Confidential draft #3 as confidentially submitted to the Securities and Exchange Commission on May 18, 2018.
This draft registration statement has not been publicly filed with the Securities and Exchange Commission and all information herein remains strictly confidential.

Registration No. 333-

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

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)**

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

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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	**Proposed Maximum Aggregate Offering Price (1)(2)**	**Amount of Registration Fee**
Common Stock, $0.001 par value per share	$	$

(1) Includes offering price of any additional shares of common stock that the underwriters have the option to purchase.
(2) Estimated solely for the purpose of calculating the registration fee pursuant to Rule 457(o) under the Securities Act of 1933, as amended.

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 , 2018

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 $ and $ per share.

We intend to apply to list our common stock on 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 17 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 additional shares of our common stock. The underwriters can exercise this option at any time within 30 days after the date of this prospectus.

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 that has demonstrated pharmacodynamic activity and improved patient symptoms in Phase 1 trials. 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 indolent systemic mastocytosis ("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

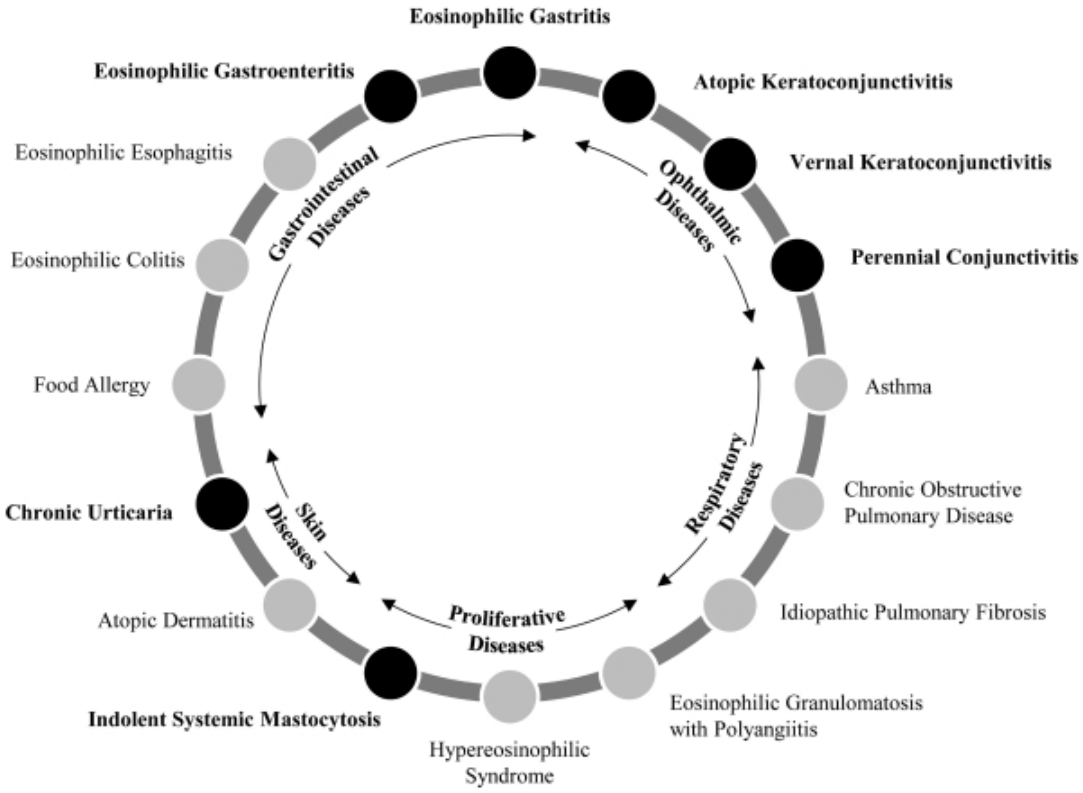


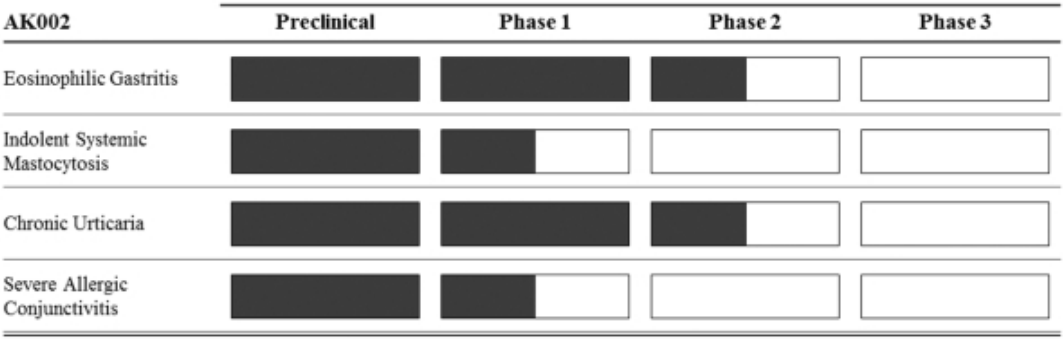
Figure A: Our most advanced AK002 programs are shown in bold in Figure A.

Despite the knowledge that eosinophils and mast cells drive many pathological conditions, there are no approved therapies that selectively target 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 the second quarter of 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.

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 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) four monthly doses of 0.3 mg/kg AK002, (b) 0.3 mg/kg for the first month followed by three doses of 1.0 mg/kg AK002 given monthly, or (c) monthly placebo. The primary endpoint is the reduction in gastric eosinophils post-treatment with AK002. We have developed a proprietary daily Patient Reported Outcome (“PRO”) questionnaire to be used to assess the change in EG patient symptoms, such as abdominal pain, cramping, nausea/vomiting and diarrhea, in our clinical trials. 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 the second quarter of 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 mastocytosis disease activity measures.

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 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 during the second quarter of 2017, and the multi-dose portion is ongoing in 12 patients. 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 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 other measures of itching, hives and swelling, including the urticaria activity score 7 ("UAS7") and cholinergic UAS7. 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 symptom measures of ocular itch, pain, lacrimation, photophobia and foreign body sensation. 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 ^{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.

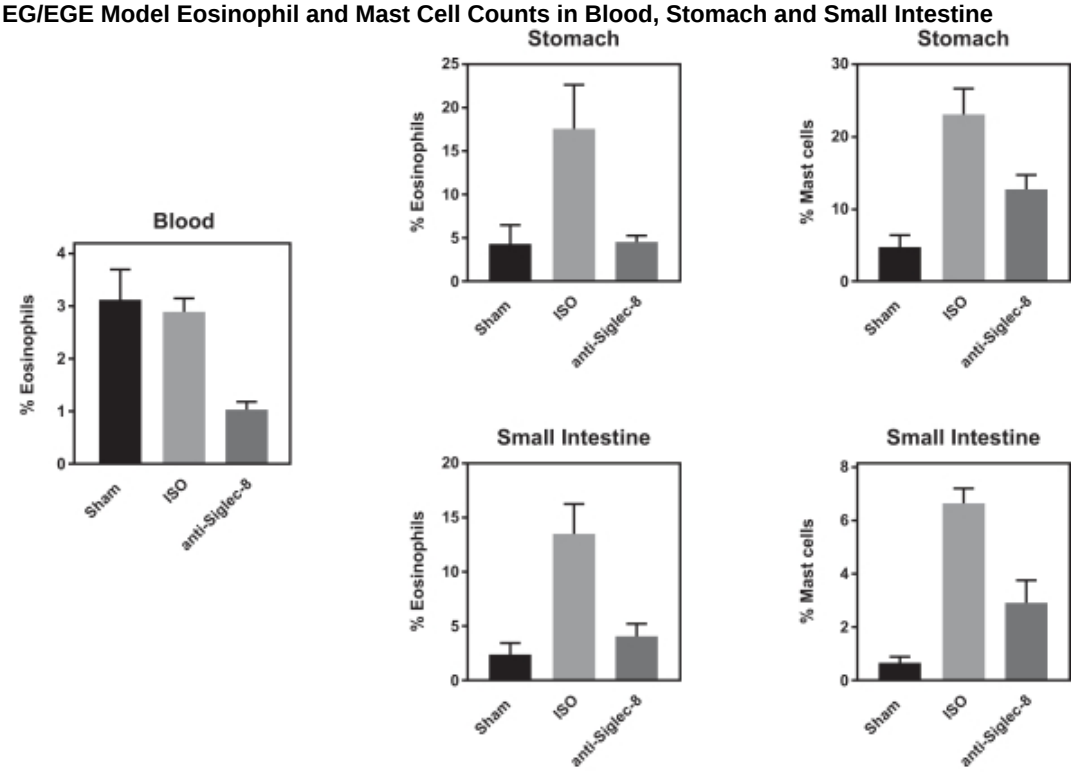
We have shown that AK002 or antibodies to Siglec-8 have broad activity in animal disease models (eosinophilic gastroenteritis, anaphylaxis, fibrosis and chronic obstructive pulmonary disease) and in

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 Reduces Eosinophil and Mast Cell Levels in EG/EGE Model

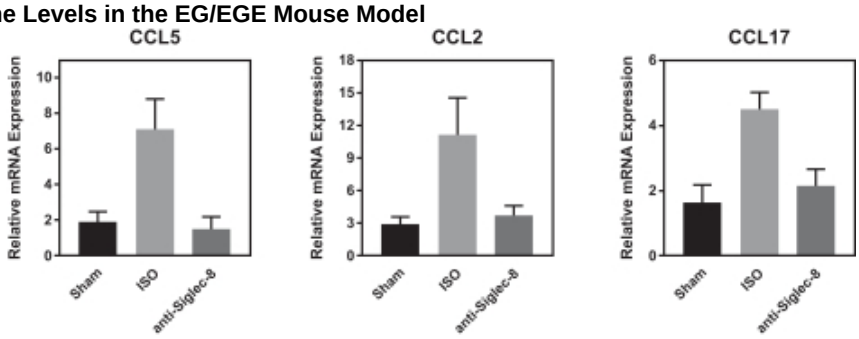
In this model, two groups of Siglec-8 transgenic mice were sensitized with ovalbumin to induce eosinophil and mast cell driven gastrointestinal inflammation similar to that observed in EG and other EGIDs. A third group of animals was administered phosphate buffered saline to serve as normal unsensitized 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.

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	shares
Common stock to be outstanding after this offering	shares (or 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 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 trading symbol	"ALLK"

The number of shares of our common stock to be outstanding after this offering is based on the 41,357,383 shares of our common stock outstanding as of March 31, 2018 (including convertible preferred stock on an as-converted basis), and excludes the following:

- 7,780,676 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 $1.11 per share;
- 1,167,200 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 $3.45 per share;
- 59,522 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 $0.49 per share; and
- shares of common stock reserved for future issuance under our stock-based compensation plans, consisting of:
  - 89,246 shares of common stock reserved for future issuance under our 2012 Equity Incentive Plan, as amended ("2012 Plan"), which shares will be included in the shares to be reserved under our 2018 Equity Incentive Plan ("2018 Plan"); and
  - shares of common stock reserved for future issuance under our 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."

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 38,714,587 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.

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	$ (10.43)	$ (11.63)	$ (2.85)	$ (3.35)
Weighted-average shares of common stock outstanding: (1)				
Basic and diluted	1,640	2,025	1,775	2,530
Pro forma net loss per share: (1)				
Basic and diluted (unaudited)		$ (0.81)		$ (0.21)
Pro forma weighted-average shares of common stock outstanding: (1)				
Basic and diluted (unaudited)		29,216		41,245

(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	$
Working capital (4)	73,904	73,904	
Total assets	79,777	79,777	
Total liabilities	3,441	3,441	3,441
Convertible preferred stock	142,969	—	—
Accumulated deficit	(69,059)	(69,059)	(69,059)
Total stockholders' equity (deficit)	(66,633)	76,336	

(1) The pro forma column in the balance sheet table reflects the automatic conversion of our outstanding shares of convertible preferred stock into 38,714,587 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 and the sale by us of shares of common stock in this offering at an assumed initial public offering price of $ 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.

(3) A $1.00 increase (decrease) in the assumed initial public offering price of $ 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 $ million, assuming that 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. An increase (decrease) of one million shares in the number of shares offered by us would increase (decrease) each of cash and cash equivalents, working capital, total assets and stockholders' equity (deficit) equity by approximately $ million, assuming the assumed initial public offering price of $ per share, which is the midpoint of the estimated offering price range 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 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.

(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 will be approximately $, assuming an initial public offering price of $, 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, 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 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 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 intend to adopt a code of conduct prior to the closing of this offering, 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 March 31, 2018, we had 42 full-time employees, including 30 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, that same group will beneficially own approximately % 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, 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. 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.

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 $ per share, representing the difference between the assumed initial public offering price of $ 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 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 7,780,676 shares subject to outstanding options with a weighted-average exercise price of $1.11 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 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 and (ii) the conversion of all outstanding shares of our convertible preferred stock into 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, 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, holders of an aggregate of 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 the . 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 may not use them effectively.

Our management will have broad discretion in the application of the net proceeds from this offering, 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 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.

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 $ million, or approximately $ million if the underwriters exercise their option to purchase additional shares in full, based upon an assumed initial public offering price of $ 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.

Each $1.00 increase (decrease) in the assumed initial public offering price of $ per share would increase (decrease) the net proceeds to us from this offering by approximately $ 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 would increase (decrease) the net proceeds to us from this offering by approximately $ million, assuming that the assumed initial public offering price 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 $ 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 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 our issuance and sale of shares of common stock in this offering at an assumed initial public offering price of $ 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.

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	$
Series A convertible preferred stock, $0.001 par value per share; 26,083 shares authorized, 26,083 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, $0.001 par value per share; 12,632 shares authorized, 12,632 shares issued and outstanding, actual; no shares authorized, issued or outstanding pro forma and pro forma as adjusted	99,973	—	—
Stockholders’ equity (deficit):			
Common stock, $0.001 par value per share; 55,000 shares authorized, 2,643 shares issued and outstanding, actual; shares authorized, 41,358 shares issued and outstanding, pro forma (unaudited); shares authorized, shares issued and outstanding, pro forma as adjusted (unaudited)	3	41	
Additional paid-in capital	2,423	145,354	
Accumulated deficit	(69,059)	(69,059)	(69,059)
Total stockholders’ equity (deficit)	(66,633)	76,336	
Total capitalization	$ 76,336	$ 76,336	$ —

(1) Each $1.00 increase (decrease) in the assumed initial public offering price of $ 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 $ million, assuming that the number of shares of common stock offered by us, 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 would increase (decrease) our pro forma as adjusted cash, additional paid-in capital, total stockholders' equity (deficit) and total capitalization by approximately $ million, assuming the assumed initial public offering price of $ per share, which is the midpoint of the estimated offering price range 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 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 is based on 41,357,383 shares of common stock (including convertible preferred stock on an as-converted basis) outstanding as of March 31, 2018, and excludes the following:

- 7,780,676 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 $1.11 per share;
- 1,167,200 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 $3.45 per share;
- 59,522 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 $0.49 per share; and
- shares of common stock reserved for future issuance under our stock-based compensation plans, consisting of:
  - 89,246 shares of common stock reserved for future issuance under our 2012 Equity Incentive Plan, as amended ("2012 Plan"), which shares will be included in the shares to be reserved under our 2018 Equity Incentive Plan ("2018 Plan"); and
  - shares of common stock reserved for future issuance under our 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."

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.

Our historical net tangible book value (deficit) as of March 31, 2018 was $(66.6) million, or $(25.21) 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 $1.85 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 38,714,587 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 38,714,587 shares of our common stock upon the completion of this offering.

After giving further effect to our sale of shares of common stock in this offering at an assumed initial public offering price of $ 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, our pro forma as adjusted net tangible book value as of March 31, 2018 would have been approximately $ million, or approximately $ per share. This represents an immediate increase in pro forma as adjusted net tangible book value per share of $ to our existing stockholders and an immediate dilution in pro forma as adjusted net tangible book value per share of approximately $ 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 from the assumed initial public offering price per share paid by new investors.

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

Assumed initial public offering price per share		$
Historical net tangible book value (deficit) per share as of March 31, 2018	$(25.21)	
Pro forma increase in net tangible book value (deficit) per share as of March 31, 2018	$ 27.06	
Pro forma net tangible book value (deficit) per share as of March 31, 2018	$ 1.85	
Increase in pro forma as adjusted net tangible book value per share attributable to new investors purchasing shares in this offering	$	
Pro forma as adjusted net tangible book value per share after this offering		$
Dilution per share to new investors purchasing shares in this offering		$

Each $1.00 increase (decrease) in the assumed initial public offering price of $ 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 by $ per share and the dilution to new investors purchasing common stock in this offering by $ per share, 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. An increase of 1.0 million shares in the number of shares offered by us would increase the pro forma as adjusted net tangible book value per share after this offering by $ and decrease the dilution per share to new investors participating in this offering by $, assuming no change in the assumed initial public offering price 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 would decrease the pro forma as adjusted net tangible book value per share after this offering by $ and increase the dilution per share to new investors participating in this offering by $, assuming no change in the assumed initial public offering price and after deducting estimated underwriting discounts and commissions and estimated offering expenses payable by us.

If the underwriters exercise their option to purchase additional shares of common stock in this offering in full at the assumed initial public offering price of $ 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 would be $ 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 $ 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 and by new investors in this offering at an assumed initial public offering price of $ 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.

	Shares Purchased		Total Consideration		Weighted-Average Price Per Share
	Number	Percent	Amount	Percent	
Existing stockholders before this offering		%	$	%	$
Investors participating in this offering					
Total		100%	$	100%	

The table above assumes no exercise of the underwriters' option to purchase 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 % 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 % of the total number of shares outstanding after this offering.

Each $1.00 increase (decrease) in the assumed initial public offering price of $ 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 by $ million, assuming that the number of shares offered by us, 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 by $ 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 is based on 41,357,383 shares of common stock (including convertible preferred stock on an as-converted basis) outstanding as of March 31, 2018, and excludes the following:

- 7,780,676 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 $1.11 per share;
- 1,167,200 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 $3.45 per share;
- 59,522 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 $0.49 per share; and
- shares of common stock reserved for future issuance under our stock-based compensation plans, consisting of:
  - 89,246 shares of common stock reserved for future issuance under our 2012 Equity Incentive Plan, as amended (“2012 Plan”), which shares will be included in the shares to be reserved under our 2018 Equity Incentive Plan (“2018 Plan”); and
  - shares of common stock reserved for future issuance under our 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.”

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	$ (10.43)	$ (11.63)	$ (2.85)	$ (3.35)
Weighted-average shares of common stock outstanding: (1)				
Basic and diluted	1,640	2,025	1,775	2,530
Pro forma net loss per share: (1)				
Basic and diluted (unaudited)		$ (0.81)		$ (0.21)
Pro forma weighted-average shares of common stock outstanding: (1)				
Basic and diluted (unaudited)		29,216		41,245

(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 that has demonstrated pharmacodynamic activity and improved patient symptoms in Phase 1 trials. 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 indolent systemic mastocytosis ("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 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 111,111 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 , 2018 was approximately $ million, based on the assumed initial public offering price of $ 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 $ million is related to vested options and approximately $ 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, 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 that has demonstrated pharmacodynamic activity and improved patient symptoms in Phase 1 trials. 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 indolent systemic mastocytosis ("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

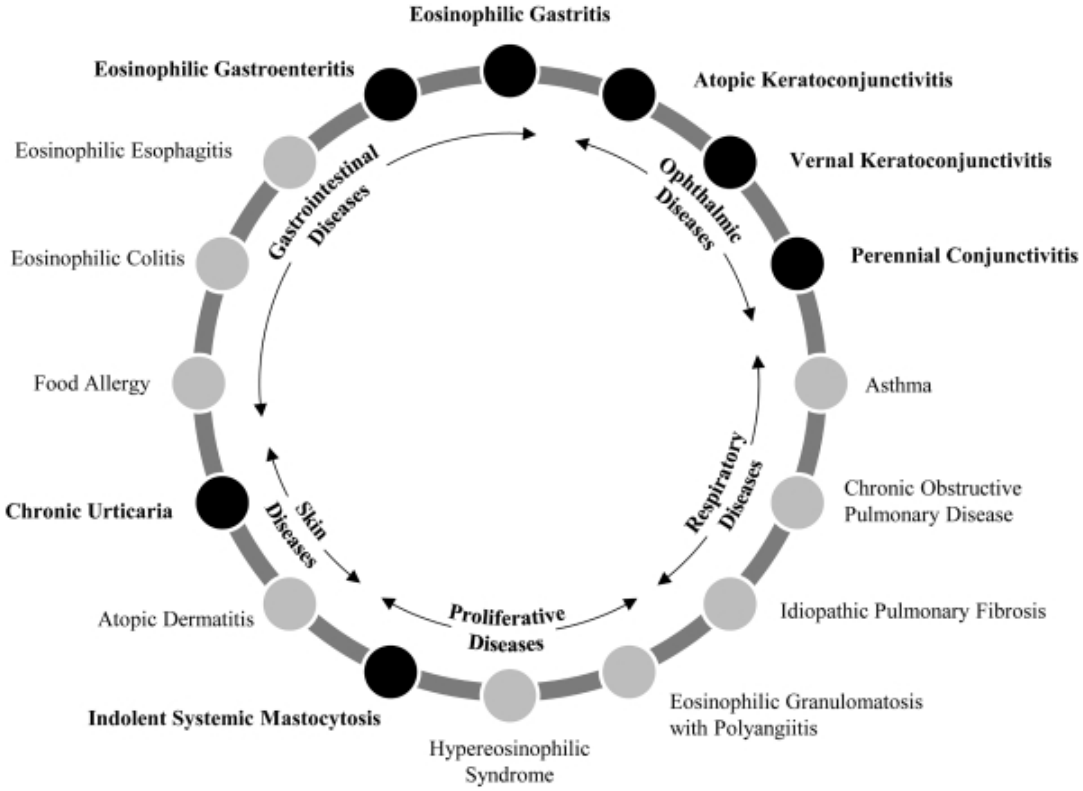


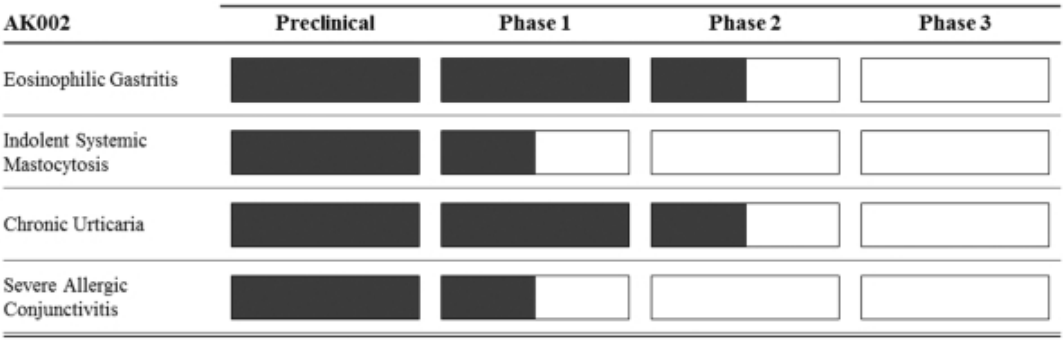
Figure 1: Our most advanced AK002 programs are shown in bold in Figure 1.

Despite the knowledge that eosinophils and mast cells drive many pathological conditions, there are no approved therapies that selectively target 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 the second quarter of 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.

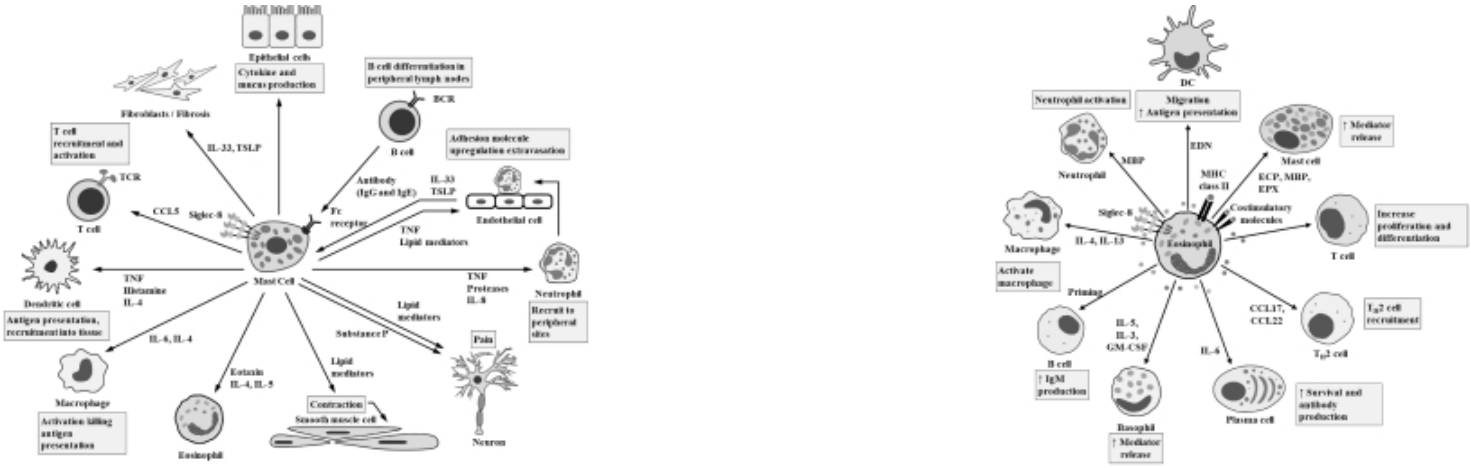
Siglec-8 is an inhibitory receptor located selectively on eosinophils, mast cells and, to a lesser extent, on basophils. Because Siglec-8 is expressed in high abundance only on eosinophils and mast cells, it presents a novel way to selectively target these important immune cells. As an inhibitory receptor, 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

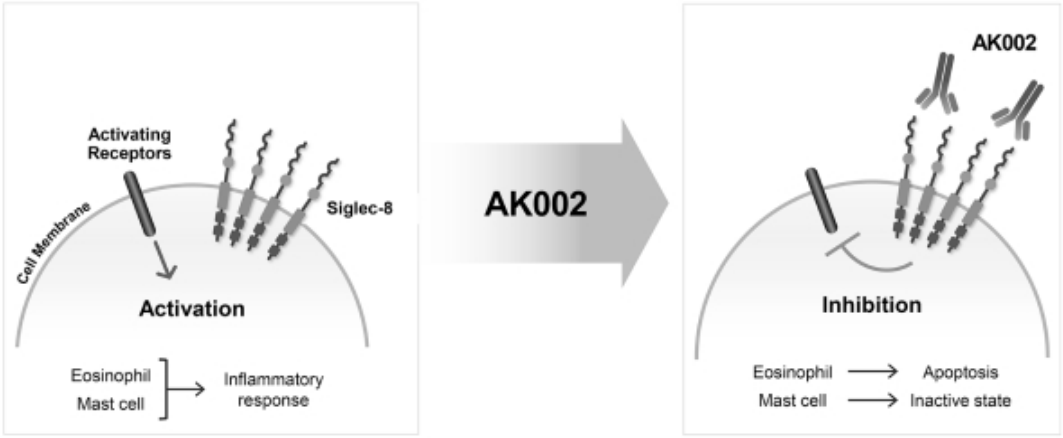


Due to their ability to respond to signals from multiple cell types and elicit responses from others, eosinophils and mast cells mediate the immediate hypersensitivity and late phase responses responsible for allergies and many innate and adaptive immune responses.

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, 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 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

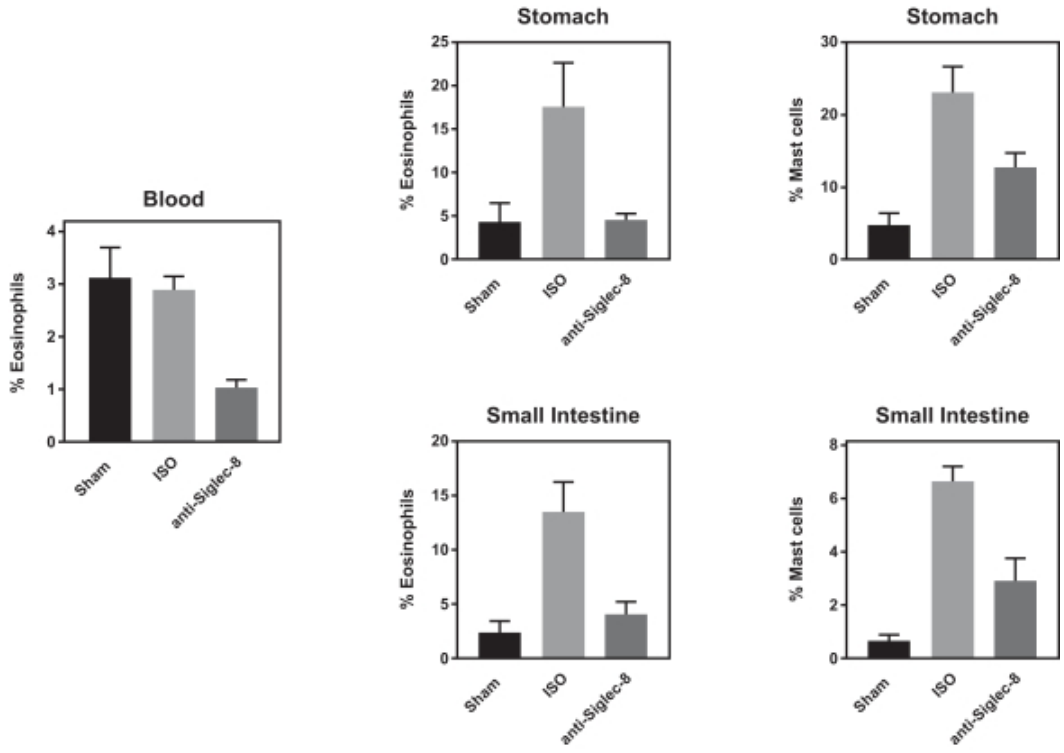
moderate infusion-related reactions (“IRRs”) (flushing, feeling of warmth, headache, nausea and dizziness), which occurred mostly during the first infusion and diminished or did not occur on subsequent infusions. In the Phase 1 healthy volunteer trial, one subject treated with 1.0 mg/kg administered 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

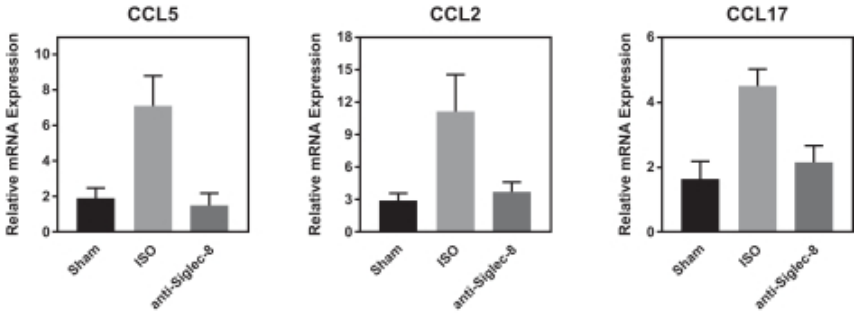
In this model, two groups of Siglec-8 transgenic mice were sensitized with ovalbumin to induce eosinophil and mast cell driven gastrointestinal inflammation similar to that observed in EG and other EGIDs. A third group of animals was administered phosphate buffered saline to serve as normal unsensitized 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) four monthly doses of 0.3 mg/kg AK002, (b) 0.3 mg/kg for the first month followed by three doses of 1.0 mg/kg AK002 given monthly, or (c) monthly placebo. The primary endpoint is the reduction in gastric eosinophils post-treatment with AK002. We have developed a proprietary daily Patient Reported Outcome (“PRO”) questionnaire to be used to assess the change in EG patient symptoms, such as abdominal pain, cramping, nausea/vomiting and diarrhea, in our clinical trials. 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 the second quarter of 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** — **20 patients 0.3 mg/kg, then 1.0 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 mastocytosis disease activity measures.

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 reported 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 during the second quarter of 2017, and the multi-dose portion is ongoing in 12 patients (Figure 9). 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 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 other measures of itching, hives and swelling, including the urticaria activity score 7 (“UAS7”) and cholinergic UAS7 (“cholUAS7”). 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 symptom measures of ocular itch, pain, lacrimation, photophobia and foreign body sensation. 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 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

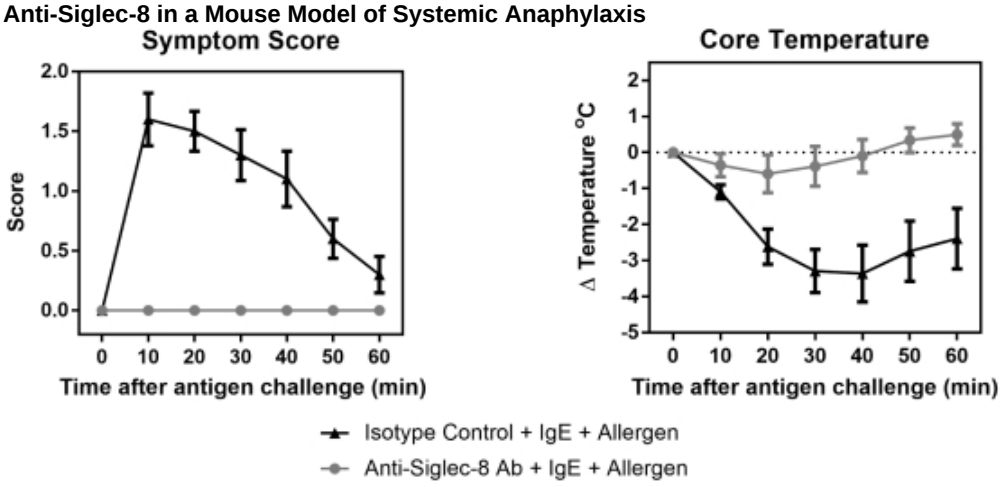
in no adverse AK002-related findings in mortality, clinical observations, body weight, food consumption and anatomic pathology after the end of dosing. Non-adverse findings included decreases in eosinophil counts in both sexes at ≥50 mg/kg/week, which persisted through the recovery period. These findings 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

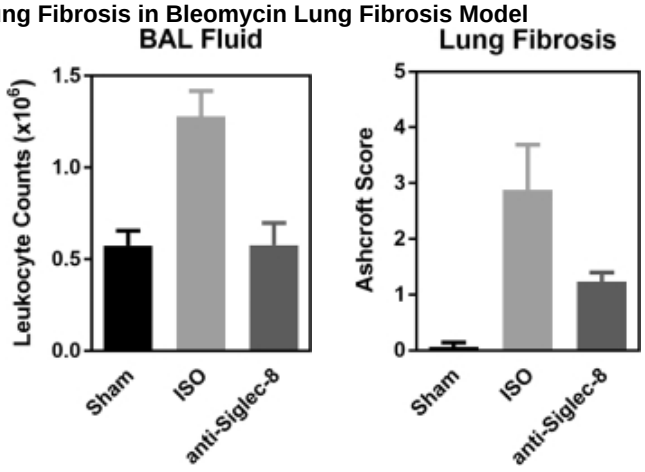


Anti-Siglec-8 Antibody Decreases Bleomycin Induced Lung Fibrosis in Mouse Model

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.

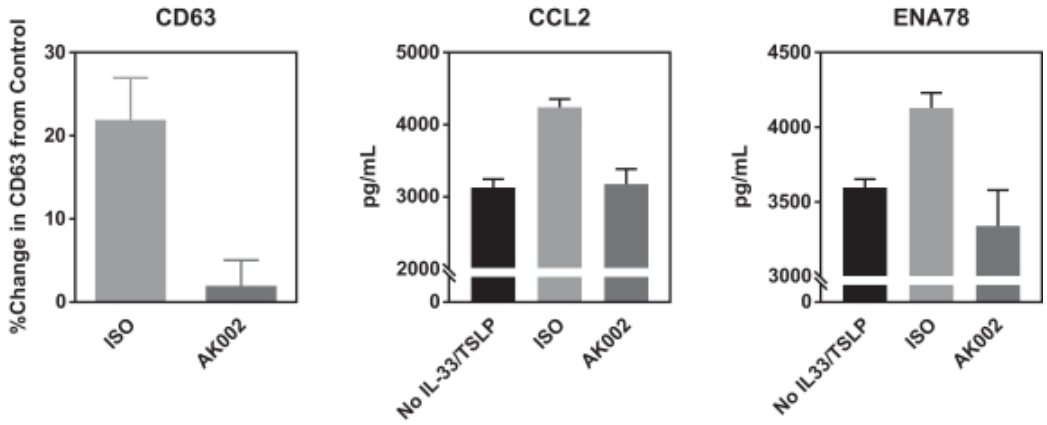
Figure 13. Leukocyte Counts and Lung Fibrosis in Bleomycin Lung Fibrosis Model



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 March 31, 2018, we had 42 full-time employees, 30 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 March 31, 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 six 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 adjustment or 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 March 31, 2018:

Name	Age	Position
Executive Officers:		
Robert Alexander, Ph.D.	48	President, Chief Executive Officer and Director
Adam Tomasi, Ph.D.	47	Chief Operating Officer, Chief Financial Officer and Secretary
Henrik Rasmussen, M.D., Ph.D.	59	Chief Medical Officer
Non-Employee Directors:		
Daniel Janney	52	Chair of the Board
Steven P. James	60	Director
John McKearn, Ph.D.	64	Director
Paul Walker	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.

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 five 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 , and their terms will expire at the annual meeting of stockholders to be held in 2019;
- the Class II directors will be , and their terms will expire at the annual meeting of stockholders to be held in 2020; and
- the Class III directors will be , 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 . Under the rules of , 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 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 , 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 , 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 , 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 , representing of our five 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 .

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 .. is the chair of our audit committee. 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 . 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 will operate under a written charter, to be effective prior to the completion of this offering, which will satisfy the applicable rules of the SEC and the listing standards of .

Compensation Committee

The members of our compensation committee are . 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 will operate under a written charter, to be effective prior to the completion of this offering, which will satisfy the applicable rules of the SEC and the listing standards of .

Corporate Governance and Nominating Committee

The members of our corporate governance and nominating committee are . 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 will operate under a written charter, to be effective prior to the completion of this offering, which will satisfy the applicable rules of the SEC and the listing standards of .

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. Following the completion of this offering, we expect to implement an annual cash and equity compensation program for our non-employee directors.

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	—	—	—
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 78,600 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. 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.

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.

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 Chief Executive Officer and current 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. *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.

(2) All bonus payments were made at the discretion of the board of directors based on our achievement of key metrics under our corporate 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	1,766,000[3]	—	—	0.55	05/17/2027
Adam Tomasi, Ph.D.	05/17/2017	883,000[4]	—	—	0.55	05/17/2027
Henrik Rasmussen, M.D., Ph.D.	10/02/2017	—	490,000[5]	—	0.93	10/02/2027
Christopher Bebbington, D.Phil.	09/05/2014	121,856[6]	88,121	—	0.31	09/05/2024
	04/24/2015	57,591[7]	26,178	—	0.34	04/24/2025
	01/20/2016	269,037[8]	292,433	—	0.42	01/20/2026

(1) Each of the outstanding options to purchase shares of our common stock was granted pursuant to our 2012 Equity Incentive Plan, as amended.
(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 441,500 shares. The shares underlying this option award vest, subject to Dr. Alexander's continued role as a service provider to us, as to 1/4th of the total shares on April 3, 2018 and an additional 1/48th of the total shares on the same day of each month thereafter. This option award provides that: (i) in the event of a corporate transaction or a change in control (each as defined in the award agreement) 100% of the shares underlying this option award are subject to accelerated vesting, (ii) in the event that, during the period commencing three months prior to a corporate transaction or a change in control (each as defined in the award agreement), Dr. Alexander is (a) terminated without cause, (b) terminated due to death or disability or (c) resigns for good reason (each as defined in the award agreement), 100% of the shares underlying this option award are subject to accelerated vesting and (iii) in the event that Dr. Alexander is terminated without cause or resigns for good reason more than three months prior to a corporate transaction or change of control, then that number of shares underlying this option award would be subject to accelerated vesting as would have vested had Dr. Alexander remained employed on the first anniversary of the date of such termination or resignation.
(4) This option award is subject to an early exercise provision and is immediately exercisable. The shares underlying this option award vest, subject to Dr. Tomasi's continued role as a service provider to us, as to 1/4th of the total shares on April 3, 2018 and an additional 1/48th of the total shares on the same day of each month thereafter. This option award provides that: (i) in the event of a corporate transaction or a change in control (each as defined in the award agreement) 100% of the shares underlying this option award are subject to accelerated vesting, (ii) in the event that, during the period commencing three months prior to a corporate transaction or a change in control (each as defined in the award agreement), Dr. Tomasi is (a) terminated without cause, (b) terminated due to death or disability or (c) resigns for good reason (each as defined in the award agreement), 100% of the shares underlying this option award are subject to accelerated vesting and (iii) in the event that Dr. Tomasi is terminated without cause or resigns for good reason more than three months prior to a corporate transaction or change of control, then that number of shares underlying this option award would be subject to accelerated vesting as would have vested had Dr. Tomasi remained employed on the first anniversary of the date of such termination or resignation.
(5) The shares underlying this option award vest, subject to Dr. Rasmussen's continued role as a service provider to us, as to 1/4th of the total shares on June 5, 2018 and an additional 1/48th of the total shares on the same day of each month thereafter.
(6) The shares underlying this option award vested as to 1/48th of the total shares on October 5, 2014 and vested and continue to vest, subject to Dr. Bebbington's continued role as a service provider to us, an additional 1/48th of the total shares on the last day of each month thereafter.

(7) The shares underlying this option award vested as to 1/48th of the total shares on April 13, 2015 and vested and continue to vest, subject to Dr. Bebbington's continued role as a service provider to us, an additional 1/48th of the total shares on the last day of each month thereafter.
(8) The shares underlying this option award vested as to 1/48th of the total shares on February 6, 2016 and vested and continue to vest, subject to Dr. Bebbington's continued role as a service provider to us, an additional 1/48th of the total shares on the last day of each month thereafter.

Employment Arrangements with Our Named Executive Officers

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

Robert Alexander, Ph.D.

We currently expect that, prior to the completion of this offering, we will enter into a confirmatory employment letter with Dr. Alexander, our President and Chief Executive Officer. The confirmatory employment letter will have no specific term and will provide 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.

Adam Tomasi, Ph.D.

We currently expect that, prior to the completion of this offering, we will enter into a confirmatory employment letter with Dr. Tomasi, our Chief Operating Officer, Chief Financial Officer and Secretary. The confirmatory employment letter will have no specific term and will provide 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.

Henrik Rasmussen, M.D., Ph.D.

We currently expect that, prior to the completion of this offering, we will enter into a confirmatory employment letter with Dr. Rasmussen, our Chief Medical Officer. The confirmatory employment letter will have no specific term and will provide 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.

Christopher Bebbington, D.Phil.

We currently expect that, prior to the completion of this offering, we will enter into a confirmatory employment letter with Dr. Bebbington, our Chief Scientific Officer. The confirmatory employment letter will have no specific term and will provide for at-will employment. Dr. Bebbington's current annual base salary is $360,163 and Dr. Bebbington 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.

Potential Payments upon Termination or Change of Control

We currently expect that, prior to the completion of this offering, we will adopt arrangements for our executive officers that provide for payments and benefits on termination or change of control, which arrangements may be included in the anticipated confirmatory offer letters or separate plans or agreements.

Employee Benefit and Stock Plans

2018 Equity Incentive Plan

Prior to the completion of this offering, our board of directors intends to adopt, and we expect our stockholders will approve, our 2018 Equity Incentive Plan ("2018 Plan"). We expect that 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 will provide 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 shares of our common stock will be reserved for issuance pursuant to our 2018 Plan. In addition, the shares reserved for issuance under our 2018 Plan also will include (a) those shares reserved but unissued under our 2012 Plan as of immediately prior to the termination of the 2012 Plan and (b) shares subject to awards under our 2012 Plan that, on or after the termination of the 2012 Plan, expire or terminate and shares previously issued pursuant to our 2012 Plan, as applicable, 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 (a) and (b) is shares). The number of shares available for issuance under our 2018 Plan will also include an annual increase on the first day of each fiscal year beginning on January 1, 2019, equal to the least of:

- shares;
- percent (%) 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. 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. 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 or forfeited, 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 will have authority to administer our 2018 Plan. We expect that 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. 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. 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. Notwithstanding the foregoing, 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 dollar 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. Prior to the completion of this offering, we intend to implement a formal policy pursuant to which our outside directors will be eligible to receive equity awards under our 2018 Plan. In order to provide a maximum limit on the 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 awards having a grant-date fair value greater than $, but this limit is increased to $ in connection with the outside director's initial service (in each case, excluding awards granted to the outside director as a consultant or employee). The grant-date fair values will be determined according to Generally Accepted Accounting Principles. The maximum limits do 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 certain changes in our capitalization, to prevent diminution or enlargement of the benefits or potential benefits available under our 2018 Plan, 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.

In the event that 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 such award will lapse, all performance goals or other vesting criteria applicable to such award will be deemed achieved at 100% of target levels and such award will become fully exercisable, if applicable, for a specified period prior to the transaction, unless specifically provided for otherwise under the applicable award agreement or other written agreement with the participant. 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, 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.

If an outside director's awards are assumed or substituted for in a merger or change in control and the service of such outside director is terminated on or following the merger or change in control, other than pursuant to a voluntary resignation, his or her options and stock appreciation rights, if any, will vest fully and become immediately exercisable, all restrictions on his or her restricted stock and restricted stock units will lapse and all performance goals or other vesting requirements for his or her performance shares and units will be deemed achieved at 100% of target levels and all other terms and conditions met.

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 7,780,676 shares of our common stock and 112,647 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.

Executive Incentive Compensation Plan

Prior to the completion of this offering, our board of directors intends to adopt our Executive Incentive Compensation Plan ("Incentive Compensation Plan"). Our Incentive Compensation Plan will allow 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 . The performance goals may differ from participant to participant and from award to award.

Our compensation committee will administer 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 reduction 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 will be paid in cash (or its equivalent) only after they are earned, and, unless otherwise determined by the administrator, 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 administratively 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 will have the authority to amend, alter, 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 contributions made by our employees, including executive officers, up to 4% of an employee's annual compensation, based on the amount of the employee's contributions.

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 intend to enter into an indemnification agreement with each member of our board of directors and each of our officers prior to the completion of the offering. 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	—	4,127,648	1,548,760
Roche Finance Ltd		—	1,876,204	628,291
Entities affiliated with RiverVest Venture Fund III, L.P.(2)	John McKearn, Ph.D.	—	1,876,205	971,777
Entities affiliated with New Enterprise Associates 16, L.P.(3)	Paul Walker	—	—	2,522,736
Entities affiliated with Capital Research and Management Company		—	—	2,522,736
Directors and Executive Officers:				
Robert Alexander, Ph.D.(4)		441,500	—	—
Christopher Bebbington, D.Phil.(5)		560,000	—	220

(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 IX, LP.

(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 441,500 shares of common stock held by Dr. Alexander. All of the shares of common stock held by Dr. Alexander in the table above were acquired through the exercise of employee stock options.

(5) Consists of (i) 318,700 shares of common stock held by Dr. Bebbington and (ii) 241,300 shares of common stock and 220 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 12,194,193 shares of our Series A convertible preferred stock at a purchase price of $1.80 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 12,631,506 shares of our Series B convertible preferred stock at a purchase price of approximately $7.93 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 IX, LP, 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 IX, LP, 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 IX, LP, 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 IX, LP, 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 seat currently remaining vacant. 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 60,000 and 21,000, respectively, shares of our 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.

Related Party Transaction Policy

Our audit committee will have 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 will provide that our audit committee shall review and approve in advance any related party transaction.

Prior to the completion of this offering, we intend to adopt 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 March 31, 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.

We have based our calculation of the percentage of beneficial ownership prior to this offering on 41,357,383 shares of our common stock outstanding as of March 31, 2018, which includes 38,714,587 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 March 31, 2018. We have based our calculation of the percentage of beneficial ownership after this offering on shares of our common stock outstanding immediately after the completion of this offering, assuming no exercise by the underwriters of their option to purchase additional shares. We have deemed shares of our common stock subject to stock options that are currently exercisable or exercisable within 60 days of March 31, 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		Shares Beneficially Owned After this Offering	
	Shares	Percentage	Shares	Percentage
5% Stockholders:				
Entities affiliated with Alta Partners VIII, LP(1)	14,086,505	34.06%		
Roche Finance Ltd(2)	5,763,408	13.94%		
Entities affiliated with RiverVest Venture Fund III, L.P.(3)	9,075,196	21.94%		
Entities affiliated with New Enterprise Associates 16, L.P.(4)	2,522,736	6.10%		
Entities affiliated with Capital Research and Management Company(5)	2,522,736	6.10%		
Named Executive Officers and Directors:				
Robert Alexander, Ph.D.(6)	1,766,000	4.10%		
Adam Tomasi, Ph.D.(7)	883,000	2.09%		
Henrik Rasmussen, M.D., Ph.D.	—	—		
Daniel Janney(8)	14,086,505	34.06%		
Steven P. James(9)	40,937	*		
John McKearn, Ph.D.(10)	9,075,196	21.94%		
Paul Walker(11)	2,522,736	6.10%		
Christopher Bebbington, D.Phil.(12)	1,460,873	3.48%		
All executive officers and directors as a group (8 persons)(13)	29,835,247	66.83%		

* Represents beneficial ownership of less than one percent (1%) of the outstanding shares of our common stock.

(1) Consists of (a) 9,778,673 shares held of record by Alta Partners VIII, LP (“Alta VIII”) and (b) 4,307,832 shares held of record by Alta Partners IX, LP. (“Alta IX”). 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 IX are indirectly held by Alta Partners Management IX, LLC (“Alta Management IX”), which is the general partner of Alta IX. The individual managing directors of Alta Management IX are Robert More, Peter Hudson and Daniel Janney, one of our directors. The managing directors of Alta Management IX exercise sole voting and investment control with respect to the shares held by Alta IX. The individual managing directors of Alta Management VIII and Alta Management IX disclaim beneficial ownership of all shares held by Alta VIII and Alta IX, 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 5,763,408 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.

(3) Consists of (a) 1,225,871 shares held of record by RiverVest Venture Fund II, L.P. (“RiverVest II”), (b) 332,971 shares held of record by RiverVest Venture Fund II (Ohio), L.P. (“RiverVest (Ohio) II”), (c) 4,398,530 shares held of record by RiverVest Venture Fund III, L.P. (“RiverVest III”), (d) 233,451 shares held of record by RiverVest Venture Fund III (Ohio), L.P. (“RiverVest (Ohio) III”), (e) 2,779,383 shares held of record by 3x5 RiverVest Fund II, L.P. (“3x5 II”) and (f) 104,990

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.

(4) Consists of (a) 2,520,844 shares held of record by New Enterprise Associates 16, L.P. (“NEA 16”) and (b) 1,892 shares held of record by NEA Ventures 2017, L.P. (“Ven 2017”). 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 2,522,736 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 1,766,000 shares subject to an option held by Dr. Alexander, of which all shares are early exercisable within 60 days of March 31, 2018 and 478,291 shares are vested as of such date. On May 10, 2018, Dr. Alexander partially exercised this option with respect to 441,500 shares.

(7) Consists of 883,000 shares subject to an option held by Dr. Tomasi, of which all shares are early exercisable within 60 days of March 31, 2018 and 239,145 shares are vested as of such date.

(8) Consists of the shares described in footnote (1) above. Mr. Janney is a managing director of Alta Management VIII and Alta Management IX 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 IX, except to the extent of any pecuniary interest therein.

(9) Consists of 78,600 shares subject to an option held by Mr. James, of which 40,937 shares are vested and exercisable within 60 days of March 31, 2018.

(10) Consists of the shares described in footnote (3) 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.

(11) 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.

(12) Consists of (a) 624,700 shares held of record by Dr. Bebbington, of which no shares are subject to repurchase by us at the original purchase price as of March 31, 2018, (b) 241,520 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 March 31, 2018 and (c) 855,216 shares subject to options held by Dr. Bebbington, of which 594,653 shares are vested and exercisable within 60 days of March 31, 2018.

(13) Consists of (a) 29,835,247 shares beneficially owned by our current executive officers and directors as of March 31, 2018, of which no shares may be repurchased by us at the original purchase price as of such date and (b) 3,284,590 shares subject to options exercisable within 60 days of March 31, 2018, of which 1,353,026 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 shares of common stock, par value $0.001 per share, and 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 38,714,587 shares of our common stock.

Based on 2,642,796 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 38,714,587 shares of common stock upon the completion of this offering and the issuance of shares of common stock in this offering, there will be 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 7,780,676 shares of common stock subject to outstanding options. As of March 31, 2018, there were 59,522 shares of common stock subject to an outstanding warrant, with a weighted-average exercise price of $0.49 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 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 7,780,676 shares of our common stock, with a weighted-average exercise price of $1.11 per share, under our 2012 Plan. After March 31, 2018, we issued options to purchase an aggregate of 1,167,200 shares of our common stock, with a weighted-average exercise price of $3.45 per share, under our 2012 Plan.

Common Stock Warrants

As of March 31, 2018, we had warrants exercisable for an aggregate of 59,522 shares of our common stock at a weighted-average exercise price of $0.49 per share issued to one accredited investor in June 2016. The warrant was originally exercisable for 29,761 shares of our common stock, and in December 2016 the number of shares exercisable under the warrant was increased to 59,522 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 38,714,587 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.

Demand Registration Rights

After the completion of this offering, the holders of up to 38,714,587 shares of our common stock 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 38,714,587 shares of our common stock 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 38,714,587 shares of our common stock 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 the , 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 intend to apply to list our common stock on under the symbol "ALLK."

Transfer Agent and Registrar

The transfer agent and registrar for our common stock is . The transfer agent and registrar's address is .

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 , 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, shares of our common stock will be outstanding, or 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:

- shares will be eligible for sale on the date of this prospectus; and
- 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 have entered into market stand-off agreements with us and have entered into or will enter 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 38,714,587 shares of our common stock 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	

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.

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 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 lock-up securities offered pursuant to employee stock option plans existing on, or upon the conversion or exchange of convertible or exchangeable securities outstanding as of, the date of the underwriting agreement.

Additionally, our officers and directors and the holders of substantially all of our equity securities 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, 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 intend to apply to list our common stock 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 $. 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 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 the , 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 7,108 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.

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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, statements of 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 and in accordance with auditing standards generally accepted in the United States of America. 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. 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

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; 26,083 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 12,632 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; 2,006 and 2,643 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	$ (10.43)	$ (11.63)
Weighted-average shares of common stock outstanding:		
Basic and diluted	1,640	2,025
Pro forma net loss per share:		
Basic and diluted (unaudited)		$ (0.81)
Pro forma weighted-average shares of common stock outstanding:		
Basic and diluted (unaudited)		29,216

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	15,528	$ 22,210	1,957	$ 2	$ 322	$ (19,922)	$ (19,598)
Issuance of Series A convertible preferred stock for cash, net of issuance costs of $8	10,555	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	—	—	49	—	20	—	20
Vesting of restricted common stock	—	—	—	—	36	—	36
Net loss	—	—	—	—	—	(17,100)	(17,100)
Balance as of December 31, 2016	26,083	$ 42,996	2,006	$ 2	$ 584	$ (37,022)	$ (36,436)
Issuance of Series B convertible preferred stock for cash, net of issuance costs of $168	11,668	92,331	—	—	—	—	—
Issuance of Series B convertible preferred stock upon conversion of convertible promissory notes	964	7,642	—	—	—	—	—
Stock-based compensation expense	—	—	—	—	402	—	402
Repurchase of unvested restricted common stock	—	—	(42)	—	—	—	—
Issuance of common stock upon exercise of stock options	—	—	679	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	38,715	$142,969	2,643	$ 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.

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.

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.

ALLAKOS INC.
NOTES TO FINANCIAL STATEMENTS

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.

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

ALLAKOS INC.
NOTES TO FINANCIAL STATEMENTS

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.

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.

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.

ALLAKOS INC.
NOTES TO FINANCIAL STATEMENTS

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.

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.

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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	1,640	2,025
Net loss per share, basic and diluted	$ (10.43)	$ (11.63)

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	26,083	26,083
Series B convertible preferred stock	—	12,632
Options to purchase common stock	3,403	6,105
Warrants to purchase common stock	60	60
Unvested restricted common stock	256	130
Total	29,802	45,010

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.

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	2,025
Adjustment for assumed conversion of convertible preferred stock	27,191
Pro forma weighted-average shares of common stock outstanding, basic and diluted	29,216
Pro forma net loss per share, basic and diluted	$ (0.81)

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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.

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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.

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.

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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, 2016	December 31, 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	December 31, 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.

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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 59,522 shares of common stock at a weighted average exercise price of $0.49 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.

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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.

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 111,111 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 963,863 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 17,777,772 shares of Series A convertible preferred stock at a purchase price of $1.80 per share. Upon execution of the agreement, the Company issued 5,555,554 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 5,555,558 shares of Series A convertible preferred stock under the same terms as the original agreement. From August 2014 through September 2014, the Company issued 8,333,334 shares of Series A convertible preferred stock at a purchase price of $1.80 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 2,777,786 shares of Series A convertible preferred stock under the same terms as the original agreement. Concurrent with the second amendment, the Company issued 1,638,637 shares of Series A convertible preferred stock at a purchase price of $1.80 per share for net cash proceeds of $2.9 million (the "Additional Second Closings").

In January 2016, the Company issued 10,555,556 shares of Series A convertible preferred stock at a purchase price of $1.80 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 12,631,506 shares of Series B convertible preferred stock at a purchase price of $7.93 per share. Upon the execution of the agreement, the Company issued 11,667,643 shares of Series B convertible preferred stock for net cash proceeds of $92.3 million and 963,863 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 $1.80 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 $1.80 and $7.93,

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 $7.93 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.

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 2,642,796 shares were issued and outstanding at December 31, 2017.

In May 2012, the Company issued 1,000,000 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 111,111 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 $0.31 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.

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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	3,403	6,105
Stock options available for future grant	26	2,932
Conversion of common stock warrants	60	60
Total	29,600	47,812

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 2,649,182 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 3,429,478 shares of common stock. In January 2016, the Company amended the 2012 Plan to allow for the issuance of up to 4,245,259 shares of common stock. In April 2016, the Company amended the 2012 Plan to allow for the issuance of up to 4,323,859 shares of common stock. In August 2017, the Company amended the 2012 Plan to allow for the issuance of up to 8,068,807 shares of common stock. In November 2017, the Company amended the 2012 Plan twice, first to allow for the issuance of up to 8,468,807 shares of common stock, and a second time to allow for the issuance of up to 10,568,807 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 26,135 and 2,932,173 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

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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

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	1,735	1,664	$ 0.32	
Shares authorized	79	—		
Granted	(1,835)	1,835	$ 0.42	
Exercised	—	(49)	$ 0.40	
Forfeited	47	(47)	$ 0.37	
Balance at December 31, 2016	26	3,403	$ 0.37	$ 9,659
Shares authorized	6,245	—		
Granted	(3,817)	3,817	$ 0.63	
Exercised	—	(679)	$ 0.34	
Repurchased	42	—	$ 0.31	
Forfeited	436	(436)	$ 0.38	
Balance at December 31, 2017	2,932	6,105	$ 0.53	$ 16,331
Options exercisable		3,955	$ 0.49	$ 10,750
Options vested and expected to vest		6,092	$ 0.53	$ 16,308

The weighted-average fair value of options granted to employees and directors during the years ended December 31, 2016 and 2017 was $0.27 and $0.43 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.

ALLAKOS INC.
NOTES TO FINANCIAL STATEMENTS

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.

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 384,580 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	256	$ 0.33
Vested	(84)	$ 0.34
Repurchased	(42)	$ 0.31
Balance at December 31, 2017	130	$ 0.34

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.

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NOTES TO FINANCIAL STATEMENTS

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.

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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.

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.

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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.

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.

ALLAKOS INC.
NOTES TO FINANCIAL STATEMENTS

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.

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; 26,083 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; 12,632 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; 2,643 shares issued and outstanding as of December 31, 2017 and March 31, 2018 (unaudited), respectively; 41,358 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	$ (2.85)	$ (3.35)
Weighted-average shares of common stock outstanding:		
Basic and diluted	1,775	2,530
Pro forma net loss per share:		
Basic and diluted		$ (0.21)
Pro forma weighted-average shares of common stock outstanding:		
Basic and diluted		41,245

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.

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.

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

ALLAKOS INC.
NOTES TO UNAUDITED INTERIM FINANCIAL STATEMENTS

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 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.

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.

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NOTES TO UNAUDITED INTERIM FINANCIAL STATEMENTS

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.

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.

ALLAKOS INC.
NOTES TO UNAUDITED INTERIM FINANCIAL STATEMENTS

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	1,775	2,530
Net loss per share, basic and diluted	$ (2.85)	$ (3.35)

ALLAKOS INC.
NOTES TO UNAUDITED INTERIM FINANCIAL STATEMENTS

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	26,083	26,083
Series B convertible preferred stock	—	12,632
Options to purchase common stock	3,395	7,781
Warrants to purchase common stock	60	60
Unvested restricted common stock	226	113
Total	29,764	46,669

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	2,530
Adjustment for assumed conversion of convertible preferred stock	38,715
Pro forma weighted-average shares of common stock outstanding, basic and diluted	41,245
Pro forma net loss per share, basic and diluted	$ (0.21)

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

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.

ALLAKOS INC.
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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 2018. The Company did not recognize any milestone expense during the three months ended March 31, 2017.

ALLAKOS INC.
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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 111,111 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 2,642,796 shares were issued and outstanding at March 31, 2018.

ALLAKOS INC.
NOTES TO UNAUDITED INTERIM FINANCIAL STATEMENTS

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	6,105	7,781
Stock options available for future grant	2,932	1,256
Conversion of common stock warrants	60	60
Total	47,812	47,812

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

ALLAKOS INC.
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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	2,932	6,105	$ 0.53	$ 16,331
Granted	(1,676)	1,676	$ 3.21	
Balance at March 31, 2018	1,256	7,781	$ 1.11	$ 18,198
Options exercisable		4,656	$ 0.81	$ 12,314
Options vested and expected to vest		7,759	$ 1.10	$ 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 $0.62 and $2.19 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	130	$ 0.34
Vested	(17)	$ 0.34
Balance at March 31, 2018	113	$ 0.34

ALLAKOS INC.
NOTES TO UNAUDITED INTERIM FINANCIAL STATEMENTS

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.

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 exchange listing fee.

	Amount to be Paid
SEC Registration Fee	$ *
FINRA filing fee	*
Exchange listing fee	*
Printing and engraving expenses	*
Legal fees and expenses	*
Accounting fees and expenses	*
Transfer agent and registrar fees	*
Miscellaneous expenses	*
Total	$ *

* To be provided by amendment.

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 1,638,637 shares of our Series A convertible preferred stock at $1.80 per share, for aggregate proceeds of $2.9 million, to a total of 9 accredited investors.

(b) In January 2016, we issued 10,555,556 shares of our Series A convertible preferred stock at $1.80 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 29,761 shares of our common stock for an exercise price of $0.42 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 59,522 shares due to the occurrence of an event that triggered such increase under the terms of the warrant. The additional 29,761 shares of our common stock that became exercisable under the warrant in December 2016 have an exercise price of $0.55 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 963,863 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 12,631,506 shares of our Series B convertible preferred stock at $7.9279 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 May 18, 2018, we granted stock options to purchase an aggregate of 9,369,815 shares of common stock to certain employees, directors and consultants under our 2012 Plan at exercise prices per share ranging from $0.34 to $3.45, for an aggregate exercise price of approximately $12.9 million.

(g) From January 2015 through May 18, 2018, we issued and sold to our employees an aggregate of 1,915,520 shares of common stock upon the exercise of options under our 2012 Plan at exercise prices per share ranging from $0.29 to $0.55, for an aggregate exercise price of approximately $0.7 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.
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+*	Offer Letter between the Registrant and Robert Alexander, Ph.D.
10.5+*	Offer Letter between the Registrant and Adam Tomasi, Ph.D.
10.6+*	Offer Letter between the Registrant and Henrik Rasmussen, M.D., Ph.D.
10.7+*	Offer Letter between the Registrant and Christopher Bebbington, D.Phil.
10.8^	Lease Agreement between the Registrant and ARE-San Francisco No. 29, LLC, dated May 1, 2013, as amended.
10.9^	Lease Agreement between the Registrant and Westport Office Park, LLC, dated January 4, 2018, as amended.
10.10#^	Non-exclusive License Agreement between the Registrant, BioWa, Inc. and Lonza Sales AG, dated October 31, 2013.
10.11#^	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.
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 this Form S-1).

* To be filed by amendment.
^ Previously submitted.
\+ 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 , 2018.

ALLAKOS INC.

By: _____
Robert Alexander, Ph.D.
President and Chief Executive Officer

POWER OF ATTORNEY

KNOW ALL PERSONS BY THESE PRESENTS, that each person whose signature appears below constitutes and appoints Robert Alexander, Ph.D. and Adam Tomasi, Ph.D. as his or her true and lawful attorneys-in-fact and agents, with full power of substitution and substitution, for him or her and in his or her name, place and stead, in any and all capacities (including his capacity as a director and/or officer of Allakos Inc.) to sign any or all amendments (including post-effective amendments) to this registration statement and any and all additional registration statements pursuant to Rule 462(b) of the Securities Act of 1933, as amended, and to file the same, with all exhibits thereto, and all other documents in connection therewith, with the Securities and Exchange Commission, granting unto said attorneys-in-fact and agents, and each of them, full power and authority to do and perform each and every act and thing requisite and necessary to be done in and about the premises, as fully to all intents and purposes as they, he or she might or could do in person, hereby ratifying and confirming all that said attorney-in-fact and agents or any of them, or their, his or her substitute or substitutes, may lawfully do or cause to be done by virtue hereof.

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
Robert Alexander, Ph.D.	President, Chief Executive Officer and Director *(Principal Executive Officer)*	, 2018
Adam Tomasi, Ph.D.	Chief Operating Officer, Chief Financial Officer and Secretary *(Principal Financial and Accounting Officer)*	, 2018
Daniel Janney	Chair of the Board	, 2018
Steve James	Director	, 2018
John McKearn, Ph.D.	Director	, 2018
Paul Walker	Director	, 2018