OF THE MONETARY CONSIDERATION ACTUALLY RECEIVED BY LICENSOR FROM LICENSEE UNDER THIS AGREEMENT.

Article 12 DISPUTE RESOLUTION

12.1 Dispute Resolution Philosophy and Process. Any dispute that may arise between Licensor and Licensee relating to the terms of this Agreement or the activities of the Parties shall be referred to [***] and [***], who shall attempt [***] to achieve a resolution. If such [***] are unable to resolve such a dispute within [***], such dispute shall be referred to [***] who shall [***]. If any dispute is not resolved by these individuals (or their designees) within [***], then [***] pursuant to Section 13.8.

12.2 No Limitation. Notwithstanding the foregoing, nothing in this Agreement shall be construed as limiting in any way the right of a Party to immediately seek temporary and/or preliminary injunctive relief from a court of competent jurisdiction with respect to any actual or threatened breach of this Agreement.

Article 13 MISCELLANEOUS PROVISIONS

13.1 Advice of Counsel. Licensee and Licensor have consulted counsel of their choice regarding this Agreement and each acknowledges and agrees that this Agreement shall not be deemed to have been drafted by one Party or another and shall be construed accordingly.

13.2 Assignment. [***].

13.3 Binding Effect. This Agreement, the rights granted and obligations assumed hereunder shall be binding upon and shall inure to the benefit of Licensee, Licensor and their respective successors and permitted assigns.

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13.4 Counterparts. This Agreement may be executed in counterparts, or facsimile versions, each of which shall be deemed to be an original, and all of which together shall be deemed to be one and the same agreement.

13.5 Entire Agreement. This Agreement and the exhibits and schedules hereto and thereto, constitute and contain the entire understanding and agreement of the Parties respecting the subject matter of this Agreement, and cancel and supersede any and all prior negotiations, correspondence, understandings and agreements between the Parties, whether oral or written, regarding such subject matter, except that the Confidentiality Agreement between the Parties dated as of January 30, 2013 shall remain in full force and effect pursuant to the terms thereof.

13.6 Force Majeure. The failure of Licensor or Licensee to timely perform any obligation under this Agreement by reason of epidemic, earthquake, riot, civil commotion, fire, act of God, war, terrorist act, strike, flood, or governmental act or restriction, or other cause that is beyond the reasonable control of that Party shall not be deemed to be a material breach of this Agreement, but shall be excused to the extent and for the duration of such cause, and that Party shall provide the other Parties with full particulars thereof as soon as it becomes aware of the same (including its best estimate of the likely extent and duration of the interference with its activities) and shall use commercially reasonable efforts to avoid or remove such cause, and shall perform its obligation(s) with the utmost dispatch when the cause is removed. If the performance of any such obligation under this Agreement is delayed owing to such a force majeure for any continuous period of more than one hundred eighty (180) days, the Parties hereto shall consult with respect to an equitable solution, including the possibility of the mutual termination of this Agreement.

13.7 Further Actions. Each Party agrees to execute, acknowledge and deliver such further instruments and to do all such other acts as may be reasonably necessary or appropriate in order to carry out the purposes and intent of this Agreement. The Parties shall cooperate and use all reasonable efforts to make all other registrations, filings, and applications, to give all notices, and to obtain as soon as practicable all governmental or other consents, transfers, approvals, orders, qualifications, authorizations, permits, and waivers, if any, and to do all other things necessary or desirable for the consummation of this Agreement.

13.8 Governing Law. This Agreement shall be governed by and construed in accordance with the laws of the [***], without regard to the application of principles of conflicts of law. The [***] shall have exclusive jurisdiction in relation to this Agreement provided that the Parties shall have the right to proceed to a suitable jurisdiction for the purpose of enforcing a judgment, award, or order (including without limitation seeking specific performance) and injunctive relief.

13.9 Interpretation. The captions and headings in this Agreement are for convenience only, and are to be of no force or effect in construing or interpreting any provisions of this Agreement. Unless specified to the contrary, references to Articles, Sections or Exhibits mean the particular Articles, Sections or Exhibits to this Agreement and references to this Agreement include all Exhibits hereto. Unless the context otherwise clearly requires, whenever used in this Agreement: (i) the words “include” or “including” shall be construed to have the inclusive meaning frequently identified with the phrase “including but

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not limited to" or "including without limitation;" (ii) the word "day" or "year" means a calendar day or year; (iii) the word "notice" shall mean notice in writing (whether or not specifically stated) and shall include notices, consents, approvals and other written communications contemplated under this Agreement; (iv) the words "hereof," "herein," "hereby" and derivative or similar words refer to this Agreement (including any Exhibits); (v) the word "or" shall be construed to have the inclusive meaning identified with the phrase "and/or;"(vi) words of any gender include the other gender; (vii) references to the plural shall be deemed to include the singular and the plural, the part and the whole; and (viii) references to any specific law, rule or regulation, or article, section or other division thereof, shall be deemed to include the then-current amendments thereto or any replacement law, rule or regulation thereof.

13.10 No Implied Licenses to Use of Name or Trademark. Except as otherwise specifically provided in Section 8.5, no right, expressed or implied, is granted by this Agreement to a Party to use in any manner the name or any other trademark of any other Party in connection with the performance of this Agreement.

13.11 Independent Contractors. Each Party is an independent contractor under this Agreement. Nothing contained in this Agreement is intended nor is to be construed so as to constitute Licensee or Licensor as partners or joint venturers with respect to this Agreement. No Party shall have any express or implied right or authority to assume or create any obligations on behalf of or in the name of any other Party, or to bind any other Party to any other contract, agreement or undertaking with any Third Party or Affiliate.

13.12 Notices and Deliveries. Any formal notice, request, delivery, approval or consent required or permitted to be given under this Agreement shall be in writing in English and shall be deemed to have been sufficiently given when it is received, whether delivered in person, transmitted by facsimile with contemporaneous confirmation by mail, delivered by certified mail (or its equivalent), or delivered by courier service (receipt required), to the Party to which it is directed at its address shown below or such other address as such Party shall have last given by notice to the other Parties.

If to Licensor:	*With a copy to:*
BioWa, Inc. [***]	[***]

and	*With a copy to:*
Lonza Sales AG [***]	[***]

*** Certain information in this agreement has been omitted and filed separately with the Securities and Exchange Commission. [***] indicates that text has been omitted and is the subject of a confidential treatment request.

If to Licensee: *With a copy to:*

Allakos, Inc.
75 Shoreway Road
Suite A San Carlos
CA 94070
Attn: CEO
Fax:

13.13 Severability. If any provision of this Agreement becomes or is declared by a court of competent jurisdiction to be illegal, unenforceable or void, this Agreement shall continue in full force and effect without said provision, so long as the Agreement, taking into account said voided provision, continues to provide the Parties with materially the same benefits as set forth in this Agreement on the Effective Date. If, after taking into account said voided provision, the Parties are unable to realize materially the same, the Parties shall negotiate in good faith to amend this Agreement to reestablish (to the extent legally permissible) the benefits as provided the Parties under this Agreement on the Effective Date.

13.14 Waiver. No waiver, modification or amendment of any provision of this Agreement shall be valid or effective unless made in writing and signed by a duly authorized officer of each Party. The failure of either Party to assert a right hereunder or to insist upon compliance with any term or condition of this Agreement shall not constitute a waiver of that right or excuse a similar subsequent failure to perform any such term or condition.

13.15 Exhibits. The exhibits attached to this Agreement shall form an integral part hereof. In the event of any inconsistency between this Agreement and any exhibit, this Agreement shall prevail.

13.16 Section 365(n) of the Bankruptcy Code. All rights and licenses granted under or pursuant to any section of this Agreement are, and shall otherwise be deemed to be, for purposes of Section 365(n) of the Bankruptcy Code, licenses of rights to "intellectual property" as defined under Section 101(35A) of the Bankruptcy Code. The Parties shall retain and may fully exercise all of their respective rights and elections under section 365(n) of the Bankruptcy Code.

IN WITNESS WHEREOF, the Parties have put their names and affixed their seals or executed this Agreement and each Party shall have one (1) copy.

LONZA SALES AG

By: /s/ Janet L. White
Name: Janet L. White
Title: Authorized Signatory

LONZA SALES AG

By: /s/ Jeetendra Vaghjiani
Name: Jeetendra Vaghjiani
Title: Authorized Signatory

BIOWA, INC.

By: /s/ Yasunori Yamaguchi
Name: Yasunori Yamaguchi, Ph.D.
Title: President and CEO

ALLAKOS, INC.

By: /s/ C.R. Bebbington
Name: Christopher Bebbington
Title: Chief Executive Officer

EXHIBIT 1

LICENSOR PATENT RIGHTS

[***]

*** Certain information in this agreement has been omitted and filed separately with the Securities and Exchange Commission. [***] indicates that text has been omitted and is the subject of a confidential treatment request.

EXHIBIT 2

PROGRESS REPORT

[***]

*** Certain information in this agreement has been omitted and filed separately with the Securities and Exchange Commission. [***] indicates that text has been omitted and is the subject of a confidential treatment request.

EXHIBIT 3
BASE POWDER, TRANSFECTION MEDIUM, TRANSFECTION SUPPLEMENTS, AND TRANSFECTION MEDIUM KNOW-HOW

[***]

*** Certain information in this agreement has been omitted and filed separately with the Securities and Exchange Commission. [***] indicates that text has been omitted and is the subject of a confidential treatment request.

EXHIBIT 4
[***]

*** Certain information in this agreement has been omitted and filed separately with the Securities and Exchange Commission. [***] indicates that text has been omitted and is the subject of a confidential treatment request.

Exhibit 10.15

SPECIFIC TERMS IN THIS EXHIBIT HAVE BEEN REDACTED BECAUSE CONFIDENTIAL TREATMENT FOR THOSE TERMS HAS BEEN REQUESTED. THE REDACTED MATERIAL HAS BEEN SEPARATELY FILED WITH THE SECURITIES AND EXCHANGE COMMISSION, AND THE TERMS HAVE BEEN MARKED AT THE APPROPRIATE PLACE WITH THREE ASTERISKS [***].

AMENDED AND RESTATED EXCLUSIVE LICENSE AGREEMENT

BETWEEN

THE JOHNS HOPKINS UNIVERSITY

&

ALLAKOS INC.

JHU AGREEMENT A30817

CONFIDENTIAL

AMENDED AND RESTATED EXCLUSIVE LICENSE AGREEMENT

THIS AMENDED AND RESTATED EXCLUSIVE LICENSE AGREEMENT (this "Agreement") is entered into by and between THE JOHNS HOPKINS UNIVERSITY, a Maryland corporation having an address at 3400 N. Charles Street, Baltimore, Maryland, 21218-2695 ("JHU") and ALLAKOS INC., a Delaware corporation having an address at 75 Shoreway Road, Suite A, San Carlos, CA 94070 ("Company"), as of September 30, 2016 (the "Restatement Date") and amends and restates that certain Exclusive License Agreement entered into by and between JHU and Allakos as of the Effective Date (the "Original License Agreement"), with respect to the following:

RECITALS

WHEREAS, as a center for research and education, JHU is interested in licensing PATENT RIGHTS (hereinafter defined) in a manner that will benefit the public by facilitating the distribution of useful products and the utilization of new processes, but is without capacity to commercially develop, manufacture, and distribute any such products or processes;

WHEREAS, a valuable invention(s) entitled [***] was developed during the course of research conducted by Drs. Bruce S. Bochner and Robert Schleimer (JHU Ref. C03875); [***] was developed during the course of research conducted by Drs. Bruce S. Bochner, Robert Schleimer, and Esra Nutku-Bilir, (JHU Ref. C03906); [***] was developed during the course of research conducted by Drs. Bruce S. Bochner, Robert Schleimer and Esra Nutku-Bilir (JHU Ref. C11235); [***] was developed during the course of research conducted by Drs. Bruce S. Bochner, Robert Schleimer and Esra Nutku-Bilir (JHU Ref. C11251) (collectively, all JHU inventors are hereinafter referred to as "Inventors");

WHEREAS, JHU has acquired through assignment from the Inventors and from a prior assignee, all rights, title and interest, with the exception of certain retained rights by the United States Government, in its interest in said valuable inventions;

WHEREAS, Company and JHU executed that certain Exclusive Option Agreement with Effective Date of December 5, 2012 (the "Option Agreement") with agreed-upon license terms attached in Exhibit C of that agreement for the above-identified inventions under JHU Ref. C03875, JHU Ref. C03906, JHU Ref. C11235 and JHU Ref. C11251, and under which Company received the BIOLOGICAL MATERIAL(S) under JHU Ref. C11235 and JHU Ref. C11251 from Dr. Bruce Bochner at JHU and on which Company conducted evaluation testing during the term of the Exclusive Option Agreement (JHU Agreement A21208), and executed the Original License Agreement with Effective Date of December 20, 2013; and

WHEREAS, the Parties now desire to amend and replace the Original License Agreement in its entirety with this Agreement, effective as of the Restatement Date.

NOW THEREFORE, in consideration of the premises and the mutual promises and covenants contained in this Agreement, and for other good and valuable consideration, the receipt and sufficiency of which is hereby acknowledged, the parties hereto agree as follows:

*** Certain information in this agreement has been omitted and filed separately with the Securities and Exchange Commission. [***] indicates that text has been omitted and is the subject of a confidential treatment request.

ARTICLE 1
DEFINITIONS

All references to particular Exhibits, Articles or Paragraphs shall mean the Exhibits to, and Paragraphs and Articles of, this Agreement, unless otherwise specified. For the purposes of this Agreement and the Exhibits hereto, the following words and phrases shall have the following meanings:

1.1 "**AFFILIATED COMPANY(IES)**" as used herein in either singular or plural shall mean any corporation, company, partnership, joint venture or other entity, which controls, is controlled by or is under common control with Company. For purposes of this Paragraph 1.1, control shall mean the direct or indirect ownership of at least fifty percent (50%).

1.2 "**BIOLOGICAL MATERIAL(S)**" shall mean materials in JHU's possession as identified in Exhibit D which have been assigned to JHU by Inventors and prior assignee of PATENT RIGHT(S).

1.3 "**DEVELOPED PRODUCT(S)**" shall mean any materials, compositions, biologic, drugs, other products (including combination products), or methods which but for the use of the BIOLOGICAL MATERIALS licensed hereunder could not be developed, made, invented, discovered or derived. For the avoidance of doubt, DEVELOPED PRODUCT(S) (as defined above) shall include all resultant FDA and other regulatory agency approved products developed, made, invented, discovered or derived from BIOLOGICAL MATERIAL(S). [***].

1.4 "**DIAGNOSTIC FIELD**" shall mean the field of identification, diagnosis or prognosis of any disease or medical condition in humans or other animals using a LICENSED PRODUCT(S) or DEVELOPED PRODUCT(S).

1.5 "**EFFECTIVE DATE**" of this Agreement shall mean December 20, 2013.

1.6 "**EXCLUSIVE LICENSE**" shall mean the license grant by JHU to Company pursuant to Paragraph 2.1 of this Agreement of its entire right and interest in the PATENT RIGHTS and BIOLOGICAL MATERIALS, subject to Paragraphs 2.3 and 2.4 of this Agreement.

1.7 "**FIRST COMMERCIAL SALE**" shall mean the first transfer by a LICENSEE, AFFILIATED COMPANY or SUBLICENSEE of a LICENSED PRODUCT(S) or DEVELOPED PRODUCT(S) for value, but shall not include a transfer of materials for the purpose of use in a clinical trial, where the consideration received is intended to cover the manufacturing cost of the materials.

1.8 "**LICENSED FIELD A**" shall mean the treatment and/or prevention of any disease or medical condition in humans or other animals using a LICENSED PRODUCT or DEVELOPED PRODUCT, but excluding the diagnosis thereof.

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1.9 "**LICENSED FIELD B**" shall mean any application, use, manufacture, sub-license, sale, lease or transfer of LICENSED PRODUCTS, DEVELOPED PRODUCTS, or BIOLOGICAL MATERIALS, including within the DIAGNOSTIC FIELD and as research reagents, but excluding LICENSED FIELD A.

1.10 "**LICENSED PRODUCT(S)**" as used herein in either singular or plural shall mean any material, composition, biologic, drug, other products, or methods, that, in the absence of a license to the PATENT RIGHT(S), the manufacture, use, offer for sale, sale, or importation thereof, or the practice thereof, would infringe a claim of the PATENT RIGHT(S) (infringement shall include, but not be limited to, direct, contributory or inducement to infringe same); or is, incorporates or uses a BIOLOGICAL MATERIAL. [***].

1.11 "**NET REVENUES**" as used herein shall mean and includes any consideration received for the sale, license, lease or other transfer (collectively "Transaction") of LICENSED PRODUCT(S) and DEVELOPED PRODUCT(S) by Company, AFFILIATED COMPANIES or SUBLICENSEE(S). Consideration includes but is not limited to [***]. NET REVENUES may be calculated using the [***] method, but [***].

(a) NET REVENUES may exclude the following items, but only to the extent that [***].

(b) In the event that Company, AFFILIATED COMPANY or SUBLICENSEE sells a LICENSED PRODUCT or DEVELOPED PRODUCT in combination with other active ingredients or components [***], the NET REVENUES for purposes of royalty payments [***] shall be calculated as follows:

(i) If all LICENSED PRODUCTS and DEVELOPED PRODUCT(S) [***] contained in the combination are commercially available separately, the NET REVENUES for purposes of royalty payments will be calculated by [***];

(ii) If the combination includes [***] which are not sold separately [***] the NET REVENUES for purposes of royalty payments will be calculated by [***]

(iii) If the [***].

[***].

1.12 [***].

1.13 "**PATENT RIGHT(S)**" shall mean [***].

1.14 "**SUBLICENSEE(S)**" as used herein in either singular or plural shall mean any person or entity other than AFFILIATED COMPANIES to which Company has granted a sublicense under this Agreement.

1.15 "TERM" has the meaning set forth in Paragraph 9.1.

1.16 "**TERRITORY**" shall mean worldwide.

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ARTICLE 2
LICENSE GRANT

2.1 Grants. Subject to the terms and conditions of this Agreement, JHU hereby grants to Company:

(a) an EXCLUSIVE LICENSE to develop, make, have made, use, have used, import, offer for sale, sell and have sold the LICENSED PRODUCT(S) and DEVELOPED PRODUCT(S) in the TERRITORY under the PATENT RIGHTS and using the BIOLOGICAL MATERIAL(S) in the LICENSED FIELD A and LICENSED FIELD B and

(b) an EXCLUSIVE LICENSE to make, have made and use BIOLOGICAL MATERIAL(S) in LICENSED FIELD A and LICENSED FIELD B.

(c) For clarity, the EXCLUSIVE LICENSE granted pursuant to subsection (b) does not include the right to sell and have sold BIOLOGICAL MATERIAL(S) which JHU and Company agree would be conducted under the EXCLUSIVE LICENSE granted under subsection (a). Company agrees that the [***] are expressly excluded from [***].

These grants shall apply to the Company and any AFFILIATED COMPANIES, except that any AFFILIATED COMPANIES shall not have the right to sublicense others as set forth in Paragraph 2.2 below. If any AFFILIATED COMPANIES exercises rights under this Agreement, such AFFILIATED COMPANIES shall be bound by all terms and conditions of this Agreement, including but not limited to indemnity, insurance provisions and royalty payments, which shall apply to the exercise of the rights, to the same extent as would apply had this Agreement been directly between JHU and the AFFILIATED COMPANIES. In addition, Company shall remain fully liable to JHU for all acts and obligations of AFFILIATED COMPANIES such that acts of the AFFILIATED COMPANIES shall be considered acts of the Company.

2.2 Sublicense. Company may sublicense to third parties under this Agreement, subject to the terms and conditions of this Paragraph 2.2 and with prior written notice to JHU, and shall provide an unredacted copy of each such sublicense agreement to JHU promptly after it is executed. As a condition to its validity and enforceability, each sublicense agreement shall: (a) incorporate by reference the terms and conditions of this Agreement, (b) be consistent with the terms, conditions and limitations of this Agreement [***]. To the extent that any terms, conditions or limitations of any sublicense agreement are inconsistent with this Agreement, those terms, conditions and limitations are null and void against JHU, [***].

2.3 Government Rights. The grants of Paragraph 2.1 are subject to rights retained by the United States government in accordance with 35 U.S.C. 200-205 and P.L. 96-517, as amended by P.L. 98-620, codified at 35 U.S.C. 200 et. seq. and implemented according to 37 CFR Part 401. The United States government has acquired a nonexclusive, nontransferable, irrevocable, paid-up license to practice or have practiced for or on behalf of the United States the

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use of BIOLOGICAL MATERIALS and the inventions described in PATENT RIGHTS throughout the world. The rights granted herein are additionally subject to: (i) the requirement that any LICENSED PRODUCT(S) or DEVELOPED PRODUCT(S) produced for use or sale within the United States shall be substantially manufactured in the United States to the extent required under 35 U.S.C. 200-205 and P.L. 96-517, as amended by P.L. 98-620, codified at 35 U.S.C. 200 et. seq. and implemented according to 37 CFR Part 401 (unless a waiver under 35 USC § 204 or equivalent is granted by the appropriate United States government agency), (ii) the right of the United States government to require JHU, or its licensees, including Company, to grant sublicenses to responsible applicants on reasonable terms when necessary to fulfill health or safety needs, and, (iii) any other rights acquired by the United States government under the laws and regulations applicable to the grant/contract award under which the inventions were made.

2.4 Retained Rights. The grants of Paragraph 2.1 are subject to the retained rights [***] to make, have made, provide and use for its and the [***] purposes, products, including [***] provided, however, that [***].

2.5 Conversion of Grant for LICENSED FIELD B. The grants for LICENSED FIELD B in Paragraphs 2.1(a) and 2.1(b) automatically convert [***] in the event that [***]. Company agrees to provide [***]. Upon conversion [***]. Company agrees to provide [***].

2.6 Duration and Conversion of Grant for LICENSED FIELDS A and B.

(a) Duration of license grants upon expiration of the TERM in each country:

(i) The grant in Paragraph 2.1(a) under the PATENT RIGHTS in LICENSED FIELD A and LICENSED FIELD B shall expire; and

(ii) The grant for the use of the BIOLOGICAL MATERIALS in LICENSED FIELD A and LICENSED FIELD B in Paragraphs 2.1(a) and 2.1(b) (unless previously converted to nonexclusive pursuant to Paragraph 2.5), shall continue to be exclusive and sublicensable for DEVELOPED PRODUCTS under Paragraph 2.1(b) (unless converted to nonexclusive pursuant to Paragraph 2.5) until the expiration of the Developed Product Royalty Period.

(b) Upon conversion [***].

(c) If Company grants any sublicense to a third party in compliance with Paragraph 2.2 [***]. Company agrees to [***].

ARTICLE 3
FEES, ROYALTIES, PAYMENTS & EQUITY

3.1 License Fees.

(a) Company shall pay to JHU a license fee as set forth in Exhibit A within thirty (30) days of the EFFECTIVE DATE of this Agreement. This license fee is nonrefundable and shall not be credited against royalties or other fees.

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(b) Company shall pay to JHU an amendment fee as set forth in Exhibit A within thirty (30) days of the RESTATEMENT DATE of this Agreement. This amendment fee is nonrefundable and shall not be credited against royalties or other fees.

3.2 Minimum Annual Royalties. Company shall pay to JHU minimum annual royalties as set forth in Exhibit A. These minimum annual royalties shall be due, without invoice from JHU, within thirty (30) days of each anniversary of the EFFECTIVE DATE beginning with the first anniversary. Running royalties on NET REVENUES of LICENSED PRODUCT(S) and DEVELOPED PRODUCT(S) accrued under Paragraph 3.3 and paid to JHU during the one year period preceding an anniversary of the EFFECTIVE DATE shall be credited against the minimum annual royalties due on that anniversary date.

3.3 Running Royalties. Company shall pay to JHU a running royalty as set forth in Exhibit A for each LICENSED PRODUCT(S) and for each DEVELOPED PRODUCT(S) sold or provided, by Company, AFFILIATED COMPANIES and SUBLICENSEE(S) for use in LICENSED FIELD A and LICENSED FIELD B, based on NET REVENUES for the term of this Agreement. Such payments shall be made within [***] following FIRST COMMERCIAL SALE of LICENSED PRODUCT(S) and/or DEVELOPED PRODUCT(S). All non-US taxes related to LICENSED PRODUCT(S) and/or DEVELOPED PRODUCT(S) sold under this Agreement shall be paid by Company and shall not be deducted from royalty or other payments due to JHU.

(a) The running royalty obligations for the sale of LICENSED PRODUCT(S) with respect to NET REVENUES in LICENSED FIELD A and LICENSED FIELD B shall commence on the date of FIRST COMMERCIAL SALE of LICENSED PRODUCT intended for use in either LICENSED FIELD A or LICENSED FIELD B in a given country and shall continue, on a country-by-country basis, until the expiration of the last to expire of any PATENT RIGHT(S) issued in that country covering the LICENSED PRODUCT(S) unless otherwise officially extended under applicable patent term extension ("Licensed Product Royalty Period").

(b) The running royalty obligations for the sale of DEVELOPED PRODUCT(S) with respect to NET REVENUES in LICENSED FIELD A and LICENSED FIELD B shall commence on the date of FIRST COMMERCIAL SALE of DEVELOPED PRODUCT intended for use in either LICENSED FIELD A or LICENSED FIELD B in a given country and shall continue for ten (10) years from the FIRST COMMERCIAL SALE of any DEVELOPED PRODUCT anywhere in the world in each field ("Developed Product Royalty Period"). DEVELOPED PRODUCT intended for use in either LICENSED FIELD A or LICENSED FIELD B launched by Company, AFFILIATED COMPANY or SUBLICENSEE(S) after expiration of the PATENT RIGHTS is subject to the running royalties in this subsection (b).

(c) For clarity, as provided for in Exhibit A, to the extent that [***], Company agrees to pay to JHU the running royalty [***] as indicated in Exhibit A [***]. Thereafter, Company agrees that the running royalty as indicated in Exhibit A applicable to [***] would apply until [***].

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(d) Should Company be required to pay running royalties [***], Company shall be entitled to [***] provided that the running royalties payable to JHU shall not [***].

(e) In no instance shall the running royalty [***].

(f) Company acknowledges that its agreement to make payments to JHU under this Paragraph 3.3 regarding rights and/or products that are not [***] has been made for purposes of [***].

(g) In the event that [***]. It is understood that royalties shall only be payable under this Paragraph 3.3 with respect to [***] whose [***].

3.4 Arms-Length Transactions. In order to ensure JHU the full royalty payments contemplated hereunder, Company agrees that in the event [***].

3.5 Milestone Payments. Company shall pay to JHU the one-time milestone payments as set forth in Exhibit A within thirty (30) days of achievement of each milestone-triggering event [***]. In the event that [***]. Company agrees that it will pay the accrued Phase II milestone payment when it submits the accrued Phase III milestone payment to JHU. For clarity, to the extent that any Company products in development in LICENSED FIELD A are LICENSED PRODUCT(S) which, except for such product's inclusion as LICENSED PRODUCT, would be a DEVELOPED PRODUCT(S) during the term of the PATENT RIGHT(S), Company agrees to pay to JHU milestone payments attributed to LICENSED PRODUCT(S) until expiration of the last to expire of any PATENT RIGHT(S). Thereafter, Company agrees that with respect to such product, the milestone payments attributed to DEVELOPED PRODUCTS will be paid by Company as subsequent milestones are met.

3.6 Sublicense Consideration. Company shall pay to JHU sublicense consideration that Company receives for execution of a sublicense agreement as identified in Exhibit A of this Agreement. Such sublicense consideration shall mean consideration of any kind received by Company or AFFILIATED COMPANIES from a SUBLICENSEE(S) for [***] such as including but not limited to [***]. However, not included in such sublicense consideration are amounts paid to Company by a SUBLICENSEE(S) for [***]. If any sublicense agreement includes [***], then Company may [***].

3.7 Patent Reimbursement. During the term of this Agreement, Company will reimburse JHU for [***]. Company shall reimburse JHU such costs within [***]. [***] are identified and totaled in Exhibit E of this Agreement. JHU will provide to Company [***].

3.8 Equity. As partial consideration for the grants under Paragraph 2.1, the Company shall issue to JHU and the Inventors within sixty (60) days of the EFFECTIVE DATE of this Agreement 111,111 shares [***] of the Company's common stock as follows:

- [***] shares will be issued to [***];
- [***] shares will be issued to [***];

*** Certain information in this agreement has been omitted and filed separately with the Securities and Exchange Commission. [***] indicates that text has been omitted and is the subject of a confidential treatment request.

- [***] shares will be issued to [***]; and
- [***] shares will be issued to [***].

Such shares shall be issued pursuant to customary Stock Issuance Agreements in substantially the form attached hereto as Exhibit F. The equity interests granted under this Paragraph 3.8 shall be diluted at the same rate as the founders' and any other issued common stock through subsequent rounds of equity financing.

3.9 [***].

3.10 Form of Payment. All payments under this Agreement shall be made in U.S. Dollars by either check or wire transfer as provided for in Paragraph 3.11 below.

3.11 Payment Information. All check payments from Company to JHU shall be sent to:

[***]

or such other addresses which JHU may designate in writing from time to time. Checks are to be made payable to [***].

Wire transfers may be made through:

[***]

Company shall be responsible for any and all costs associated with wire transfers. Company shall provide JHU with the date of wire transfer payment and ACH confirmation number upon completion of such payment.

3.12 Late Payments. In the event that any payment due hereunder is not made when due, [***]. Each such payment when made shall be [***] shall not negate or waive the right of JHU to seek any other remedy, legal or equitable, to which it may be entitled because of the delinquency of any payment including, but not limited to [***].

3.13 Invoices. Any invoice for payments sent by JHU to Company may be electronically provided by e-mail service. JHU will send invoices to an e-mail address provided by Company. Company will provide JHU with any updates to this e-mail address.

ARTICLE 4
PATENT PROSECUTION, MAINTENANCE, & INFRINGEMENT

4.1 Prosecution & Maintenance. [***], shall file, prosecute and maintain all patents and patent applications specified under PATENT RIGHT(S) and, subject to the terms and conditions of this Agreement, [***]. [***] shall have full and complete control over all patent matters in connection therewith under the PATENT RIGHT(S), provided however, that [***]. By concurrent written notification to [***] and its patent counsel at least [***] in advance (or later at [***] discretion) of any filing or response deadline, or fee due date, [***] may elect [***]. Upon such notification, [***] may [***].

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4.2 Notification. Each party will notify the other promptly in writing when any infringement of [***] by [***].

4.3 Infringement. [***] shall have the first right to enforce any patent within PATENT RIGHT(S) against any infringement or alleged infringement thereof for [***], but only for [***] for [***], and shall at all times keep [***] informed as to the status thereof. Before [***] commences an action with respect to any infringement of any patent within the PATENT RIGHT(S), [***] shall give careful consideration to [***] in making its decision whether or not to [***]. [***]

If [***] elects not to enforce any patent within the PATENT RIGHT(S), then it shall so notify [***] in writing within [***] of receiving notice that an infringement exists, and [***] may after receipt of such notice [***].

4.4 Patent Invalidity Suit. If a declaratory judgment action is brought naming [***] as a defendant and alleging invalidity of any of the PATENT RIGHT(S), [***].

4.5 Recovery. Any recovery by [***] under Paragraph 4.3 shall be deemed to reflect [***], and [***].

ARTICLE 5
OBLIGATIONS OF THE PARTIES

5.1 Reports. Company shall provide to JHU the following written reports according to the following schedules.

(a) Until [***], Company shall provide [***], due within [***] following the EFFECTIVE DATE of this Agreement. These [***] shall describe [***] obligations under the terms of this Agreement, including in any [***].

(b) Upon achieving [***], Company shall provide [***], substantially in the format of Exhibit B, accompanying each running royalty payment under Paragraph 3.3 of this Agreement. [***] shall disclose [***].

(c) Company shall provide [***] within [***] of the end of [***] following the [***]. [***] shall include:

(i) [***] as required under [***].

(ii) [***] which have [***] pursuant to [***]

(iii) [***] under this Agreement upon which [***]

(iv) [***] that relates to this Agreement, if not previously provided to [***].

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(d) In lieu of sending reports to JHU via mail or via courier under this Paragraph 5.1, Company may electronically submit all required reports to an e-mail address specified by JHU.

5.2 Records. Company shall make and retain, for a period of three (3) years following the period of each report required by Paragraph 5.1, true and accurate records, files and books of account containing all the data reasonably required for the full computation and verification of sales and other information required in Paragraph 5.1. Such books and records shall be in accordance with generally accepted accounting principles consistently applied. Company shall permit the inspection and copying of such records, files and books of account by JHU or its agents during regular business hours upon [***] written notice to Company. Such inspection shall not be made more than [***]. All costs of such inspection and copying shall be [***], provided that if any such inspection shall [***], such costs shall be borne by [***]. As a condition to entering into any such agreement, Company shall include in any agreement with [***] and other information as required in [***] and permit JHU to inspect such records as required by this Paragraph 5.2.

5.3 Diligence Milestones: Company will use [***] to [***]. [***] may be demonstrated by [***] or by the [***]. [***] shall have the right but not the obligation of [***] and shall work with [***].

[***]

5.4 Other Products. After [***], provided in writing by [***] demonstrating the [***], Company shall [***] or [***]. If Company is [***], Company will [***].

5.5 Patent Acknowledgement. Company agrees that all packaging containing individual LICENSED PRODUCT(S) sold by Company, AFFILIATED COMPANIES and SUBLICENSEE(S) of Company will be marked with the number of the applicable patent(s) licensed hereunder in accordance with each country's patent laws.

5.6 Deliverable(s). Company received BIOLOGICAL MATERIAL(S) under the Option Agreement. Company agrees that it has adequate supply of BIOLOGICAL MATERIAL(S) to fulfill its obligations under this Agreement and will take steps to maintain its supply of BIOLOGICAL MATERIAL(S) during the term of this Agreement. JHU is not obligated to provide additional quantities of BIOLOGICAL MATERIAL(S) upon execution of this Agreement or thereafter during the term of this Agreement.

ARTICLE 6
REPRESENTATIONS

6.1 Duties of the Parties. JHU is not a commercial organization. It is an institute of research and education. Therefore, JHU has no ability to evaluate the commercial potential of any PATENT RIGHT(S), LICENSED PRODUCT, DEVELOPED PRODUCT or other license or rights granted in this Agreement. It is therefore incumbent upon Company to evaluate the rights and products in question, to examine the materials and information provided by JHU, and to determine for itself the validity of any PATENT RIGHT(S), its freedom to operate, and the value of any LICENSED PRODUCT(S) or other rights granted.

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6.2 Representations by JHU. JHU warrants that it has good and marketable title to its interest in the inventions claimed under PATENT RIGHT(S) and BIOLOGICAL MATERIAL(S) with the exception of certain retained rights of the United States Government, which may apply if any part of the JHU research was funded in whole or in part by the United States Government. JHU does not warrant the validity of any patents or that practice under such patents or use of such material shall be free of infringement. EXCEPT AS EXPRESSLY SET FORTH IN THIS PARAGRAPH 6.2, COMPANY AGREES THAT THE PATENT RIGHT(S) AND BIOLOGICAL MATERIAL(S) ARE PROVIDED "AS IS", AND THAT JHU MAKES NO REPRESENTATION OR WARRANTY WITH RESPECT TO THE PERFORMANCE OF BIOLOGICAL MATERIAL(S), LICENSED PRODUCT(S) AND DEVELOPED PRODUCT(S) INCLUDING THEIR SAFETY, EFFECTIVENESS, OR COMMERCIAL VIABILITY, OR WITH RESPECT TO THEIR UTILITY IN MAKING A DEVELOPED PRODUCT(S) OR THE USEFULNESS OF SUCH A DEVELOPED PRODUCT(S). JHU DISCLAIMS ALL WARRANTIES WITH REGARD TO PRODUCT(S) LICENSED UNDER THIS AGREEMENT, INCLUDING, BUT NOT LIMITED TO, ALL WARRANTIES, EXPRESSED OR IMPLIED, OF MERCHANTABILITY AND FITNESS FOR ANY PARTICULAR PURPOSE. NOTWITHSTANDING ANY OTHER PROVISION OF THIS AGREEMENT, JHU ADDITIONALLY DISCLAIMS ALL OBLIGATIONS AND LIABILITIES ON THE PART OF JHU AND INVENTORS, FOR DAMAGES, INCLUDING, BUT NOT LIMITED TO, DIRECT, INDIRECT, SPECIAL, AND CONSEQUENTIAL DAMAGES, ATTORNEYS' AND EXPERTS' FEES, AND COURT COSTS (EVEN IF JHU HAS BEEN ADVISED OF THE POSSIBILITY OF SUCH DAMAGES, FEES OR COSTS), ARISING OUT OF OR IN CONNECTION WITH THE MANUFACTURE, USE, OR SALE OF THE PRODUCT(S) LICENSED UNDER THIS AGREEMENT. AS BETWEEN THE PARTIES, COMPANYASSUMES ALL RESPONSIBILITY AND LIABILITY FOR LOSS OR DAMAGE CAUSED BY A PRODUCT MANUFACTURED, USED, OR SOLD BY COMPANY, ITS SUBLICENSEE(S) AND AFFILIATED COMPANIES WHICH IS A LICENSED PRODUCT(S) OR A DEVELOPED PRODUCT(S) AS DEFINED IN THIS AGREEMENT.

ARTICLE 7
INDEMNIFICATION

7.1 Indemnification. JHU and the Inventors would have no legal liability exposure to third parties if JHU does not license the LICENSED PRODUCT(S) or otherwise itself distribute, use or sell such LICENSED PRODUCT(S), and any royalties JHU and Inventors may receive is not adequate compensation for such legal liability exposure. Therefore, JHU requires Company to protect JHU and Inventors from such exposure. Furthermore, JHU and the Inventors will not, under the provisions of this Agreement or otherwise, have control over the manner in which Company or its AFFILIATED COMPANIES or its SUBLICENSEE(S) or those operating for its account or third parties who purchase LICENSED PRODUCT(S) or DEVELOPED PRODUCT(S) from any of the foregoing entities, develop, manufacture, market or practice the inventions of LICENSED PRODUCT(S), and DEVELOPED PRODUCT(S). Company and its AFFILIATED COMPANY shall indemnify, defend with counsel reasonably acceptable to JHU, and hold JHU, The Johns Hopkins Health Systems, their present and former

trustees, officers, Inventors of PATENT RIGHT(S) and BIOLOGICAL MATERIAL(S), agents, faculty, employees and students harmless as against any judgments, fees, expenses, or other costs arising from or incidental to any product liability or other lawsuit, claim, demand or other action brought as a consequence of the practice of said inventions by any of the foregoing entities, whether or not JHU or said Inventors, either jointly or severally, is named as a party defendant in any such lawsuit and whether or not JHU or the Inventors are alleged to be negligent or otherwise responsible for any injuries to persons or property. Company shall not be obligated to indemnify JHU for any liability or damages caused solely by JHU's medical malpractice when JHU uses the LICENSED PRODUCT(S) or DEVELOPED PRODUCT(S). Practice of the inventions covered by LICENSED PRODUCT(S) and DEVELOPED PRODUCT(S), by an AFFILIATED COMPANY or an agent or a SUBLICENSEE(S) or a third party on behalf of or for the account of Company or by a third party who purchases LICENSED PRODUCT(S) or purchases or licenses DEVELOPED PRODUCT(S) from Company, shall be considered Company's practice of said inventions for purposes of this Paragraph 7.1. The obligation of Company to defend and indemnify as set out in this Paragraph 7.1 shall survive the termination of this Agreement, shall continue even after assignment of rights and responsibilities to an AFFILIATED COMPANY or SUBLICENSEE, and shall not be limited by any other limitation of liability elsewhere in this Agreement.

ARTICLE 8
CONFIDENTIALITY

8.1 Confidentiality. If necessary, the parties will exchange information relating to the PATENT RIGHT(S), BIOLOGICAL MATERIAL(S), LICENSED PRODUCT(S) and DEVELOPED PRODUCTS(S), as well as information related to the Company's research, business plans and financial information, which they consider to be confidential. The recipient of such information agrees to accept the disclosure of said information, and to employ all reasonable efforts to maintain the information secret and confidential, such efforts to be no less than the degree of care employed by the recipient to preserve and safeguard its own confidential information. The information shall not be disclosed or revealed to anyone except employees of the recipient who have a need to know the information and who have entered into a secrecy agreement with the recipient under which such employees are required to maintain confidential the proprietary information of the recipient and such employees shall be advised by the recipient of the confidential nature of the information and that the information shall be treated accordingly.

The obligations of this Paragraph 8.1 shall also apply to AFFILIATED COMPANIES and/or SUBLICENSEE(S) provided such information by Company. JHU's, Company's, AFFILIATED COMPANIES' and SUBLICENSEE(S)' obligations under this Paragraph 8.1 shall extend until three (3) years after the expiration or termination of this Agreement.

8.2 Exceptions. The recipient's obligations under Paragraph 8.1 shall not extend to any part of the information:

a. that can be demonstrated to have been in the public domain or publicly known and readily available to the trade or the public prior to the date of the disclosure;

b. that can be demonstrated, from written records to have been in the recipient's possession or readily available to the recipient from another source not under obligation of secrecy to the disclosing party prior to the disclosure;

c. that becomes part of the public domain or publicly known by publication or otherwise, not due to any unauthorized act by the recipient;

d. that is demonstrated from written records to have been developed by or for the receiving party without reference to confidential information disclosed by the disclosing party; or

e. that is required to be disclosed by law, government regulation or court order.

8.3 Right to Publish. JHU may publish manuscripts, abstracts or the like describing the PATENT RIGHT(S) and inventions contained therein and BIOLOGICAL MATERIAL(S) provided confidential information of Company, as defined in Paragraph 8.1, is not included or without first obtaining approval from Company to include such confidential information. Otherwise, JHU and the Inventors shall be free to publish manuscripts and abstracts or the like directed to the work done at JHU related to the licensed technologies without prior approval.

ARTICLE 9
TERM & TERMINATION

9.1 Term. The term of this Agreement shall commence on the EFFECTIVE DATE and shall continue, in each country, until the later of: (i) date of expiration of the last to expire patent included within PATENT RIGHT(S) in that country and (ii) the expiration of all of Company's payment obligations under this Agreement (the "TERM").

9.2 Termination by Either Party. This Agreement may be terminated by either party, in the event that the other party (a) files or has filed against it a petition under the Bankruptcy Act, makes an assignment for the benefit of creditors, has a receiver appointed for it or a substantial part of its assets, or otherwise takes advantage of any statute or law designed for relief of debtors or (b) fails to perform or otherwise materially breaches any of its obligations hereunder, if, following the giving of notice by the terminating party of its intent to terminate and stating the grounds therefor, the party receiving such notice shall not have cured the failure or breach within [***]. In no event, however, shall such notice or intention to terminate be deemed to waive any rights to damages or any other remedy, which the party giving notice of breach may have as a consequence of such failure or breach.

9.3 Termination by Company. Company may terminate this Agreement and the licenses granted herein, for any reason, upon giving JHU ninety (90) days written notice in accordance with Paragraph 10.6 of this Agreement.

9.4 Obligations and Duties upon Termination or Expiration. If this Agreement is terminated or expired, both parties shall be released from all obligations and duties imposed or assumed hereunder to the extent so terminated or expired, except as expressly provided to the contrary in this Agreement. Upon termination or expiration, both parties shall cease any further use of the confidential information disclosed to the receiving party by the other party. Termination or expiration of this Agreement, for whatever reason, shall not affect the obligation of either party to make any payments for which it is liable prior to or upon such expiration or termination. Expiration or termination shall not affect JHU's right to recover unpaid royalties, fees, reimbursement for patent expenses, or other forms of financial compensation incurred prior to expiration or termination.

(a) Upon expiration or termination, Company shall submit any accrued royalty payments for [***] with [***], accrued fees, unreimbursed patent expenses and other accrued financial compensation due to JHU shall become immediately payable.

(b) Upon expiration or termination of this Agreement, [***], except that [***] Company shall not have any obligation to [***]. Furthermore, upon expiration or termination of this Agreement, [***], except that [***] Company shall retain [***].

(c) Upon termination of this Agreement, any SUBLICENSEE(S) shall become a direct licensee of JHU, provided that JHU's obligations to SUBLICENSEE(S) are no greater than JHU's obligations to Company under this Agreement and SUBLICENSEE(S) will have no obligation to pay any amounts to JHU in excess of the amounts that would have been due to JHU by Company under this Agreement. Company shall provide written notice of termination of the Agreement to each SUBLICENSEE(S) with a copy of such notice provided to JHU.

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9.5 Obligation regarding DEVELOPED PRODUCT(S). Expiration or termination of this Agreement shall not affect [***] obligation under Paragraph 3.3(c) to [***] on [***] and provide [***] under Paragraph 5.1(b) for any sales prior to the conclusion of the [***]. Such obligation will survive expiration or termination of this Agreement.

ARTICLE 10
MISCELLANEOUS

10.1 Use of Name. Company, AFFILIATED COMPANIES and SUBLICENSEE(S) shall not use the name of The Johns Hopkins University or The Johns Hopkins Health System or any of its constituent parts, such as the Johns Hopkins Hospital or any contraction thereof or the name of Inventors in any advertising, promotional, sales literature or fundraising documents without prior written consent from an authorized representative of JHU. Company, AFFILIATED COMPANIES and SUBLICENSEE(S) shall allow at least seven (7) business days' notice of any proposed public disclosure for JHU's review and comment or to provide written consent.

10.2 No Partnership. Nothing in this Agreement shall be construed to create any agency, employment, partnership, joint venture or similar relationship between the parties other than that of a licensor/licensee. Neither party shall have any right or authority whatsoever to incur any liability or obligation (express or implied) or otherwise act in any manner in the name or on the behalf of the other, or to make any promise, warranty or representation binding on the other.

10.3 Notice of Claim. Each party shall give the other or its representative immediate notice of any suit or action filed, or prompt notice of any claim made, against them arising out of the performance of this Agreement or arising out of the practice of the inventions licensed hereunder.

10.4 Product Liability Insurance. Prior to [***] as the case may be [***], Company shall establish and maintain, [***], product liability or other appropriate insurance coverage in the minimum amount of [***] and will [***] present evidence to JHU that such coverage is being maintained. Company will furnish JHU with [***]. [***]. If such Product Liability insurance is underwritten on a [***] basis, Company agrees that [***] during the term of this Agreement will require the [***] of this Agreement.

10.5 Governing Law. This Agreement shall be construed, and legal relations between the parties hereto shall be determined, in accordance with the laws of [***] applicable to contracts solely executed and wholly to be performed within [***] without giving effect to the principles of conflicts of law. Any disputes between the parties to this Agreement shall be brought in [***]. Both parties agree to waive their right to a jury trial.

*** Certain information in this agreement has been omitted and filed separately with the Securities and Exchange Commission. [***] indicates that text has been omitted and is the subject of a confidential treatment request.

10.6 Notice. All notices or communication required or permitted to be given by either party hereunder shall be deemed sufficiently given if mailed by registered mail or certified mail, return receipt requested, or sent by overnight courier, such as Federal Express, to the other party at its respective address set forth below or to such other address as one party shall give notice of to the other from time to time hereunder ("Notice"). Mailed notices shall be deemed to be received on the third business day following the date of mailing. Notices sent by overnight courier shall be deemed received the following business day.

If to Company: Allakos, Inc.
75 Shoreway Road, Suite A
San Carlos, CA 94070
[***]

If to JHU: [***]

10.7 Compliance with All Laws. In all activities undertaken pursuant to this Agreement, both JHU and Company covenant and agree that each will in all material respects comply with such Federal, state and local laws and statutes, as may be in effect at the time of performance and all valid rules, regulations and orders thereof regulating such activities.

10.8 Successors and Assigns. Neither this Agreement nor any of the rights or obligations created herein, except for the right to receive any remuneration hereunder, may be assigned by either party, in whole or in part, without the prior written consent of the other party, except that either party shall be free to assign this Agreement in connection with [***]. Such assignment shall be subject to [***]. This Agreement shall bind and inure to the benefit of the successors and permitted assigns of the parties hereto.

10.9 No Waivers; Severability. No waiver of any breach of this Agreement shall constitute a waiver of any other breach of the same or other provision of this Agreement, and no waiver shall be effective unless made in writing. Any provision hereof prohibited by or unenforceable under any applicable law of any jurisdiction shall, as to such jurisdiction, be deemed ineffective and deleted herefrom without affecting any other provision of this Agreement. It is the desire of the parties hereto that this Agreement be enforced to the maximum extent permitted by law, and should any provision contained herein be held by any governmental agency or court of competent jurisdiction to be void, illegal and unenforceable, the parties shall negotiate in good faith for a substitute term or provision which carries out the original intent of the parties.

10.10 Entire Agreement; Amendment. Company and JHU acknowledge that they have read this entire Agreement and that this Agreement, including the attached Exhibits, constitutes the entire understanding and contract between the parties hereto and supersedes any and all prior or contemporaneous oral or written communications with respect to the subject matter hereof, all of which communications are merged herein. It is expressly understood and agreed that (i) there being no expectations to the contrary between the parties hereto, no usage of trade, verbal agreement or another regular practice or method dealing within any industry or

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between the parties hereto shall be used to modify, interpret, supplement or alter in any manner the express terms of this Agreement; and (ii) this Agreement shall not be modified, amended or in any way altered except by an instrument in writing signed by both of the parties hereto.

10.11 Delays or Omissions. Except as expressly provided herein, no delay or omission to exercise any right, power or remedy accruing to any party hereto, shall impair any such right, power or remedy to such party nor shall it be construed to be a waiver of any such breach or default, or an acquiescence therein, or in any similar breach or default be deemed a waiver of any other breach or default theretofore or thereafter occurring. Any waiver, permit, consent or approval of any kind or character on the part of any party of any breach or default under this Agreement, or any waiver on the part of any party of any provisions or conditions of this Agreement, must be in writing and shall be effective only to the extent specifically set forth in such writing. All remedies either under this Agreement or by law or otherwise afforded to any party, shall be cumulative and not alternative.

10.12 Force Majeure. If either party fails to fulfill its obligations hereunder (other than an obligation for the payment of money), when such failure is due to an act of God, or other circumstances beyond its reasonable control, including but not limited to fire, flood, civil commotion, riot, war (declared and undeclared), revolution, or embargoes, then said failure shall be excused for the duration of such event and for such a time thereafter as is reasonable to enable the parties to resume performance under this Agreement, provided however, that in no event shall such time extend for a period of more than one hundred eighty (180) days.

10.13 Further Assurances. Each party shall, at any time, and from time to time, prior to or after the EFFECTIVE DATE of this Agreement, at reasonable request of the other party, execute and deliver to the other such instruments and documents and shall take such actions as may be required to more effectively carry out the terms of this Agreement.

10.14 Survival. All representations, warranties, covenants and agreements made herein and which by their express terms or by implication are to be performed after the execution and/or termination hereof, or are prospective in nature, shall survive such execution and/or termination, as the case may be. This shall include Paragraphs 3.10 (Late Payments), 5.2 (Records), 9.5 (Obligation regarding DEVELOPED PRODUCT(S)) and Articles 6, 7, 8, 9, and 10.

10.15 No Third Party Beneficiaries. Nothing in this Agreement shall be construed as giving any person, firm, corporation or other entity, other than the parties hereto and their successors and permitted assigns, any right, remedy or claim under or in respect of this Agreement or any provision hereof.

10.16 Headings. Article headings are for convenient reference and are not a part of this Agreement. All Exhibits are incorporated herein by this reference.

10.17 Counterparts. This Agreement may be executed in counterparts, each of which shall be deemed an original and all of which when taken together shall be deemed but one instrument.

[REST OF PAGE INTENTIONALLY LEFT BLANK]

IN WITNESS WHEREOF, this Agreement shall take effect as of the EFFECTIVE DATE when it has been executed below, by the duly authorized representatives of the parties.

THE JOHNS HOPKINS UNIVERSITY

/s/ Neil Veloso
Neil Veloso
Executive Director, Johns Hopkins Technology Transfer
Johns Hopkins Technology Ventures

10/14/2016
(Date)

ALLAKOS INC.

/s/ Chris Bebbington
Christopher Bebbington
President & CEO

10/14/2016
(Date)

EXHIBIT A. LICENSE FEES, ROYALTIES, PAYMENTS & EQUITY UNDER ARTICLE 3

EXHIBIT B. [***] REPORT FORM UNDER PARAGRAPH 5.1(b)

EXHIBIT C. PATENT RIGHT(S) UNDER PARAGRAPH 1.14

EXHIBIT D. BIOLOGICAL MATERIAL(S) UNDER PARAGRAPH 1.2

EXHIBIT E. [***] UNDER PARAGRAPH 3.7

EXHIBIT F. FORM OF STOCK ISSUANCE AGREEMENT UNDER PARAGRAPH 3.8

*** Certain information in this agreement has been omitted and filed separately with the Securities and Exchange Commission. [***] indicates that text has been omitted and is the subject of a confidential treatment request.

EXHIBIT A

LICENSE FEE, ROYALTIES, PAYMENTS AND EQUITY UNDER ARTICLE 3

1. **License Fee and Amendment Fee:** The license fee payable under Paragraph 3.1(a) is [***]. The amendment fee payable under Paragraph 3.1(b) is [***].

2. **Minimum Annual Royalties:** The minimum annual royalties payable under Paragraph 3.2 are:

Anniversary	Amount
[***]	

3. **Royalties:** The running royalty rates payable under Paragraph 3.3 are:

[***]

4. **Diligence Milestone Payments:**The diligence milestone payments payable under Paragraph 3.5 are:

[***].

5. **Sublicense Consideration:** The percent sublicense consideration payable under Paragraph 3.6 is:

[***].

6. **Equity:**The equity to be issued to JHU under Paragraph 3.8 is:

111,111 shares of the Company's common stock pursuant to a customary Stock Issuance Agreement

7. **Patent Expense Reimbursement:** The patent expense reimbursement under Paragraph 3.7 is:

[***]

*** Certain information in this agreement has been omitted and filed separately with the Securities and Exchange Commission. [***] indicates that text has been omitted and is the subject of a confidential treatment request.

EXHIBIT B

[***] REPORT UNDER PARAGRAPH 5.1(b)

FOR LICENSE AGREEMENT A30817

BETWEEN

ALLAKOS INC. AND THE JOHNS HOPKINS UNIVERSITY

EFFECTIVE DATE _____

FOR PERIOD OF _____ to _____

[***]

This report format is to be used to report [***] to JHU. [***].

*** Certain information in this agreement has been omitted and filed separately with the Securities and Exchange Commission. [***] indicates that text has been omitted and is the subject of a confidential treatment request.

EXHIBIT C

PATENT RIGHTS UNDER PARAGRAPH 1.14

[***]

*** Certain information in this agreement has been omitted and filed separately with the Securities and Exchange Commission. [***] indicates that text has been omitted and is the subject of a confidential treatment request.

EXHIBIT D

BIOLOGICAL MATERIAL(S) UNDER PARAGRAPH 1.2

[***]

*** Certain information in this agreement has been omitted and filed separately with the Securities and Exchange Commission. [***] indicates that text has been omitted and is the subject of a confidential treatment request.

EXHIBIT E

[***] UNDER PARAGRAPH 3.7

[***]

*** Certain information in this agreement has been omitted and filed separately with the Securities and Exchange Commission. [***] indicates that text has been omitted and is the subject of a confidential treatment request.

EXHIBIT F

FORM OF STOCK ISSUANCE AGREEMENT UNDER PARAGRAPH 3.8

(see attached)

FINAL

CONFIDENTIAL

ALLAKOS INC.

COMMON STOCK ISSUANCE AGREEMENT

This Common Stock Issuance Agreement (the "**Agreement**") is made as of , 2013, by and between Allakos Inc., a Delaware corporation (the "**Company**"), and The Johns Hopkins University (the "**JHU**").

RECITALS

A. JHU and the Company are each a party to that certain Exclusive License Agreement with an effective date of , 2013 (the "**License Agreement**"), pursuant to which JHU licensed certain intellectual property rights to the Company.

B. Pursuant to Section 3.8 of the License Agreement, JHU is entitled to receive 111,111 shares of Common Stock of the Company.

C. The Board of Directors of the Company has approved the issuance of 111,111 shares of Common Stock of the Company as fulfillment in full of the Company's obligation to grant such equity award to JHU pursuant to Section 3.8 of the License Agreement.

NOW, THEREFORE, for good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, and each intending to be bound hereby, the Company and JHU hereby agree as follows:

1. Issuance of Common Stock.

(a) The Company hereby issues to JHU 111,111 shares of the Company's Common Stock (the "**Shares**") at a price of $[***] (par value) per Share and an aggregate Purchase Price of $[***] (the "**Purchase Price**"). The Company will promptly, after delivery of this Agreement, issue a certificate representing the Shares registered in the name of JHU.

(b) The Purchase Price for the Shares shall be deemed to be paid in full by JHU's execution of the License Agreement and the grants made by JHU pursuant to Section 2.1 of the License Agreement.

(c) JHU acknowledges and agrees that, except for JHU's participation rights set forth in Section 3.9 of the License Agreement, the issuance of the Shares satisfies in full any and all rights that JHU may have to acquire or otherwise receive equity securities or securities convertible into or exercisable for equity securities of the Company pursuant to the License Agreement.

2. Stock Splits, etc. If, from time to time during the term of this Agreement:

(a) there is any stock dividend or dividend of cash and/or property, stock split, or other change in the character or amount of any of the outstanding securities of the Company, including any conversion of outstanding securities of the Company into cash or securities of another corporation, person, or entity in connection with any acquisition, merger, consolidation, or similar transaction involving the Company; or

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(b) there is any liquidation, dissolution, or similar transaction,

then, in such event, any and all new, substituted or additional securities, or other property to which JHU is entitled by reason of its ownership of Shares shall be immediately subject to this Agreement and be included in the word "Shares" for all purposes with the same force and effect as the Shares presently subject to the right of first refusal, market standoff agreement and other terms of this Agreement.

3. Right of First Refusal. Before any Shares registered in the name of JHU or of any transferee (either being sometimes referred to herein as the "**Holder**") thereof may be sold or transferred (including any transfer by operation of law), the Company or its assignee(s) shall have a right of first refusal to purchase the Shares on the terms and conditions set forth in this Section 3 (the "**Right of First Refusal**").

(a) **Notice of Proposed Transfer**. The Holder of the Shares shall deliver to the Company a notice (the "**Notice**") stating (i) the Holder's *bona fide* intention to sell or otherwise transfer such Shares; (ii) the name of each proposed purchaser or other transferee (the "**Proposed Transferee**"); (iii) the number of Shares to be sold or transferred to each Proposed Transferee; and (iv) the *bona fide* cash price or other consideration for which the Holder proposes to sell or transfer such Shares (the "**Offered Price**"), and the Holder shall offer the Shares at the Offered Price to the Company or its assignee(s).

(b) **Exercise of Right of First Refusal**. At any time within thirty (30) days after receipt of the Notice, the Company and/or its assignee(s) may, by giving written notice to the Holder, elect to purchase all or part of the Shares proposed to be transferred to any one or more of the Proposed Transferees, at the purchase price determined in accordance with subsection (c) below.

(c) **Purchase Price**. The purchase price for the Shares purchased by the Company (the "**Company's Price**") or its assignee(s) under this Section 3 shall be the Offered Price. If the Offered Price includes consideration other than cash, the cash equivalent value of the non-cash consideration shall be determined by the Board of Directors of the Company in good faith.

(d) **Payment**. Payment of the Company's Price shall be made, at the option of the Company or its assignee(s), in cash (by check), by cancellation of all or a portion of any outstanding indebtedness of the Holder to the Company (or, in the case of repurchase by an assignee, to the assignee), or by any combination thereof within thirty (30) days after receipt of the Notice or in the manner and at the times set forth in the Notice.

(e) **Holder's Right to Transfer**. If all of the Shares proposed in the Notice to be transferred to a given Proposed Transferee are not purchased by the Company and/or its assignee(s) as provided in this Section 3, then the Holder may sell or otherwise transfer such Shares to that Proposed Transferee at the Offered Price or at a higher price, *provided* that such sale or other transfer is consummated within one hundred and twenty (120) days after the date of

the Notice, that any such sale or other transfer is effected in accordance with any applicable securities laws and that the Proposed Transferee agrees in writing that the provisions of this Section 3 shall continue to apply to the Shares in the hands of such Proposed Transferee. If the Shares described in the Notice are not transferred to the Proposed Transferee within such period, a new Notice shall be given to the Company, and the Company and/or its assignees shall again be offered the Right of First Refusal before any Shares held by the Holder may be sold or otherwise transferred.

(f) **Termination of Right of First Refusal**. The Right of First Refusal shall terminate upon the earlier of (i) the effective date of a registration statement filed by the Company under the Securities Act of 1933, as amended (the "**Securities Act**"), with respect to a public offering of Common Stock of the Company, or (ii) the closing date of a sale of assets or merger of the Company or other acquisition transaction pursuant to which stockholders of the Company receive cash or securities of a buyer whose shares are publicly traded.

(g) **Invalid Transfers**. The Company shall not be required (i) to transfer on its share register any Shares which shall have been purportedly sold or transferred if such transfer would be in violation of this Agreement or (ii) to treat as owner of such Shares, to accord the right to vote as such owner, or to pay dividends to any purported transferee to whom such Shares shall have purportedly been so transferred.

4. Legends. All certificates representing any of the Shares shall have endorsed thereon legends in substantially the following form:

(a) "THE SHARES REPRESENTED BY THIS CERTIFICATE ARE SUBJECT TO CERTAIN RESTRICTIONS ON TRANSFER, INCLUDING A RIGHT OF FIRST REFUSAL ON TRANSFERS, SET FORTH IN AN AGREEMENT BETWEEN THE COMPANY AND THE REGISTERED HOLDER, OR ITS, HIS OR HER PREDECESSOR IN INTEREST, A COPY OF WHICH IS ON FILE AT THE PRINCIPAL OFFICE OF THE COMPANY."

(b) "THESE SECURITIES HAVE NOT BEEN REGISTERED UNDER THE SECURITIES ACT OF 1933, AS AMENDED. THEY MAY NOT BE SOLD, OFFERED FOR SALE, PLEDGED, OR HYPOTHECATED IN THE ABSENCE OF AN EFFECTIVE REGISTRATION STATEMENT AS TO THE SECURITIES UNDER SAID ACT OR AN OPINION OF COUNSEL, SATISFACTORY TO THE COMPANY, THAT SUCH REGISTRATION IS NOT REQUIRED."

(c) Any legend required to be placed thereon by the applicable blue sky laws of any state.

5. JHU's Representations. In connection with the purchase of the Shares, JHU hereby represents and warrants to the Company as follows:

(a) **Investment Intent**. JHU is purchasing the Shares solely for investment and not with any present intention of selling or otherwise disposing of the Shares or any portion thereof in any transaction other than a transaction exempt from registration under the Securities Act. JHU also represents that the entire legal and beneficial interest of the Shares is being purchased, and will be held, for JHU's account only, and neither in whole nor in part for any other person or entity.

(b) **Residence**. JHU principal location is at the address indicated beneath JHU's signature below.

(c) **Information Concerning Company**. JHU has had the opportunity to discuss the plans, operations, and financial condition of the Company with its officers and has received all information JHU has deemed appropriate to enable JHU to evaluate the financial risk inherent in investing in the Shares. JHU has a preexisting business relationship with the Company or any of its officers, directors, or controlling persons or by reason of JHU's business or financial experience or the business or financial experience of JHU's professional advisors who are unaffiliated with and who are not compensated by the Company, directly or indirectly, could be reasonably assumed to have the capacity to evaluate the merits and risks of an investment in the Company and to protect JHU's own interests in connection with these transactions.

(d) **Economic Risk**. JHU realizes that the purchase of the Shares involves a high degree of risk, and JHU is able, without impairing its financial condition, to hold the Shares for an indefinite period of time and to suffer a complete loss of their value.

(e) **Restricted Securities**. JHU acknowledges that the sale of the Shares has not been registered under the Securities Act. The Shares must be held indefinitely unless subsequently registered under the Securities Act or an exemption from such registration is available, and the Company is under no obligation to register the Shares.

(f) **Rule 144**. JHU is familiar with Rule 144 adopted under the Securities Act, which in some circumstances permits limited public resales of "restricted securities" like the shares acquired from an issuer in a non-public offering. JHU understands that its ability to sell the Shares under Rule 144 in the future is uncertain, and may depend upon, among other things: (i) the availability of certain current public information about the Company; (ii) the resale occurring more than a specified period after JHU's purchase and full payment (within the meaning of Rule 144) for the Shares; and (iii) if JHU is an affiliate of the Company (A) the sale being made in an unsolicited "broker's transaction", transactions directly with a market maker or riskless principal transactions, as those terms are defined under the Securities Exchange Act of 1934, as amended, (B) the amount of shares being sold during any three-month period not exceeding the specified limitations stated in Rule 144, and (C) timely filing of a notice of proposed sale on Form 144, if applicable. JHU further understands that the requirements of Rule 144 may never be met, and that the Shares may never be saleable under the rule. JHU further understands that at the time it wishes to sell the Shares, there may be no public market for the Company's stock upon which to make such a sale, or the current public information requirements of Rule 144 may not be satisfied, either of which may preclude JHU from selling the Shares under Rule 144 even if the relevant holding period had been satisfied.

(g) **Further Limitations on Disposition**. Without in any way limiting the representations set forth above, JHU further agrees that it shall in no event make any disposition of any portion of the Shares unless and until:

(i) (A) there is in effect a registration statement under the Securities Act covering such proposed disposition and such disposition is made in accordance with said registration statement; (B) the resale provisions of Rule 701 or Rule 144 are available in the opinion of counsel to the Company; or (C) (1) JHU shall have notified the Company of the proposed disposition and shall have furnished the Company with a detailed statement of the circumstances surrounding the proposed disposition, (2) JHU shall have furnished the Company with an opinion of JHU's counsel, reasonably acceptable to the Company to the effect that such disposition will not require registration of such shares under the Securities Act, and (3) such opinion of JHU's counsel shall have been concurred in by counsel for the Company and the Company shall have advised JHU of such concurrence; and

(ii) JHU shall have complied with the Right of First Refusal set forth in Section 3.

(h) **Responsibility for Tax Consequences**. JHU has reviewed the federal, state, local and foreign tax consequences of this investment and the transactions contemplated by this Agreement (including any tax consequences that may result now or in the future under recently enacted tax legislation) and has had the opportunity to consult with its tax advisors, if any, regarding such consequences. JHU acknowledges that it is not relying on any statements or representations of the Company or any of the Company's agents in regard to such tax consequences and understands that JHU (and not the Company) shall be responsible for its own tax liability that may arise as a result of this investment or the transactions contemplated by this Agreement. JHU acknowledges that the Company has no obligation in regard to the future conduct of its business, to act or refrain from acting in any manner, regardless of the loss of any tax benefit to JHU in connection with the purchase, ownership, or sale of the Stock, which may result from such action or inaction.

6. Market Standoff Agreement. JHU hereby agrees that JHU shall not offer, pledge, sell, contract to sell, sell any option or contract to purchase, purchase any option or contract to sell, grant any option, right or warrant to purchase, lend, or otherwise transfer or dispose of, directly or indirectly, any Common Stock (or other securities) of the Company or enter into any swap, hedging or other arrangement that transfers to another, in whole or in part, any of the economic consequences of ownership of any Common Stock (or other securities) of the Company held by JHU (other than those included in the registration) for a period specified by the representative of the underwriters of Common Stock (or other securities) of the Company not to exceed one hundred and eighty (180) days following the effective date of any registration statement of the Company filed under the Securities Act (or such other period as may be requested by the Company or the underwriters to accommodate regulatory restrictions on (i) the publication or other distribution of research reports and (ii) analyst recommendations and opinions, including, but not limited to, the restrictions contained in NASD Rule 2711(f)(4) or NYSE Rule 472(f)(4), or any successor provisions or amendments thereto).

JHU agrees to execute and deliver such other agreements as may be reasonably requested by the Company or the underwriter which are consistent with the foregoing or which are necessary to give further effect thereto. In addition, if requested by the Company or the representative of the underwriters of Common Stock (or other securities) of the Company, JHU shall provide, within ten (10) days of such request, such information as may be required by the

Company or such representative in connection with the completion of any public offering of the Company's securities pursuant to a registration statement filed under the Securities Act. The obligations described in this Section 6 shall not apply to a registration relating solely to employee benefit plans on Form S-1 or Form S-8 or similar forms that may be promulgated in the future, or a registration relating solely to a Commission Rule 145 transaction on Form S-4 or similar forms that may be promulgated in the future. The Company may impose stop-transfer instructions with respect to the shares of Common Stock (or other securities) subject to the foregoing restriction until the end of said one hundred and eighty (180) day (or other) period. JHU agrees that any transferee of the Shares shall be bound by this Section 6.

7. Governing Law. This Agreement shall be governed by the laws of the State of California without regard to the conflicts of law provisions thereof.

8. Jurisdiction; Venue. The parties consent to the exclusive jurisdiction of, and venue in, the state courts in Santa Clara County in the State of California (or in the event of exclusive federal jurisdiction, the courts of the Northern District of California) with respect to any disputes arising out of or related to this Agreement which is not resolved by the relevant parties thereto themselves in writing.

9. Dispute Resolution Fees. If any action at law or in equity is necessary to enforce or interpret the terms of this Agreement, the prevailing party shall be entitled to reasonable attorneys' fees, costs and disbursements in addition to any other relief to which such party may be entitled.

10. Amendments and Waivers. Any term of this Agreement may be amended and the observance of any term of this Agreement may be waived (either generally or in a particular instance and either retroactively or prospectively), only with the written consent of the parties hereto.

11. Additional Actions. The parties will execute such further instruments and take such further action as may reasonably be necessary to carry out the intent of this Agreement.

12. Notices. Any notice required or permitted hereunder shall be given in writing and shall be deemed effectively given upon personal delivery or upon deposit in the United States Post Office, by regular or certified mail with postage and fees prepaid, addressed, if to JHU, at its address shown on the Company's records and, if to the Company, at the address of its principal corporate offices (Attention: President) or at such other address as such party may designate by ten (10) days' advance written notice to the other party.

13. Assignment. The Company may assign its rights and delegate its duties under this Agreement. If any such assignment or delegation requires consent of the California Commissioner of Corporations, the parties agree to cooperate in requesting such consent.

14. Successors and Assigns. This Agreement shall inure to the benefit of the successors and assigns of the Company and, subject to the restrictions on transfer herein set forth, be binding upon JHU and its successors and assigns.

15. Severability. In case any provision of this Agreement shall be invalid, illegal or unenforceable, the validity, legality and enforceability of the remaining provisions shall not in any way be affected or impaired thereby.

16. Counterparts. This Agreement may be executed in any number of counterparts, each of which shall be an original, but all of which together shall constitute one instrument

17. Entire Agreement. This Agreement constitutes the full and entire understanding and agreement between the Company and JHU with regard to the subjects hereof and thereof, and no party shall be liable or bound to any other party in any manner with regard to the subjects hereof or thereof by any warranties, representations, or covenants, except as specifically set forth herein.

[Remainder of page intentionally left blank]

IN WITNESS WHEREOF, the parties hereto have executed this Common Stock Issuance Agreement as of the day and year first above written.

"**COMPANY**"

ALLAKOS INC.

BY: _____
NAME: _____
TITLE: _____

"**JHU**"

THE JOHNS HOPKINS UNIVERSITY

BY: _____
NAME: _____
TITLE: _____

Address:

EXHIBIT 23.1

Consent of Independent Registered Public Accounting Firm

We consent to the reference to our firm under the caption “Experts” and to the use of our report dated April 10, 2018 (except for the first paragraph of Note 2 and for Note 13, as to which the date is July 9, 2018), in Amendment No. 1 to the Registration Statement (Form S-1 No. 333-225836) and related Prospectus of Allakos Inc. dated July 9, 2018.

/s/ Ernst & Young LLP

Redwood City, California
July 9, 2018