

As confidentially submitted to the Securities and Exchange Commission on May 5, 2020.
 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*

ALX ONCOLOGY HOLDINGS INC.

(Exact name of Registrant as specified in its charter)

Delaware
 (State or other jurisdiction of
 incorporation or organization)

2834
 (Primary Standard Industrial
 Classification Code Number)
 866 Malcolm Road, Suite 100
 Burlingame, California 94010
 650-466-7125

85-0642577
 (I.R.S. Employer
 Identification Number)

(Address, including zip code and telephone number, including area code, of Registrant's principal executive offices)

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 Chief Executive Officer
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 650-466-7125

(Name, address, including zip code and telephone number, including area code, of agent for service)

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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	<input type="checkbox"/>	Accelerated filer	<input type="checkbox"/>
Non-accelerated filer	<input checked="" type="checkbox"/>	Smaller reporting company	<input type="checkbox"/>
		Emerging growth company	<input checked="" type="checkbox"/>

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	\$	\$

(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.

The information in this preliminary prospectus is not complete and may be changed. We may not sell these securities until the registration statement filed with the Securities and Exchange Commission is effective. This preliminary prospectus is not an offer to sell these securities and is not soliciting an offer to buy these securities in any jurisdiction where the offer or sale is not permitted.

SUBJECT TO COMPLETION, DATED _____, 2020

PRELIMINARY PROSPECTUS

Shares



Common Stock

We are offering _____ shares of our common stock. This is our initial public offering of our common stock, and no public market currently exists for our common stock. We expect the initial public offering price to be between \$ _____ and \$ _____ per share. We intend to apply to list our common stock on the Nasdaq Global Select Market under the symbol "ALXO."

We are an "emerging growth company" as defined under the federal securities laws and, as such, we 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 a high degree of risk. Please read "[Risk Factors](#)" beginning on page 11 of this prospectus.

Neither the Securities and Exchange Commission nor any state securities commission has approved or disapproved of these securities or determined if this prospectus is truthful or complete. Any representation to the contrary is a criminal offense.

	<u>PER SHARE</u>	<u>TOTAL</u>
Initial Public Offering Price	\$ _____	\$ _____
Underwriting Discounts and Commissions ⁽¹⁾	\$ _____	\$ _____
Proceeds to ALX Oncology Holdings Inc., before expenses	\$ _____	\$ _____

⁽¹⁾ See "Underwriting" beginning on page 150 for additional information regarding underwriter compensation.

Delivery of the shares of common stock is expected to be made on or about _____, 2020. We have granted the underwriters an option for a period of 30 days to purchase an additional _____ shares of our common stock. If the underwriters exercise the option in full, the total underwriting discounts and commissions payable by us will be \$ _____ and the total proceeds to us, before expenses, will be \$ _____.

Jefferies

Credit Suisse

Piper Sandler

Cantor

LifeSci Capital

Prospectus dated _____, 2020

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Through and including _____, 2020 (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 of this prospectus unless the information specifically indicates that another date applies, regardless of the time of delivery of this prospectus or of any sale of the shares of common stock offered hereby. 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 consolidated 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 consolidated financial statements and related notes. In this prospectus, unless the context requires otherwise, references to "we," "us," "our," "ALX," "ALX Oncology," or "the Company" refer to ALX Oncology Holdings Inc. and its subsidiaries on a combined basis.

Overview

We are a clinical-stage immuno-oncology company focused on helping patients fight cancer by developing therapies that block the CD47 checkpoint pathway and bridge the innate and adaptive immune system. Cancer cells leverage CD47, a cell surface protein, as a "don't eat me" signal, to evade detection by the immune system. Our company is developing a next-generation checkpoint inhibitor designed to have a high affinity for CD47 and to avoid the limitations caused by hematologic toxicities inherent in other CD47 blocking approaches. We believe our lead product candidate, ALX148, will have a wide therapeutic window to safely and effectively block the "don't eat me" signal on cancer cells, and to leverage the immune activation of broadly used anti-cancer agents through combination strategies. We have dosed over 140 subjects with ALX148 and have demonstrated promising clinical activity across a range of hematologic and solid malignancies in combination with a number of leading anti-cancer agents. We intend to advance ALX148 into clinical development for the treatment of myelodysplastic syndromes, or MDS, and to continue clinical development for the treatment of a range of solid tumor indications. Based on the clinical results to date showing strong evidence of efficacy in multiple oncology indications, combined with favorable tolerability, we believe that ALX148 has the potential to become a cornerstone of future combination treatments in oncology.

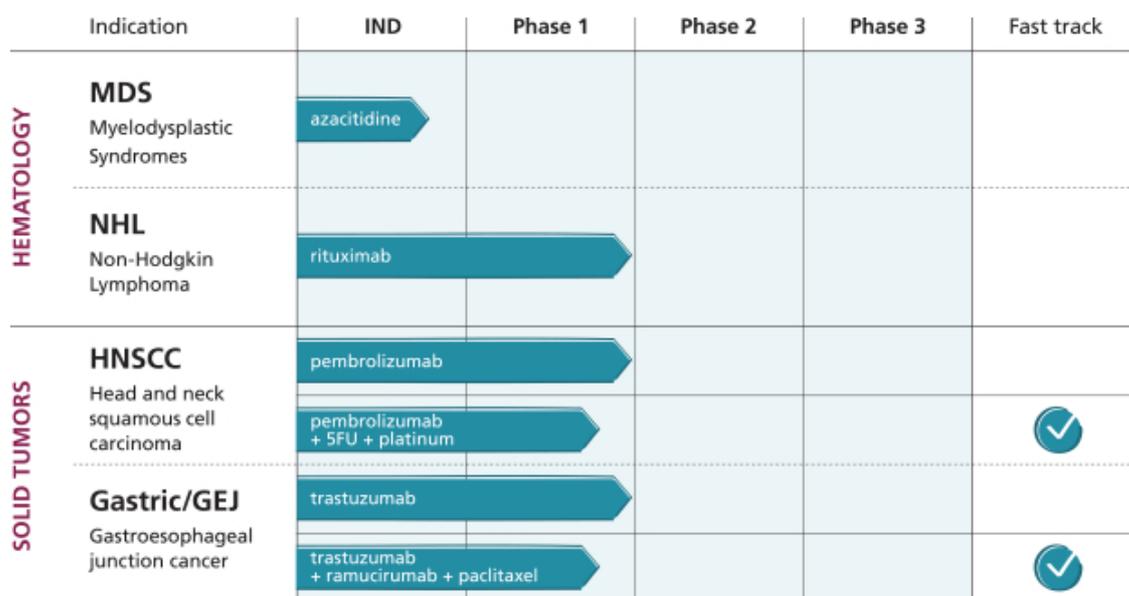
Anti-cancer agents, including many chemotherapies, other small molecules and anti-cancer antibodies, can stimulate immune cells such as macrophages to engulf and kill cancer cells, a process known as phagocytosis, by providing so-called "eat me" signals on cancer cells. In response, cancer cells frequently overexpress CD47 to counteract these "eat me" signals. As a result, high expression of CD47 on cancer cells has been associated with reduced patient survival in multiple cancers. The therapeutic blockade of CD47 in combination with an "eat me" signal enables the immune system to detect and phagocytose cancer cells. However, healthy blood cells and nearly all other cells in the body also express CD47 as a way to protect against pathologic phagocytosis by immune cells. There have been a number of approaches to blocking CD47, including monoclonal antibodies and fusion proteins that include an active Fc region. These approaches have encountered limitations, including limited dosing and therapeutic window, limited ability to combine with other anti-cancer agents, limited efficacy in solid tumors and limited indications due to patient selection, that have challenged their ability to maximize the full potential of CD47 blockade. In addition, most of these therapeutic approaches to CD47 blockade have resulted in the destruction of patients' healthy blood cells, causing cytopenias that limit the dosing and therapeutic potential of those molecules.

ALX Oncology was founded by Corey Goodman, Ph.D., K. Christopher Garcia, Ph.D., and Jaume Pons, Ph.D., to address fundamental challenges in blocking CD47 and to realize the full potential of this therapeutic target. We have developed a new approach to CD47 blockade that is designed to maximize clinical activity and minimize toxicities. All competing clinical data to date have come from product candidates that incorporate an active antibody Fc region in addition to a CD47 blocking region. The Fc region provides a positive, pro-phagocytic "eat me" signal to macrophages and other cells of the immune system. Since healthy blood cells also express CD47, these competing therapeutic approaches can cause a reduction in the number of blood cells in the body, resulting in anemia, thrombocytopenia and neutropenia, which can be dangerous to patients and may limit the ability to combine these agents with other anti-cancer medicines.

Our lead product candidate, ALX148, is a next-generation CD47 blocking therapeutic that we believe has significantly enhanced properties compared to competing CD47 blocking approaches. ALX148 is a fusion protein that combines a high-affinity CD47 binding domain with an inactivated proprietary Fc domain. The CD47 binding domain of ALX148 is an affinity enhanced extracellular domain of signal regulatory protein alpha, or SIRP α , a protein which is the natural receptor to CD47 found on myeloid cells. We have engineered the Fc domain of ALX148 so that it does not provide a pro-phagocytic signal while still maintaining an antibody-like half-life for the molecule. We believe our inactive Fc approach may significantly improve safety and tolerability, when compared to other CD47 blocking approaches that have an Fc domain that engages activating receptors on macrophages, causing phagocytosis and death of healthy cells in addition to cancer cells. Clinical data to date in ALX148 have not shown dose-dependent hematologic toxicities, which are characteristic of other CD47 blockers that incorporate an active Fc domain.

Pipeline

Our initial programs are focused on targeting CD47 across various oncology indications. Many forms of cancer use CD47 expression as a means of evading immune response. We are targeting the hematologic malignancies and solid tumor indications where we believe we have the greatest potential to address large markets and unmet medical needs.



ALX148 for the Treatment of MDS

We plan to advance ALX148 for the treatment of MDS, a hematologic malignancy affecting over 70,000 people in the United States. We initially explored the treatment of patients with hematologic malignancies in our ongoing Phase 1b trial of ALX148 in combination with rituximab, an anti-CD20 agent in subjects with relapsed/refractory Non-Hodgkin's lymphoma, or NHL. ALX148 demonstrated a higher response rate at higher doses and achieved a 62.5% objective response rate, or ORR, in the highest dose (15 mg/kg once per week) cohort. We view this ORR as compelling evidence for the role of ALX148 in treating hematologic malignancies and as a favorable comparison to outcomes reported by other CD47 blocking agents in a similar patient population. Furthermore, other CD47 blocking agents in development have demonstrated clinical evidence supporting the role of CD47 blockade in treating hematologic malignancies, specifically in MDS, albeit with high rates of

cytopenias. We have conducted preclinical studies of ALX148 combined with azacitidine, a standard of care agent for the treatment of MDS, that support our clinical development plan in MDS. Our studies and those of others show that azacitidine increases calreticulin display, an “eat me” signal, in tumor models. The addition of ALX148 to azacitidine shows increased phagocytic activity and tumor growth inhibition as compared to azacitidine alone in these in vitro models. We are planning to advance ALX148 into a Phase 1b/2 trial in combination with azacitidine for the first-line treatment of subjects with higher-risk MDS by the end of 2020.

ALX148 for the Treatment of Solid Tumors

ALX148 has generated promising clinical data in solid tumors in combinations with a leading tumor antigen targeting antibody, a leading checkpoint inhibitor and chemotherapy. We believe that ALX148 induces multiple responses that bridge innate and adaptive immunity. We are investigating ALX148 for the first-line treatment of head and neck squamous cell carcinoma, or HNSCC and for second-line treatment of human epidermal growth factor receptor 2, or HER2-positive gastric/gastroesophageal junction, or GEJ, carcinoma. In the United States there are over 38,000 people living with metastatic HNSCC, and there are over 25,000 people living with metastatic gastric/GEJ carcinoma. In Phase 1b clinical trials, ALX148 has demonstrated both promising levels of activity and safety in combination with other broadly utilized cancer agents. Based on these results, the Food & Drug Administration, or FDA, has granted Fast Track designation for ALX148 for both the treatment of patients with HNSCC in the first-line setting and for HER2-positive advanced gastric/GEJ carcinoma in the second-line setting. While other CD47 blockers have failed to achieve meaningful clinical activity in the treatment of solid tumors, we believe ALX148's properties, including favorable tolerability and ability to escalate to higher doses, coupled with high affinity and small size for enhanced solid tumor penetration, may underlie the observed clinical activity of ALX148 in solid tumors. We are planning to advance ALX148 into Phase 2 trials in subjects with HNSCC in combination with pembrolizumab, marketed as Keytruda, the market leading anti-programmed cell death protein-1, or PD-1, checkpoint inhibitor, in the first half of 2021, and gastric/GEJ carcinoma in combination with trastuzumab, marketed as Herceptin, the market-leading anti-HER2 antibody, in the second half of 2021.

Our Strategy

Our goal is to transform treatment options for patients with cancer by developing ALX148 as a foundational checkpoint immunotherapy.

Key elements of our strategy to support this goal include:

- **Pursuing fast to market trials for our lead product candidate, ALX148, in MDS.** We plan to initiate a Phase 1b/2 trial of ALX148, in combination with azacitidine, for the first-line treatment of patients with higher-risk MDS by the end of 2020. Given the limitations of current treatment options for patients with MDS, preclinical activity of ALX148 in combination with azacitidine, clinical data from competitor programs and the differentiated tolerability profile of ALX148, we believe the data generated from this Phase 1b/2 trial could support accelerated approval of ALX148 in the first-line treatment of high-risk MDS.
- **Expanding the therapeutic potential of CD47 blockade into solid tumors.** We believe ALX148 can overcome the limitations of other CD47 blocking approaches in solid tumors. We have generated encouraging data in subjects with HNSCC treated with ALX148 in combination with a PD-1 checkpoint inhibitor and in subjects with HER2-positive gastric/GEJ cancer, who have progressed on prior HER2-targeted therapy and chemotherapy, treated in combination with a HER2-targeted antibody. We have initiated additional Phase 1b cohorts for the first-line treatment of subjects with HNSCC and patients with HER2-positive gastric/GEJ cancer, with Phase 1b data expected in 2021. The FDA has granted ALX148 Fast Track designation in first-line HNSCC and advanced HER2 positive gastric/GEJ cancer. We believe the data generated from our planned Phase 2 randomized trials of ALX148 and pembrolizumab with and without chemotherapy in first-line HNSCC could support

accelerated approval. We are also planning a randomized Phase 2 trial of ALX148, trastuzumab and chemotherapy in first-line HER2-positive gastric/GEJ cancer to inform future paths to registration in this indication.

- **Continuing development of a pipeline of innovative therapeutics based on our protein engineering expertise and knowledge of the immune system and cancer biology.** We specialize in designing and developing drug candidates that engage the immune system. We continue to develop a pipeline of immuno-oncology programs that represent complementary, but differentiated, approaches to engaging the innate and adaptive immune systems.
- **Developing strategic partnerships to broaden the potential impact of our current and future product candidates across patient populations.** In order to advance treatment options for the most patients, we may partner with other companies with complementary resources that will maximize the value of our current and future product candidates. Such partnerships may allow us to pair ALX148 and our future product candidates with other novel agents owned fully or in part by strategic partners. Partnerships may also help realize the full potential of our product candidates in markets where we are unlikely to pursue development or commercialization on our own. We intend to maintain significant economic interest in our product candidates and selectively consider partnership opportunities.

Our Team

Our team of industry veterans plans to continue to advance a broad development plan for ALX148 that balances speed to market, scale of unmet need and existing clinical evidence for ALX148's combination mechanisms. Members of our management team have brought multiple drugs to FDA approval. Our President, Chief Executive Officer and founder, Jaume Pons, Ph.D., was Chief Science Officer of Rinat's (a subsidiary of Pfizer), invented fremanezumab (FDA approved in 2018), tanezumab (Biologics License Application filed in 2020) and additional antibodies in late-stage development at Pfizer and advanced nine more drugs into human trials. Our Chief Medical Officer, Sophia Randolph, M.D., Ph.D., was the global clinical franchise lead for Ibrance at Pfizer, where she oversaw the program from first-in-human trials to regulatory approval. Our Executive Chairman and founder, Corey Goodman, Ph.D., an elected member of the National Academy of Sciences, has co-founded seven biopharmaceutical companies, including Exelixis and Labrys (acquired by Teva Pharmaceuticals in 2014), and led Pfizer's Biotherapeutics and Bioinnovation Center. Our Chief Financial Officer, Peter Garcia, has over 20 years of experience guiding public and private life science companies and has raised over \$1.5 billion in debt and equity offerings. We have funded ALX Oncology to date primarily through the issuance and sale of our convertible preferred stock to investors including venBio, Lightstone Ventures, Vivo Capital, Logos Capital, Janus Henderson, Foresite Capital, Stanford University, Cormorant Asset Management, BVF Partners, HBM Healthcare Investments and the Longevity Fund.

Risks Associated with Our Business

Our business is subject to numerous risks and uncertainties that you should consider before investing in our company. 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 have incurred significant net losses since our inception, and we expect to continue to incur significant net losses for the foreseeable future.
- We will require substantial additional capital to finance our operations.
- We have a limited operating history and have no products approved for commercial sale.
- We are substantially dependent on the success of our lead product candidate, ALX148, which is in clinical development and which has not completed a pivotal trial.
- 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 other comparable foreign regulatory authorities.
- Our product candidates may cause significant adverse events or other undesirable side effects when used alone or in combination with other treatments.

- Clinical trials of our product candidates are expensive, time consuming and difficult to design and implement and may fail to demonstrate adequate safety, efficacy and potency of our product candidates or provide the basis for marketing approval.
- The regulatory approval processes of the FDA and comparable foreign regulatory authorities are lengthy, time-consuming and inherently unpredictable, which could lead to our inability to generate product revenue.
- If we are unable to obtain, maintain and enforce patent protection and other intellectual property for our product candidates and related technology, our business could be materially harmed.
- We are highly dependent on our key personnel, and if we are not successful in attracting, motivating, and retaining highly qualified personnel, we may not be able to successfully implement our business strategy.
- The novel coronavirus, or COVID-19, pandemic could adversely impact our business including our ongoing and planned clinical trials and preclinical research.
- We have identified material weaknesses in our internal control over financial reporting. If remediation measures are not effective, investors may lose confidence in our financial reports.

Corporate Information and History

Our predecessor company, ALX Oncology Limited, an Irish private company limited by shares, was initially incorporated in Ireland on March 13, 2015 under the name Alexo Therapeutics Limited and changed its name to ALX Oncology Limited on October 11, 2018. We were then incorporated in Delaware on April 1, 2020 under the name ALX Oncology Holdings Inc. and completed a reorganization effective as of the same date whereby ALX Oncology Limited became our wholly-owned subsidiary and all of the shareholders, warrant holders and option holders of ALX Oncology Limited became our stockholders, warrant holders and option holders, holding the same number of corresponding shares, warrants and/or options in ALX Oncology Holdings Inc. as they did in ALX Oncology Limited immediately prior to the reorganization. We present the information included in this prospectus as that of ALX Oncology Holdings Inc. unless such information refers to a date prior to April 1, 2020, in which case it will reflect that of our predecessor company. In addition, we present our capitalization information as “preferred stock” and “common stock” of ALX Oncology Holdings Inc., while we present any capitalization information from a date prior to April 1, 2020 as “preferred shares” and “ordinary shares” of ALX Oncology Limited.

Our principal executive offices are located at 866 Malcolm Road, Suite 100, Burlingame, California 94010. Our telephone number is 650-466-7125. Our website address is <http://alxoncology.com>. Information contained on, or that can be accessed through, our website is not incorporated by reference into this prospectus and should not be considered to be part of this prospectus.

We use ALX Oncology 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 TM 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, or the 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

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reduced reporting requirements in our future filings with the Securities and Exchange Commission. In particular, in this prospectus, we have provided only two years of audited consolidated 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 elected to use this extended transition period to enable us to comply with new or revised accounting standards that have different effective dates for public and private companies until the earlier of the date we (i) are no longer an emerging growth company or (ii) affirmatively and irrevocably opt out of the extended transition period provided in the JOBS Act. As a result, our consolidated financial statements may not be comparable to companies that comply with the new or revised accounting standards as of public company effective dates.

The Offering

Common stock offered	shares.
Underwriters' option to purchase additional shares of common stock	shares.
Common stock to be outstanding after the offering	shares (or shares if the underwriters exercise in full their option to purchase additional shares).
Use of proceeds	<p>We estimate that the net proceeds to us from this offering will be approximately \$ million, based upon the assumed initial public offering price of \$ per share, which is the midpoint of the price range set forth on the cover page of this prospectus, after deducting the underwriting discounts and commissions and estimated offering expenses payable by us.</p> <p>We currently intend to use the net proceeds from this offering, together with our existing cash, to fund the development of ALX148 through Phase 1b and Phase 2 clinical trials in several indications, as well as for working capital and other general corporate activities. See "Use of Proceeds" on page 63 for a more complete description of the intended use of proceeds from this offering.</p>
Risk factors	See "Risk Factors" beginning on page 11 and other information included in this prospectus for a discussion of factors that you should consider carefully before deciding to invest in our common stock.
Proposed Nasdaq Global Select Market trading symbol	"ALXO"
The number of shares of our common stock to be outstanding after this offering is based on the outstanding as of , 2020 (including shares of common stock that are subject to a right of repurchase and our convertible preferred stock on an as-converted basis), and excludes:	shares of our common stock
	<ul style="list-style-type: none">▪ shares of common stock issuable upon exercise of options outstanding as of , 2020, at a weighted-average exercise price of \$ per share;▪ shares of common stock issuable upon exercise of options granted after , 2020, at a weighted-average exercise price of \$ per share;▪ warrants to purchase an aggregate of shares of our convertible preferred stock that were outstanding as of , 2020 that will be converted into warrants to purchase an aggregate of shares of our common stock, with an exercise price of \$ per share; and▪ shares of common stock reserved for issuance pursuant to future awards under our 2020 Equity Incentive Plan, or the 2020 Plan, including the amendment thereto that will become effective immediately prior to the completion of this offering, and any additional shares that become available under our 2020 Plan pursuant to provisions thereof that automatically increase the share reserve under the plan each year.
Unless otherwise indicated or the context otherwise requires, this prospectus reflects and assumes the following:	
	<ul style="list-style-type: none">▪ a -for-1 reverse stock split to be effected prior to the closing of this offering;

- no exercise of the outstanding options and the warrants described above;
- no exercise by the underwriters of their option to purchase additional shares of our common stock;
- the automatic conversion of all of our outstanding shares of convertible preferred stock, including cumulative dividends, into an aggregate of _____ shares of common stock, which will occur immediately prior to the completion of this offering;
- warrants to purchase an aggregate of _____ shares of our convertible preferred stock that will be converted into warrants to purchase an aggregate of _____ shares of our common stock, which will occur immediately prior to the completion of this offering; and
- the filing and effectiveness of our amended and restated certificate of incorporation and the adoption of our amended and restated bylaws, each of which will occur immediately prior to the completion of this offering.

Summary Consolidated Financial Data

The following tables summarize our consolidated financial data for the periods and as of the dates indicated. We derived the consolidated statements of operations and comprehensive loss data for the years ended December 31, 2018 and December 31, 2019, and consolidated balance sheet data as of December 31, 2019, from our audited consolidated financial statements included elsewhere in this prospectus. Our historical results are not necessarily indicative of the results that may be expected in the future. You should read the following summary consolidated financial data in conjunction with our consolidated financial statements and the related notes appearing elsewhere in this prospectus and the information in the sections titled "Selected Consolidated Financial Data" and "Management's Discussion and Analysis of Financial Condition and Results of Operations."

Consolidated Statements of Operations and Comprehensive Loss Data:	YEAR ENDED DECEMBER 31,	
	2018	2019
	(in thousands, except share and per share amounts)	
Related-party revenue	\$ 2,067	\$ 4,796
Operating expenses:		
Research and development	11,270	16,306
General and administrative	2,601	3,313
Cost of services for related-party revenue	1,880	4,360
Total operating expenses	15,751	23,979
Loss from operations	(13,684)	(19,183)
Interest expense	—	(21)
Other income (expense), net	(2)	(5)
Loss before income taxes	(13,686)	(19,209)
Income tax provision	(45)	(34)
Net loss and comprehensive loss	(13,731)	(19,243)
Cumulative dividends allocated to preferred shareholders	(3,671)	(4,028)
Net loss attributable to ordinary shareholders	\$ (17,402)	\$ (23,271)
Net loss per share attributable to ordinary shareholders, basic and diluted	\$ (0.96)	\$ (1.15)
Weighted-average shares used to compute net loss per share attributable to ordinary shareholders, basic and diluted	18,102,402	20,245,115
Pro forma net loss per share attributable to ordinary shareholders, basic and diluted (unaudited)(1)		\$ (0.20)
Weighted-average shares used to compute pro forma net loss per share attributable to ordinary shareholders, basic and diluted (unaudited)(1)		94,274,058

(1) See Note 12 to our audited consolidated financial statements included elsewhere in this prospectus for an explanation of the method used to calculate historical and pro forma basic and diluted net loss per share, 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, 2019		
	ACTUAL	PRO FORMA(1)	PRO FORMA
		(unaudited)	
	(in thousands)		
Consolidated Balance Sheet Data:			
Cash	\$ 9,017	\$ 9,017	\$
Working capital(3)	4,825	4,825	
Total assets	10,676	10,676	
Total liabilities	10,952	10,952	
Convertible preferred shares	70,363	—	
Accumulated deficit	(72,782)	(72,782)	
Total stockholders' deficit	(70,639)	(276)	

(1) The pro forma consolidated balance sheet data in the table above reflects the conversion of our outstanding shares of our convertible preferred stock and cumulative dividends into 80,509,887 shares of our common stock, and the resulting reclassification of the convertible preferred stock immediately prior to the completion of this offering.

(2) The pro forma as adjusted consolidated balance sheet data in the table above reflects the pro forma adjustments described in footnote (1) above plus the sale and issuance by us of shares of our common stock in this offering, based upon the assumed initial public offering price of \$ per share, which is the midpoint of the price range set forth on the cover page of this prospectus, after deducting the underwriting discounts and commissions and estimated offering expenses payable by us. Each \$1.00 increase or decrease in the assumed initial public offering price of \$ per share would increase or decrease, as applicable, the pro forma as adjusted amount of each of cash, working capital, total assets and total stockholders' 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 the underwriting discounts and commissions. Similarly, each increase or decrease of 1.0 million shares in the number of shares offered by us would increase or decrease, as applicable, each of cash, working capital, total assets and total stockholders' deficit by approximately \$ million, assuming the assumed initial public offering price of \$ per share remains the same, and after deducting the underwriting discounts and commissions. 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.

(3) We define working capital as current assets less current liabilities. See our consolidated financial statements 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 consolidated 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 and the market price of our common stock.

Risks Related to Our Financial Position and Need for Additional Capital

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

We have incurred significant 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 convertible preferred stock. Our net loss was \$19.2 million for the year ended December 31, 2019. As of December 31, 2019, we had an accumulated deficit of \$72.8 million. We have devoted substantially all of our resources and efforts to research and development. Our lead product candidate, ALX148, is in early-stage clinical trials. Our other programs are in preclinical discovery and research stages. As a result, we expect that it will be several years, if ever, before we have a commercialized product and 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 discover, 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, our ability to fund the development of our product candidates and our ability to achieve and maintain profitability and the performance of our stock.

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. Our operations have consumed substantial amounts of cash since inception, and we expect our expenses to increase in connection with our ongoing activities, particularly as we conduct clinical trials of, and seek marketing approval for ALX148 and advance our other programs. 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 activities. Our expenses could increase beyond expectations if we are required by the U.S. Food and Drug Administration, or FDA, the European Medicines Agency, or EMA, or other regulatory agencies to perform clinical trials or preclinical studies in addition to those that we currently anticipate. Other unanticipated costs may also arise. Because the design and outcome of our planned and anticipated clinical trials are highly uncertain, we cannot reasonably estimate the actual amount of resources and funding that will be necessary to successfully complete the development and commercialization of any product candidate we develop. 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.

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As of December 31, 2019, we had \$9.0 million in cash and subsequently raised \$105.0 million of gross proceeds from our Series C convertible preferred stock issuance in February 2020. Based on our current operating plan, we believe that the proceeds from this offering, together with our existing cash and cash subsequently raised in February 2020, will be sufficient to fund our operations for at least the next months. Our estimate as to how long we expect the net proceeds from this offering, together with our existing cash and cash subsequently raised in February 2020, 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 advance the clinical development of ALX148, as well as for working capital and other general corporate purposes. This may include additional research, hiring additional personnel, capital expenditures, the potential acquisition of businesses or assets and the costs of operating as a public company, as well as for working capital and other general corporate purposes. Advancing the development of ALX148 and our other programs will require a significant amount of capital. The net proceeds from this offering, together with our cash, may not be sufficient to fund all of the actions that are necessary to complete the development of ALX148 or our other programs.

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. In addition, our Loan and Security Agreement, or the Loan Agreement, with Silicon Valley Bank, or SVB, and WestRiver Innovation Lending Fund VIII, LP, or WestRiver, and collectively, the Lenders, restricts our ability to incur additional indebtedness without the consent of the Lenders. To the extent that we raise additional capital through the sale of equity or convertible debt securities, your ownership interest will be diluted, and the terms may include liquidation or other preferences that adversely affect your rights as a stockholder. Debt financing may result in imposition of debt covenants, increased fixed payment obligations or other restrictions that may affect our business. If we raise additional funds through upfront 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.

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, and we may have to delay, reduce the scope of, suspend or eliminate one or more of our research-stage programs, clinical trials or future commercialization efforts.

We have a limited operating history and have no products approved for commercial sale, which may make it difficult for you to evaluate our current business and likelihood of success and viability.

We are a clinical-stage biopharmaceutical company with a limited operating history upon which you can evaluate our business and prospects. We were incorporated and commenced operations in 2015, have no products approved for commercial sale and have not generated any revenue. Drug development is a highly uncertain undertaking and involves a substantial degree of risk. Our operations to date have been limited to organizing and staffing our company, business planning, raising capital, identifying and developing potential product candidates and conducting preclinical and clinical trials of our product candidates, including a Phase 1 clinical trial of ALX148. 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 likelihood of success and 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.

Our ability to generate revenue and achieve profitability depends significantly on our ability to achieve several objectives relating to the discovery, development and commercialization of our product candidates.

Our business depends entirely on the successful development and commercialization of our product candidates. We currently generate no revenue from any product sales, licenses or collaborations and do not expect to generate any revenue from the sale of product candidates in the foreseeable future. We have no products approved for commercial sale and do not anticipate generating any revenue from product sales for the next several years, 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 product candidate, ALX148, and our other future product candidates;
- establishing and maintaining relationships with contract research organizations, or CROs, and clinical sites for the clinical development of ALX148 and our other future product candidates;
- timely receipt of marketing approvals from applicable regulatory authorities for any product candidates for which we successfully complete clinical development;
- the extent of any required post-marketing approval commitments to applicable regulatory authorities;
- developing an efficient and scalable manufacturing process for ALX148 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;
- establishing and maintaining commercially viable supply and manufacturing relationships with third parties that can provide adequate, in both amount and quality, products and services to support clinical development and meet the market demand for our product candidates, if approved;
- successful commercial launch 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 ALX148 and any future product candidates as viable treatment options by patients, the medical community and third-party payors;
- obtaining favorable coverage and adequate reimbursement by third-party payors for our product candidates;
- addressing any competing therapies and technological and market developments;
- identifying, assessing, acquiring and developing new product candidates;
- obtaining, maintaining and expanding patent protection, trade secret protection and regulatory exclusivity, both in the United States and internationally;
- protecting our rights in our intellectual property portfolio, including our licensed intellectual property;
- defending against third-party interference or infringement claims, if any;
- entering into, on favorable terms, any collaboration, licensing or other arrangements that may be necessary or desirable to develop, manufacture or commercialize our product candidates;
- negotiating favorable terms in any collaboration, licensing or other arrangements that may be necessary to develop, manufacture or commercialize our product candidate; 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.

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

We are substantially dependent on the success of our lead product candidate, ALX148, which is in clinical development and which has not completed a pivotal trial. If we do not obtain regulatory approval for and successfully commercialize ALX148 in one or more indications, or we experience significant delays in doing so, we may never generate any revenue or become profitable.

We do not have any products that have received regulatory approval and may never be able to develop marketable product candidates. We expect that a substantial portion of our efforts and expenses over the next several years will be devoted to the development of our lead product candidate, ALX148, in our ongoing clinical trials. As a result, our business currently depends heavily on the successful development, regulatory approval and, if approved, commercialization of ALX148 in one or more of these indications, such as myelodysplastic syndromes, or MDS, head and neck squamous cell carcinoma, or HNSCC, or gastric/gastroesophageal junction, or GEJ, carcinoma. We cannot be certain that ALX148 will receive regulatory approval or will be successfully commercialized even if it receives regulatory approval. The research, testing, manufacturing, safety, efficacy and potency, labeling, approval, sale, marketing and distribution of ALX148 is, and will remain, subject to comprehensive regulation by the FDA and similar foreign regulatory authorities. Our failure to timely complete clinical trials, obtain regulatory approval or, if approved, commercialize ALX148 or any of our future product candidates, would materially harm our business, financial condition and results of operations. We are not permitted to market or promote ALX148, or any other product candidate, before we receive marketing approval from the FDA and comparable foreign regulatory authorities, and we may never receive such marketing approvals. If we do not receive marketing approvals for ALX148, we may not be able to continue our operations.

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 other comparable foreign regulatory authorities. The clinical trials of our product candidates may not produce positive results or demonstrate adequate safety, purity and efficacy and potency to the satisfaction of regulatory authorities.

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/potency 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 approval of their drugs.

Positive or timely results from preclinical or early-stage trials do not ensure positive or timely results in future clinical trials or registrational clinical trials because product candidates in later-stage clinical trials may fail to demonstrate sufficient safety, purity and efficacy and potency to the satisfaction of the FDA or comparable international regulatory authorities, despite having progressed through preclinical studies or initial clinical trials. Product candidates that have shown promising results in early clinical trials may still suffer significant setbacks in subsequent clinical trials or registration clinical trials. For example, a number of companies in the pharmaceutical industry, including those with greater resources and experience than us, have suffered significant setbacks in advanced clinical trials, even after obtaining promising results in earlier clinical trials.

Clinical trials of our product candidates are expensive, time consuming and difficult to design and implement and may fail to demonstrate adequate safety, purity and efficacy and potency of our product candidates or provide the basis for marketing approval.

Before obtaining marketing approval from regulatory authorities for the sale of our product candidates, we must conduct preclinical development and then extensive clinical trials to demonstrate their safety, purity and efficacy and potency. Clinical trials are expensive and difficult to design and implement. Clinical trials can take many years to complete, and their ultimate outcome is uncertain. A failure of one or more clinical trials can occur at any stage of the process. We will be required to demonstrate with substantial evidence through well-controlled clinical trials that our product candidates are safe, pure and effective or potent for use in a diverse patient population before we can

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seek regulatory approvals for their commercial sale. Our clinical trials may produce negative or inconclusive results and we may decide, or regulators may require us, to conduct additional and expansive preclinical or clinical testing.

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 approval to commence a clinical trial;
- reaching agreement on acceptable terms with prospective CROs and clinical trial sites;
- obtaining institutional review board approval at each clinical trial site;
- adding necessary new clinical trial sites;
- recruiting suitable patients to participate in a trial;
- failing in having clinical trial sites or patients comply with trial protocols;
- suffering clinical trial sites or patients dropping out of trials; 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 subjects dropping out of these clinical trials at a higher rate than anticipated;
- delays in clinical trials due to outbreaks or public health crises, such as the COVID-19 pandemic, that impact both trial site operations and patient selection;
- 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 are 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.

As a result of any of these delays or other circumstances, we may incur unplanned costs, not obtain or be delayed in obtaining marketing approval, receive more limited or restrictive marketing approval, be subject to additional post-marketing testing requirements or have our drug removed from the market after obtaining marketing approval.

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

If we experience delays or difficulties in the enrollment of patients in clinical trials and/or retention of patients in clinical trials, our regulatory submissions or 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 international regulatory authorities. Patient enrollment is a significant factor in the timing of clinical trials. In particular, because certain of our clinical trials of ALX148 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

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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 or potency 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 by us and the clinical trial sites;
- patient referral practices of physicians;
- the ability to monitor patients adequately during and after treatment;
- proximity of clinical trial sites to prospective patients;
- risk of patients enrolled in clinical trials dropping out before completion; and
- inability or delay in enrollment of patients due to a variety of reasons, including outbreaks and public health crises, such as the COVID-19 pandemic.

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 drugs.

Interim, topline and preliminary data from our clinical trials that we announce or publish from time to time may change as more patient data become available and are subject to audit and verification procedures that could result in material changes in the final data.

From time to time, we may publicly disclose preliminary, interim or topline data from our clinical trials. These interim updates are based on a preliminary analysis of then-available data, and the results and related findings and conclusions are subject to change following a more comprehensive review of the data related to the particular study or trial. Further, interim, topline and preliminary data include certain assumptions, estimations, calculations and conclusions as part of our analyses of data available at that time, and we may not have received or had the opportunity to fully and carefully evaluate all data. As a result, the topline results that we report may differ from future results of the same studies, or different conclusions or considerations may qualify such results, once additional data have been received and fully evaluated. Topline data also remain subject to audit and verification procedures that may result in the final data being materially different from the preliminary data we previously published. Interim data from clinical trials that we may complete 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. Adverse changes between interim data and final data could significantly harm our business and prospects. Further, additional disclosure of interim data by us or by our competitors in the future could result in volatility in the price of our common stock. You or others may not agree with what we determine is the material or otherwise appropriate information to include in our disclosure, and any information we determine not to disclose may ultimately be deemed significant with respect to future decisions, conclusions, views, activities or otherwise regarding a particular product candidate or our business. If the preliminary or topline data that we report differ from late, final or actual results, or if others, including regulatory authorities, disagree with the conclusions reached, our ability to obtain approval for product candidates may be harmed, which could harm our business, financial condition, results of operations and prospects.

Our product candidates may cause significant adverse events, toxicities or other undesirable side effects when used alone or in combination with other approved products or investigational new drugs that may result in a safety profile that could prevent regulatory approval, prevent market acceptance, limit their commercial potential or result in significant negative consequences.

If ALX148 and any of our product candidates are associated with undesirable side effects or have unexpected characteristics in preclinical studies or clinical trials when used alone or in combination with other approved

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products or investigational new drugs 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. For example, we have observed single-digit incident rates of treatment-related grade three and higher cytopenias occurred across each of the trial cohorts in our ALX148 combination clinical trials with pembrolizumab, trastuzumab and rituximab in a heavily pre-treated group of subjects who are typical participants in early stage cancer trials and are often hematologically fragile at baseline. Subjects in our ALX148 combination clinical trials experienced a number of treatment-related adverse events that were low-grade and manageable, including alanine aminotransferase, or ALT, increase, aspartate aminotransferase, or AST, increase, rash, fatigue, pruritus, anemia, infusion reaction, platelets decrease, neutropenia, nausea, alkaline phosphate increase, arthralgia, pyrexia, white blood cell decrease, decreased appetite and myalgia. Treatment-related side effects could also affect patient recruitment or the ability of enrolled subjects to complete the trial or result in potential product liability claims. Any adverse events as a result of ALX148 or any of our future product candidates, including in combination therapy, may prevent us from achieving or maintaining market acceptance of the affected product candidate and may harm our business, financial condition and prospects significantly.

We face substantial competition which may result in others discovering, developing or commercializing products before or more successfully than we do.

The development and commercialization of new product candidates is highly competitive. We face competition with respect to ALX148 and will face competition with respect to any product candidates that we may seek to develop or commercialize in the future, from major pharmaceutical, specialty pharmaceutical and biotechnology companies among others. We compete in the segments of the pharmaceutical, biotechnology and other related markets that develop immuno-oncology therapies for the treatment of cancer. There are other companies working to develop immuno-oncology therapies for the treatment of cancer including divisions of large pharmaceutical and biotechnology companies of various sizes. The large pharmaceutical and biotechnology companies that have commercialized and/or are developing immuno-oncology treatments for cancer include AstraZeneca, Bristol Myers Squibb, Gilead Sciences, Merck, Novartis, Pfizer and Roche/Genentech.

Some of these competitive products and therapies are based on scientific approaches that are the same as or similar to our approach, including with respect to the targeting of CD47 pathway and others are based on entirely different approaches. We are aware that Arch Therapeutics, Bristol Myers Squibb, Gilead Sciences (through its recent acquisition of Forty Seven), I-Mab, Novimmune, OSE Immunotherapeutics, Seattle Genetics, Surface Oncology and Trillium Therapeutics, among others, are developing drugs targeting the CD47 pathway that may have utility for the treatment of indications that we are targeting. Potential competitors also include academic institutions, government agencies and other public and private research organizations that conduct research, seek patent protection and establish collaborative arrangements for research, development, manufacturing and commercialization.

There are already a variety of available drug therapies marketed for cancer and some of the currently approved drug therapies are branded and subject to patent protection and others are available on a generic basis. Many of these approved drugs are well established therapies and are widely accepted by physicians, patients and third-party payors. Insurers and other third-party payors may also encourage the use of generic products. We expect that if ALX148 and any of our other future product candidates are approved, they will be priced at a significant premium over competitive generic products. This may make it difficult for us to achieve our business strategy of using our product candidates in combination with existing therapies or replacing existing therapies with our product candidates.

Many of the companies against which we are competing or against which we may compete in the future have significantly greater financial resources and expertise in research and development, manufacturing, preclinical testing, conducting clinical trials, obtaining regulatory approvals and marketing approved drugs than we do. Mergers and acquisitions in the pharmaceutical and biotechnology industries may result in even more resources being concentrated among a smaller number of our competitors. 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, in establishing clinical trial sites and enrolling subjects for our clinical trials and in acquiring technologies complementary to, or necessary for, our programs.

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We could see a reduction or elimination of our commercial opportunity if our competitors develop and commercialize products that are safer, more effective, are more convenient or are less expensive than any products that we or our collaborators may develop. Our competitors also may obtain FDA or foreign regulatory approval for their products more rapidly than we may obtain approval for ours, which could result in our competitors establishing a strong market position before we are able to enter the market. The key competitive factors affecting the success of all our product candidates, if approved, are likely to be their efficacy, safety, convenience, price, the level of biosimilar or generic competition and the availability of reimbursement from government and other third-party payors. The inability to compete with existing or subsequently introduced drugs would harm our business, financial condition and results of operations.

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

Even after approval, our manufacturing processes, labeling, packaging, distribution, adverse event reporting, storage, advertising, promotion, import, export and recordkeeping for our approved products 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 on-going compliance with current good manufacturing practices, or cGMPs, and current good clinical practices, or cGCPs, for any clinical trials that we conduct post-approval. Regulatory approvals may contain significant limitations related to use restrictions for specific target population subsets, e.g., age groups, warnings, precautions or contraindications, or may include costly and burdensome post-approval study or risk management requirements and regulatory inspection. For example, the FDA may require a Risk Evaluation and Mitigation Strategy, or REMS, as a condition for approval of our product candidates, which could entail requirements for a medication guide, physician training, and communication plans or additional elements to ensure safe use, such as restricted distribution methods, patient registries and other risk mitigation tools.

In addition, manufacturers of drug products and their facilities are subject to continual review and periodic, unannounced 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 a contract supplier, vendor, or facility where the product is manufactured or processed, a regulatory agency may impose restrictions on that product, the manufacturing facility or contractor, or us, including requiring recall or withdrawal of the product from the market or suspension of manufacturing. In addition, failure to comply with FDA, EMA and other comparable foreign regulatory requirements may subject our company to administrative or judicially imposed sanctions or enforcement actions, including:

- delays in or the rejection of product approvals;
- 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; and
- imposition of restrictions on operations, including costly new manufacturing requirements.

The occurrence of any of these sanctions, enforcement actions, or penalties described above may inhibit our ability to commercialize our product candidates, even if approved, and generate revenue.

We contract with third parties for the manufacture of our product candidates for preclinical development and clinical trials, and we expect to continue to do so 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 or quality, which could delay, prevent or impair our development or commercialization efforts.

We do not currently own or operate, nor do we have any plans to establish in the future, any manufacturing facilities or personnel. We rely, and expect to continue to rely, on third parties for the manufacture of our product candidates for preclinical development and clinical testing, as well as for the commercial manufacture of our drugs if any of our product candidates receive marketing approval. No assurance can be given that long-term, scalable manufacturers can be identified or that they can make clinical and commercial supplies of our product candidates that meet the product specifications of previously manufactured batches, or are of a sufficient quality, or at an appropriate scale and cost to make it commercially feasible. Such third-party manufacturers may also be subject to delays due to circumstances outside of their control for a variety of reasons, including outbreaks and public health crises, such as the COVID-19 pandemic, that could shut down or cause limited staffing of their facilities. Our 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 or quality, which could delay, prevent or impair our development or commercialization efforts. If they are unable to do so, it could have a material adverse impact on our business.

The facilities used by contract manufacturers to manufacture our product candidates must be approved by the FDA or any applicable foreign regulatory authority pursuant to inspections that may be conducted after we submit our marketing applications to the FDA or any such foreign regulatory authority. We do not control the manufacturing process of, and will be completely dependent on, our contract manufacturers for compliance with cGMPs in connection with the manufacture of our product candidates. If our contract manufacturers 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 regulatory approval for their manufacturing facilities. In addition, we have no control over the ability of our contract manufacturers to maintain adequate quality control, quality assurance and qualified personnel. If the FDA or any applicable 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, including causing substantial delay, in our ability to develop, obtain regulatory approval for or market our product candidates. Further, our failure, or the failure of our third-party manufacturers, to comply with applicable regulations could result in sanctions being imposed on us, including clinical holds, fines, injunctions, civil penalties, delays, suspension or withdrawal of approvals, license revocation, seizures or recalls of drug candidates or drugs, operating restrictions and criminal prosecutions, any of which could significantly and adversely affect our business and supplies of our product candidates.

Our product candidates and any drugs that we may develop may compete with other product candidates and approved drugs for access to manufacturing facilities. There are a limited number of manufacturers that operate under cGMP regulations and that might be capable of manufacturing for us.

We also expect to rely on other third parties to store and distribute product candidate supplies for our clinical trials. Any performance failure on the part of our distributors could delay clinical development or marketing approval of any future product candidates or commercialization of our products, producing additional losses and depriving us of potential drug revenue.

Any performance failure on the part of our existing or future manufacturers could delay clinical development, marketing approval or commercial drug supply after marketing approval. If our current contract manufacturers cannot perform as agreed, we may be required to replace such manufacturers causing additional costs and delays in identifying and qualifying any such replacement.

Material modifications in the methods of product candidate manufacturing or formulation may result in additional costs or delay.

The manufacture of drugs 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. Also,

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as product candidates progress through preclinical and clinical trials to marketing approval and commercialization, it is common that various aspects of the development program, such as manufacturing, suppliers and formulation, are altered in an effort to optimize yield and manufacturing batch size, minimize costs and achieve consistent quality and results. 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 modified manufacturing, materials or process. This could delay completion of clinical trials, require the conduct of additional clinical trials, such as bridging studies to demonstrate the product is substantially equivalent to product used during earlier 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, if approved, and generate revenue.

Lack of third-party combination drugs may materially and adversely affect demand for our product candidates.

Our product candidates may be administered in combination with drugs of other pharmaceutical companies as one regimen. In addition, we plan to use third-party drugs in our development and clinical trials as controls for our studies, such as our current plans to conduct Phase 2 clinical trials of ALX148 in combination with pembrolizumab for HNSCC and trastuzumab for gastric/GEJ carcinoma. As a result, both the results of our clinical trials and the sales of our drugs may be affected by the availability of these third-party drugs. If other pharmaceutical companies discontinue these drugs for combination therapies in the future, regimens that use these combination drugs may no longer be prescribed, and we may not be able to introduce or find an alternative drug to be used in combination with our drugs at all or in a timely manner and on a cost-effective basis. Use of new combination drugs with our approved product candidates will require further regulatory approval before we can promote such new combination therapies. As a result, demand for our product candidates may be lowered, which would in turn materially and adversely affect our business and results of operations.

We may not be able to obtain regulatory approval for our product candidates or commercialize any product candidates that may result from our development efforts, or may miss expected deadlines, if we are not able to maintain or secure agreements with the third parties that conduct the activities related to our clinical trials on acceptable terms, if these third parties do not perform their services as contractually required, or if these third parties fail to timely transfer any regulatory information held by them to us.

We rely on entities outside of our control, which may include academic institutions, CROs, hospitals, clinics and other third-party strategic partners, to monitor, support, conduct and oversee preclinical studies and clinical trials of our current and future product candidates. As a result, we have less control over the timing and cost of these studies and the ability to recruit trial subjects than if we conducted these trials with our own personnel. If we are unable to maintain or enter into agreements with these third parties on acceptable terms, or if any such engagement is terminated prematurely, we may be unable to enroll patients on a timely basis or otherwise conduct our clinical trials as planned. In addition, there is no guarantee that these third parties will devote adequate time and resources to our clinical trials or perform as required by our contract or in accordance with regulatory requirements, including maintenance of clinical trial information regarding our product candidates. For example, these third parties may be adversely impacted by the COVID-19 pandemic. If these third parties fail to meet expected deadlines, fail to transfer to us any regulatory information in a timely manner, fail to adhere to protocols or fail to act in accordance with regulatory requirements or our agreements with them, or if they otherwise perform in a substandard manner or in a way that compromises the quality or accuracy of their activities or the data they obtain, then clinical trials of our product candidates may be extended or delayed with additional costs incurred, or our data may be rejected by the FDA or other regulatory agencies. Ultimately, we are responsible for ensuring that each of our clinical trials is conducted in accordance with the applicable protocol, legal, regulatory and scientific standards, and our reliance on third parties does not relieve us of our regulatory responsibilities.

We and our CROs are required to comply with cGCPs, regulations and guidelines enforced by the FDA and comparable foreign regulatory authorities for products in clinical development. Regulatory authorities enforce these cGCPs through periodic inspections of clinical trial sponsors, principal investigators and clinical trial sites. If we or any of our CROs fail to comply with applicable cGCPs, the clinical data generated in our clinical trials may be deemed unreliable and our submission of marketing applications may be delayed, or the FDA or foreign regulatory authority may require us to perform additional clinical trials before approving our marketing applications. Upon inspection, the FDA or foreign regulatory authority could determine that any of our clinical trials fail or have failed to comply with applicable cGCPs.

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Our business also may be implicated if any of our CROs violates fraud and abuse or false claims laws and regulations or healthcare privacy and security laws.

If any of our third-party clinical trial sites terminate for any reason, we may experience the loss of follow-up information on subjects enrolled in our ongoing clinical trials unless we are able to transfer the care of those subjects to another qualified clinical trial site. Further, our CROs are not required to work indefinitely or exclusively with us. Our existing agreements with our CROs may be subject to termination by the counterparty upon the occurrence of certain circumstances. If any CRO terminates its agreement with us, the research and development of the relevant product candidate would be suspended, and our ability to research, develop and license future product candidates would be impaired. We may be required to devote additional resources to the development of our product candidates or seek a new CRO partner, and the terms of any additional arrangements that we establish may not be favorable to us. Switching or adding CROs or other service providers can involve substantial cost and require extensive management time and focus. In addition, there is a natural transition period when a new CRO or service provider commences work. As a result, delays may occur, which can materially impact our ability to meet our desired clinical development timelines. If we are required to seek alternative arrangements, the resulting delays and potential inability to find suitable replacements could materially and adversely impact our business.

Even if we receive marketing approval for any of our product candidates, we may not achieve market acceptance, which would limit the revenue that we can generate from sales of any of our approved product candidates.

Even if the FDA and applicable foreign regulatory authorities approve the marketing of any product candidates that we develop, physicians, patients, third-party payors or the medical community may not accept or use our product candidates. Efforts to educate the medical community and third-party payors on the benefits of our product candidates may require significant resources and may not be successful. Market acceptance of ALX148 and any other product candidates, if any are approved, will depend on a number of factors, including, among others:

- the ability of ALX148 and our other product candidates to treat cancer or other applicable targeted diseases, as compared with other available drugs, treatments or therapies;
- the timing of market introduction of the product candidate as well as competitive products;
- the clinical indications for which a product candidate is approved;
- the approval of other new therapies for the same indications;
- the prevalence and severity of any adverse side effects associated with ALX148 and our other product candidates;
- limitations or warnings contained in the labeling approved for ALX148 or our other product candidates by the FDA or foreign regulatory authorities;
- availability of alternative treatments and the potential and perceived advantages of our product candidates over alternative treatments;
- the size of the target patient population and the willingness of the target patient population to try new therapies and of physicians to prescribe these therapies;
- the strength and effectiveness of marketing and distribution support and timing of market introduction of competitive products;
- publicity for our product candidates and competing products and treatments;
- pricing and cost-effectiveness in relation to alternative treatments;
- relative convenience and ease of administration;
- our ability to obtain sufficient third-party coverage or reimbursement, and the willingness of patients to pay out-of-pocket in the absence of third-party coverage; and
- the likelihood that the FDA or any foreign regulatory authority may impose additional requirements that limit the promotion, advertising, distribution or sales of our product candidates.

Adverse events in clinical trials for our product candidates or in clinical trials of others developing similar products and the resulting publicity, as well as any other adverse events in the field of immuno-oncology that may occur in the future, could result in a decrease in demand for ALX148 or any other product candidate that we may develop. If public perception is influenced by claims that the use of cancer immunotherapies is unsafe, whether related to our

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therapies or those of our competitors, our products may not be accepted by the general public or the medical community. Future adverse events in immuno-oncology or the biopharmaceutical industry generally could also result in greater governmental regulation and stricter labeling requirements.

If any of our product candidates is approved but does not achieve an adequate level of acceptance by patients, physicians and third-party payors, we may not generate sufficient revenue to become or remain profitable and our business may be harmed.

We have never commercialized a product candidate and we may lack the necessary expertise, personnel and resources to successfully commercialize any of our products that receive regulatory approval.

We currently have no marketing and sales organization and we have never commercialized a product candidate. To achieve commercial success of our product candidates, if any are approved, we will have to develop our own sales, marketing and supply capabilities or outsource these activities to a third party.

If any of our product candidates ultimately receives regulatory approval, we may choose to establish an internal marketing and sales organization with technical expertise and supporting distribution capabilities to commercialize each such product in major markets, which will be expensive and time consuming. We have no prior experience as a company in the marketing, sale and distribution of pharmaceutical products and there are significant risks involved in building and managing a sales organization. Factors that may affect our ability to commercialize our product candidates on our own include recruiting and retaining adequate numbers of effective sales and marketing personnel, obtaining access to or persuading adequate numbers of physicians to prescribe our product candidates and other unforeseen costs associated with creating an independent sales and marketing organization. Developing a sales and marketing organization requires significant investment, is time-consuming and could delay the launch of our product candidates. We may not be able to build an effective sales and marketing organization in the United States, the European Union or other key global markets. If we are unable to build our own distribution and marketing capabilities or to find suitable partners for the commercialization of our product candidates, we may have difficulties generating revenue from them.

We may also choose to collaborate 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 may not be able to enter into collaborations or hire consultants or external service providers to assist us in sales, marketing and distribution functions on acceptable financial terms, or at all. In addition, our product revenue and our profitability, if any, may be lower if we rely on third parties for these functions than if we were to market, sell and distribute any products that we develop ourselves. We likely will have little control over such third parties, and any of them may fail to devote the necessary resources and attention to sell and market our products effectively. If we are not successful in commercializing our products, either on our own or through arrangements with one or more third parties, we may not be able to generate any future product revenue and we would incur significant additional losses. We have no internal sales, marketing or distribution capabilities.

The market opportunities for the product candidates we develop, if approved, may be limited to certain smaller patient subsets.

There is no guarantee that the product candidates we develop, even if approved, would be approved for the currently proposed indications. We may have to conduct additional clinical trials that may be costly, time-consuming and subject to risk. Regulators, like FDA, may require us to narrow our indications to smaller patient subsets, and the number of patients in such subsets may turn out to be lower than expected.

Our current and future product candidates may have undesirable side effects that may delay or prevent marketing approval or, if approval is received, require them to be taken off the market, require them to include new safety warnings, contraindications or precautions, or otherwise limit their sales. No regulatory agency has made a determination that any of our product candidates are safe, pure, potent or effective for use by the target patient population for any indication.

Our lead product candidate, ALX148, is at an early stage of clinical development and not all adverse effects can be predicted or anticipated. Unforeseen side effects from ALX148 or any of our future product candidates may arise at

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any time during clinical development or, if approved by regulatory authorities, after the approved drug product has been marketed. Any undesirable or unacceptable side effects of ALX148 or our future product candidates could interrupt, delay or halt clinical trials, and result in delay of, or failure to obtain, marketing approval from the FDA or comparable international regulatory authorities, or result in marketing approval from the FDA or comparable international regulatory authorities with restrictive label warnings or for limited patient populations. Ultimately, such side effects could result in product liability claims. No regulatory agency has made any determination that any of our product candidates or discovery programs is safe or effective for use by the general public for any indication.

Even if any of our product candidates receive marketing approval, if we or others later identify undesirable or unacceptable side effects caused by such products:

- regulatory authorities may require us to take our approved product off the market;
- regulatory authorities may require the addition of labeling statements, specific warnings, contraindication, precaution or field alerts to physicians and pharmacies;
- we may be required to change the way the product is administered, limit the patient population who can use the product or conduct additional clinical trials;
- we may be subject to limitations on how we may promote the product;
- sales of the product may decrease significantly;
- we may be subject to litigation or product liability claims; and
- our reputation may suffer.

Any of these events could prevent us from achieving or maintaining market acceptance of the affected product or could substantially increase commercialization costs and expenses, which in turn could delay or prevent us from generating revenue from the sale of any future product candidates.

Failure to obtain or maintain adequate coverage and reimbursement for our product candidates, if approved, could limit our ability to market those products and decrease our ability to generate revenue.

The availability and adequacy of coverage and reimbursement by governmental healthcare programs such as Medicare and Medicaid, private health insurers and other third-party payors are essential for most patients to be able to afford products such as our product candidates, if approved. Our ability to achieve acceptable levels of coverage and reimbursement for products by governmental authorities, private health insurers and other organizations will have an effect on our ability to successfully commercialize our product candidates. Coverage under certain government programs, such as Medicare, Medicaid and TRICARE, may not be available for certain of our product candidates. Assuming we obtain coverage for a given product by a third-party payor, the resulting reimbursement payment rates may not be adequate or may require co-payments that patients find unacceptably high. We cannot be sure that coverage and reimbursement in the United States, the European Union or elsewhere will be available for any product that we may develop, and any reimbursement that may become available may be decreased or eliminated in the future.

Third-party payors increasingly are challenging prices charged for pharmaceutical products and services, and many third-party payors may refuse to provide coverage and reimbursement for particular drugs when an equivalent generic drug, biosimilar or a less expensive therapy is available. It is possible that a third-party payor may consider our product candidates and other therapies as substitutable and only offer to reimburse patients for the less expensive product. Even if we show improved efficacy and potency or improved convenience of administration with our product candidates, pricing of existing drugs may limit the amount we will be able to charge for our product candidates. These payors may deny or revoke the reimbursement status of a given product or establish prices for new or existing marketed products at levels that are too low to enable us to realize an appropriate return on our investment in product development. If reimbursement is not available or is available only at limited levels, we may not be able to successfully commercialize our product candidates and may not be able to obtain a satisfactory financial return on products that we may develop.

Obtaining and maintaining reimbursement status is time-consuming and costly. No uniform policy for coverage and reimbursement for products exists among third-party payors in the United States. Therefore, coverage and

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reimbursement for products can differ significantly from payor to payor. 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 applied consistently or obtained in the first instance. Furthermore, rules and regulations regarding reimbursement change frequently, in some cases at short notice, and we believe that changes in these rules and regulations are likely.

Moreover, increasing efforts by governmental and third-party payors in the United States and abroad to cap or reduce healthcare costs may cause such organizations to limit both coverage and the level of reimbursement for newly approved products and, as a result, they may not cover or provide adequate payment for our product candidates. We expect to experience pricing pressures in connection with the sale of any of our product candidates due to the trend toward managed healthcare, the increasing influence of health maintenance organizations and additional legislative changes. The downward pressure on healthcare costs in general, particularly prescription drugs, has become very intense. As a result, increasingly high barriers are being erected to the entry of new products. The continuing efforts of the government, insurance companies, managed care organizations and other payors of health care services to contain or reduce costs of health care may adversely affect:

- the demand for any products for which we may obtain regulatory approval;
- our ability to set a price that we believe is fair for our products;
- our ability to obtain and maintain coverage and adequate reimbursement for a product;
- our ability to generate revenue and achieve or maintain profitability; and
- the level of taxes that we are required to pay.

The FDA and other regulatory agencies actively enforce the laws and regulations prohibiting the promotion of off-label uses.

The FDA strictly regulates manufacturers' promotional claims of drug products. In particular, a product may not be promoted for uses that are not approved by the FDA as reflected in the FDA-approved labeling. The FDA, the Department of Justice, the Inspector General of the Department of Health and Human Services, among other government 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, including large civil and criminal fines, penalties and enforcement actions. The FDA has also imposed consent decrees or permanent injunctions under which specified promotional conduct is changed or curtailed for companies that engaged in such prohibited activities. If we cannot successfully manage the promotion of our approved product candidates, we could become subject to significant liability, which would materially adversely affect our business and financial condition.

Risks Related to Government Regulation

Even if we receive regulatory approval to commercialize any of our product candidates, we will be subject to ongoing regulatory obligations and continued regulatory review with respect to our drugs, which will result in significant additional expense.

Any regulatory approvals that we receive for our product candidates may be subject to limitations on the approved indicated uses for which the product may be marketed, or subject to certain conditions of approval and may contain requirements for potentially costly post-approval trials and surveillance to monitor the safety, purity and efficacy/potency of the marketed product. For any approved drug, we will be subject to ongoing regulatory obligations and extensive oversight by regulatory authorities, including with respect to manufacturing processes, labeling, packaging, distribution, adverse event reporting, storage, advertising, promotion and recordkeeping for the product. These requirements include submissions of safety and other post-approval information and reports, as well as continued compliance with cGMPs and cGCP for any clinical trials that we conduct post-approval. Later discovery of previously unknown problems with a drug, including adverse events of unanticipated severity or frequency, or with third-party manufacturers or manufacturing processes, or failure to comply with regulatory requirements, may result in, among other things:

- restrictions on the marketing or manufacturing of the drug;

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- withdrawal of the drug from the market or voluntary or mandatory product recalls;
- adverse publicity, fines, warning letters or holds on clinical trials;
- refusal by the FDA or any other applicable regulatory authority to approve pending applications or supplements to approved applications filed by us, or suspension or revocation of product license approvals;
- drug product seizure or detention, or refusal to permit the import or export of product candidates; and
- injunctions or the imposition of civil or criminal penalties.

The occurrence of any of the foregoing could have a material and adverse effect on our business and results of operations. Further, the policies of the FDA or other comparable foreign regulatory authorities may change, and additional government regulations may be enacted that could prevent, limit or delay regulatory approval of our product candidates or impact any already approved drugs. 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, which would adversely affect our business, prospects and ability to generate revenue or achieve or sustain profitability.

The regulatory approval processes of the FDA and comparable foreign regulatory authorities are lengthy, time-consuming and inherently unpredictable, which could lead to our inability to generate product revenue. Even if we obtain FDA approval of any of our product candidates, we may never obtain approval or commercialize such products outside of the United States, which would limit our ability to realize their full market potential.

The time required to obtain approval by the FDA 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. Seeking foreign regulatory approvals could result in significant delays, difficulties and costs for us and may require additional preclinical studies or clinical trials which would be costly and time consuming. Regulatory requirements can vary widely from country to country and could delay or prevent the introduction of our product candidates in those countries. 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. Satisfying these and other regulatory requirements is costly, time consuming, uncertain and subject to unanticipated delays. Our failure to obtain regulatory approval in any country may delay or have negative effects on the process for regulatory approval in other countries. Even if we eventually complete clinical testing and receive approval of any regulatory filing for our product candidates, the FDA 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 ALX148 or any product candidates we may seek to develop in the future will ever obtain regulatory approval. If we fail to comply with regulatory requirements in international markets or to obtain and maintain required approvals, our target market will be reduced and our ability to realize the full market potential of our product candidates will be harmed.

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

- the FDA or comparable international regulatory authorities may disagree with the design, implementation or results of our clinical trials;
- the FDA or comparable international 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 potency and safety in the full population for which we seek approval;
- the FDA or comparable international regulatory authorities may disagree with our interpretation of data from preclinical studies or clinical trials;

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- the data collected from clinical trials of our product candidates may not be sufficient to support the submission of a Biologics License Application, New Drug Application or other submission or to obtain regulatory approval in the United States or elsewhere;
- we may be unable to demonstrate to the FDA or comparable international regulatory authorities that a product candidate's risk-benefit ratio for its proposed indication is acceptable;
- the FDA or comparable international 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 or international foreign regulatory authorities may significantly change in a manner rendering our clinical data insufficient for approval.

In order to market any product candidates outside of the United States, we must establish and comply with numerous and varying regulatory requirements of other countries regarding safety and efficacy and potency and approval standards. Clinical trials conducted in one country may not be accepted by regulatory authorities in other countries, and regulatory approval in one country does not mean that regulatory approval will be obtained in any other country.

The ability of the FDA to review and approve new products can be affected by a variety of factors, including government budget and funding levels, ability to hire and retain key personnel and accept the payment of user fees, government shutdowns, including as a result of budget delays or other circumstances like the COVID-19 pandemic and statutory, regulatory and policy changes. Average review times at the agency have fluctuated in recent years as a result. 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.

While we have received certain FDA Fast Track designations, such Fast Track designations may not lead to a faster development or regulatory review or approval process, and does not increase the likelihood that the drug will receive marketing approval.

In February 2020, the FDA granted Fast Track designations to ALX148 for first-line HNSCC and for second-line treatment of advanced human epidermal growth factor receptor 2, or HER2-positive gastric/GEJ carcinoma. If a product candidate is intended for the treatment of a serious condition and preclinical or clinical data demonstrate the potential to address unmet medical need for such condition, a sponsor may apply for FDA Fast Track designation. Even though we received these Fast Track designations for ALX148, Fast Track designation does not ensure that we will receive marketing approval or that approval will be granted within any particular timeframe. We may not experience a faster development or regulatory review or approval process with Fast Track designation compared to conventional FDA procedures. In addition, the FDA may withdraw Fast Track designation if it believes that the designation is no longer supported by data from our clinical development program. Fast Track designation alone does not guarantee qualification for the FDA's priority review procedures.

If we decide to seek orphan drug designation for one or more of our product candidates, we may be unsuccessful or may be unable to maintain the benefits associated with such orphan drug designation.

Under the Orphan Drug Act, the FDA may designate a product candidate 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. We may seek Orphan Drug Designation for certain indications for our product candidates in the future. Orphan Drug Designation neither shortens the development time or regulatory review time of a product candidate nor gives the product candidate any advantage in the regulatory review or approval process. Generally, if a product candidate with an Orphan Drug Designation subsequently receives the first marketing approval for the indication for which it has such designation, the drug is entitled to a period of marketing exclusivity that precludes the FDA from approving another marketing application for the same drug for the same indication for seven years. Therefore, if our competitors are able to obtain orphan product exclusivity for their product candidates in the same indications we are pursuing, we may not be able to have competing product candidates approved in those indications by the FDA for a significant period of time. There are also limited circumstances where the FDA may reduce the seven-year exclusivity for a product candidate with an orphan drug

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designation where other product candidates show clinical superiority to the product with orphan exclusivity or if the FDA finds that the holder of the orphan exclusivity has not shown that it can assure the availability of sufficient quantities of the orphan product to meet the needs of patients with the disease or condition for which the drug was designated. However, even if one of our product candidates receives orphan exclusivity, the FDA can still approve other drugs that have a different active ingredient for use in treating the same indication or disease. Furthermore, the FDA can waive orphan exclusivity if we are unable to manufacture a sufficient supply of our product.

Current and future legislation may increase the difficulty and cost for us to commercialize our products, if approved, and affect the prices we may obtain. 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.

Third-party payors, whether domestic or foreign, or governmental or commercial, are developing increasingly sophisticated methods of controlling healthcare costs. In both the United States and certain foreign jurisdictions, there have been, and likely will continue to be, legislative and regulatory proposals at the foreign, federal and state levels directed at containing or lowering the cost of healthcare. We cannot predict the initiatives that may be adopted in the future. The continuing efforts of the government, insurance companies, managed care organizations and other payors of healthcare services to contain or reduce costs of healthcare and/or impose price controls may adversely affect:

- the demand for our drugs, if we obtain regulatory approval;
- our ability to receive or set a price that we believe is fair for our drugs;
- our ability to generate revenue and achieve or maintain profitability;
- the level of taxes that we are required to pay; and
- the availability of capital.

The Patient Protection and Affordable Care Act, as amended by the Health Care and Education Reconciliation Act, or collectively ACA, was enacted in 2010 and includes measures that have significantly changed the way healthcare is financed by both governmental and private insurers. The ACA continues to impact the U.S. pharmaceutical industry. Since its enactment, there have been judicial, executive and Congressional challenges to certain aspects of the ACA. In December 2018, the Centers for Medicare & Medicaid Services, or CMS, published a new final rule permitting further collections and payments to and from certain ACA-qualified health plans, or QHPs, and health insurance issuers under the ACA risk adjustment program in response to the outcome of federal district court litigation regarding the method CMS uses to determine this risk adjustment. On April 27, 2020, the United States Supreme Court reversed a Federal Circuit decision that previously upheld Congress' denial of \$12 billion in "risk corridor" funding. Further, in December 2018, a Texas U.S. District Court Judge ruled that the ACA is unconstitutional in its entirety because the "individual mandate" was repealed by the U.S. Congress as part of a tax act. Additionally, in December 2019, the U.S. Court of Appeals for the 5th Circuit upheld the district court ruling that the individual mandate was unconstitutional and remanded the case back to the district court to determine whether the remaining provisions of the ACA are invalid as well. In March 2020, the U.S. Supreme Court agreed to hear the case, which is expected to occur in the fall of 2020. It is unclear how such litigation and other efforts to repeal and replace the ACA will impact the ACA and our business. Complying with any new legislation or reversing changes implemented under the ACA could be time-intensive and expensive, resulting in a material adverse effect on our business.

In addition, other legislative changes have been proposed and adopted since the ACA was enacted. These changes include aggregate reductions to Medicare payments to providers of up to 2% per fiscal year pursuant to the Budget Control Act of 2011, which began in 2013 and will remain in effect through 2030 unless additional Congressional action is taken. The Coronavirus Aid, Relief and Economic Security Act, or CARES Act, which was signed into law in March 2020 and is designed to provide financial support and resources to individuals and businesses affected by

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the COVID-19 pandemic, suspended the 2% Medicare sequester from May 1, 2020 through December 31, 2020, and extended the sequester by one year, through 2030, in order to offset the added expense of the 2020 cancellation. Additionally, it is possible that additional governmental action is taken to address the COVID-19 pandemic, resulting in a material adverse effect on our business. For example, on April 18, 2020, CMS announced that QHP issuers under the ACA may suspend activities related to the collection and reporting of quality data that would have otherwise been reported between May and June 2020 given the challenges healthcare providers are facing responding to the COVID-19 virus.

There also has recently been heightened governmental scrutiny over the manner in which drug manufacturers set prices for their drugs, which has resulted in several U.S. congressional inquiries and proposed and enacted federal and state legislation designed to, among other things, bring more transparency to product pricing, review the relationship between pricing and manufacturer patient programs and reform government program reimbursement methodologies for drug products. At the federal level, the Trump administration's budget proposal for fiscal year 2021 includes a \$135 billion allowance to support legislative proposals seeking to reduce drug prices, increase competition, lower out-of-pocket drug costs for patients and increase patient access to lower-cost generic and biosimilar drugs. On March 10, 2020, the Trump administration sent "principles" for drug pricing to Congress, calling for legislation that would, among other things, cap Medicare Part D beneficiary out-of-pocket pharmacy expenses, provide an option to Medicare Part D beneficiary monthly out-of-pocket expenses, and place limits on pharmaceutical price increases. The Trump administration previously released a "Blueprint" to lower drug prices and reduce out of pocket costs of drugs that contained proposals to increase manufacturer competition, increase the negotiating power of certain federal healthcare programs, incentivize manufacturers to lower the list price of their products and reduce the out-of-pocket costs of drug products paid by consumers. The Department of Health and Human Services, or HHS, has solicited feedback on some of these measures and, at the same, has implemented others under its existing authority. For example, in May 2019, CMS issued a final rule to allow Medicare Advantage plans the option to use step therapy for Part B drugs beginning January 1, 2020, codifying a policy change that was effective January 1, 2019. While some of these and other measures may require additional authorization to become effective, Congress and the Trump administration have each indicated that they would continue to seek new legislative and/or administrative measures to control drug costs. At the state level, legislatures have increasingly passed legislation and implemented regulations designed to control pharmaceutical and biological product pricing, including price or patient reimbursement constraints, discounts, restrictions on certain product access and marketing cost disclosure and transparency measures and, in some cases, designed to encourage importation from other countries and bulk purchasing.

The ACA, as well as other healthcare reform measures that may be adopted in the future, may result in additional reductions in Medicare and other healthcare funding, more rigorous coverage criteria, lower reimbursement and new payment methodologies. This could lower the price that we receive for any approved drug product. Any denial in coverage or reduction in reimbursement from Medicare or other government funded programs may result in a similar denial or reduction in payments from private payors, which may prevent us from being able to generate sufficient revenue, attain profitability or commercialize our product candidates, if approved.

In the European Union, similar political, economic and regulatory developments may affect our ability to profitably commercialize our current or any future products. In addition to continuing pressure on prices, price controls and cost containment measures, legislative developments at the European Union or member state level may result in significant additional requirements or obstacles that may increase our operating costs. In international markets, reimbursement and healthcare payment systems vary significantly by country, and many countries have instituted price ceilings on specific products and therapies. Our future product candidates, if any, might not be considered medically reasonable and necessary for a specific indication or cost-effective by third-party payors, an adequate level of reimbursement might not be available for such product candidates and third-party payors' reimbursement policies might adversely affect our ability to sell any future product candidates profitably.

Some countries require approval of the sale price of a drug before it can be marketed. In many countries, the pricing review period begins after marketing or product licensing approval is granted. In some foreign markets, prescription pharmaceutical pricing remains subject to continuing governmental control even after initial approval is granted. As a result, we might obtain marketing approval for a product candidate in a particular country, but then be subject to

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price regulations that delay the commercial launch of the product candidate, possibly for lengthy time periods, and negatively impact the revenue that are generated from the sale of the product in that country. If reimbursement of such product candidates is unavailable or limited in scope or amount, or if pricing is set at unsatisfactory levels, or if there is competition from lower-priced cross-border sales, our profitability will be negatively affected.

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, our product candidates may lose any marketing approval that may have been obtained and we may not achieve or sustain profitability, which would adversely affect our business.

Our business operations and current and future relationships with investigators, health care professionals, consultants, third-party payors and customers will be subject, directly or indirectly, to federal and state healthcare fraud and abuse laws, false claims laws, health information privacy and security laws and other healthcare laws and regulations. If we are unable to comply, or have not fully complied, with such laws, we could face substantial penalties.

Although we do not currently have any products on the market, if we obtain FDA approval for our product candidates and begin commercializing those products in the United States, our operations may be directly, or indirectly through our prescribers, customers and third-party payors, subject to various U.S. federal and state healthcare laws and regulations, including, without limitation, the U.S. federal Anti-Kickback Statute, the U.S. federal civil and criminal false claims laws and the Physician Payments Sunshine Act and regulations. Healthcare providers, physicians and others play a primary role in the recommendation and prescription of any products for which we obtain marketing approval. These laws may impact, among other things, our current business operations, including our clinical research activities and proposed sales, marketing and education programs and constrain the business of financial arrangements and relationships with healthcare providers, physicians and other parties through which we market, sell and distribute our products for which we obtain marketing approval. In addition, we may be subject to patient data privacy and security regulation by both the U.S. federal government and the states in which we conduct our business. Finally, we may be subject to additional healthcare, statutory and regulatory requirements and enforcement by foreign regulatory authorities in jurisdictions in which we conduct our business. The laws that may affect our ability to operate are described in the following paragraphs:

- The U.S. federal Anti-Kickback Statute prohibits, among other things, persons or entities from knowingly and willfully soliciting, offering, receiving or paying any remuneration (including any kickback, bribe or certain rebates), directly or indirectly, overtly or covertly, in cash or in kind, to induce or reward either the referral of an individual for, or the purchase, lease, order or recommendation of, any good, facility, item or service, for which payment may be made, in whole or in part, under U.S. federal and state healthcare programs such as Medicare and Medicaid. Moreover, the ACA provides that the government may assert that a violation of the federal Anti-Kickback Statute also constitutes a false or fraudulent claim for purposes of the civil False Claims Act.
- The federal civil and criminal false claims, including the civil False Claims Act, or FCA, that can be enforced by private citizens through civil whistleblower or qui tam actions, prohibit individuals or entities from, 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. No specific intent to defraud is required under the civil FCA. The criminal FCA provides for criminal penalties for submitting false claims, including imprisonment and criminal fines.
- The Civil Monetary Penalty Act of 1981 and implementing regulations impose penalties against any person or entity that, among other things, is determined to have presented or caused to be presented a claim to a federal healthcare program that the person knows or should know is for an item or service that was not provided as claimed or is false or fraudulent, or offering or transferring remuneration to a federal healthcare beneficiary that a person knows or should know is likely to influence the beneficiary's decision to order or receive items or services reimbursable by the government from a particular provider or supplier.
- The U.S. federal Health Insurance Portability and Accountability Act of 1996, or HIPAA, imposes criminal and civil liability for, among other things, knowingly and willfully executing, or attempting to execute, a

scheme to defraud any healthcare benefit program or knowingly and willfully falsifying, concealing or covering up a material fact or making any materially false statement, in connection with the delivery of, or payment for, healthcare benefits, items or services. Similar to the U.S. federal Anti-Kickback Statute, a person or entity does not need to have actual knowledge of the statute or specific intent to violate it in order to have committed a violation.

- HIPAA, as amended by the Health Information Technology for Economic and Clinical Health Act of 2009, or HITECH, and its implementing regulations, as amended again by the Modifications to the HIPAA Privacy, Security, Enforcement and Breach Notification Rules Under HITECH and the Genetic Information Nondiscrimination Act and Other Modifications to the HIPAA Rules, commonly referred to as the Final HIPAA Omnibus Rule, published in January 2013, impose certain obligations, including mandatory contractual terms, on covered entities subject to the Final HIPAA Omnibus Rule, *i.e.*, health plans, healthcare clearinghouses and healthcare providers, as well as their business associates that perform certain services for or on their behalf involving the use or disclosure of individually identifiable health information with respect to safeguarding the privacy, security and transmission of individually identifiable health information.
- The U.S. Federal Food, Drug and Cosmetic Act prohibits, among other things, the adulteration or misbranding of drugs, biologics and medical devices.
- The federal Physician Payments Sunshine Act requires applicable manufacturers of covered drugs, medical 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, as defined by such law, and teaching hospitals as well as information regarding ownership and investment interests held by physicians and their immediate family members. Additionally, President Trump signed into law in 2018 the "Substance Use-Disorder Prevention that Promoted Opioid Recovery and Treatment for Patients and Communities Act" which, under the provision entitled "Fighting the Opioid Epidemic with Sunshine," in part, extends the reporting and transparency requirements for physicians under the Physician Payments Sunshine Act to physician assistants, nurse practitioners and other mid-level practitioners, with reporting requirements going into effect in 2022 for payments made in 2021.
- The distribution of pharmaceutical products is subject to additional requirements and regulations, including extensive record-keeping, licensing, price reporting, storage and security requirements intended to prevent the unauthorized sale of pharmaceutical products. Pricing and rebate programs must also 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. Manufacturing, sales, promotion and other activities also are potentially subject to federal and state consumer protection and unfair competition laws.
- Analogous state laws and regulations impose additional obligations, including: state anti-kickback and false claims laws, which may apply to our business practices, including, but not limited to, research, distribution, sales and marketing arrangements and claims involving healthcare items or services reimbursed by any third-party payor, including private insurers; state laws that require pharmaceutical companies to comply with the pharmaceutical industry's voluntary compliance guidelines and the relevant compliance guidance promulgated by the U.S. federal government, or otherwise restrict payments that may be made to healthcare providers and other potential referral sources; state laws and regulations that require drug manufacturers to file reports relating to pricing and marketing information, which requires tracking gifts and other remuneration and items of value provided to healthcare professionals and entities; state and local laws requiring the registration of pharmaceutical sales representatives; and state laws governing the privacy and security of health information in certain circumstances, many of which differ from each other in significant ways and often are not preempted by HIPAA, thus complicating compliance efforts.
- European and other foreign law equivalents of each of the laws also impose legal requirements, including reporting requirements detailing interactions with and payments to healthcare providers.

Ensuring that our internal operations and future business arrangements with third parties comply with applicable healthcare laws and regulations will involve substantial costs. It is possible that governmental authorities will conclude that our business practices do not comply with current or future statutes, regulations, agency guidance or

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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 the laws described above or any other governmental laws and regulations that may apply to us, we may be subject to significant penalties, including civil, criminal and administrative penalties, damages, fines, exclusion from U.S. government funded healthcare programs, such as Medicare and Medicaid, or similar programs in other countries or jurisdictions, disgorgement, imprisonment, contractual damages, reputational harm, diminished profits, additional reporting requirements and oversight, and the delay, reduction, termination or restructuring of our operations. Further, defending against any such actions can be costly and 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. If any of the physicians or other providers or entities with whom we expect to do business is found not to be in compliance with applicable laws, they may be subject to significant criminal, civil or administrative sanctions, including exclusions from government funded healthcare programs and imprisonment. If any of the above occur, it could adversely affect our ability to operate our business and our results of operations.

If we, our employees, independent contractors, principal investigators, consultants, vendors or agents acting on our behalf fail to comply with healthcare laws and regulatory requirements, we could be subject to fines, penalties or enforcement actions, or incur costs that could have a material adverse effect on our business.

We are exposed to the risk of employee fraud or other misconduct as well as risks of noncompliance by contractors or agents acting on our behalf. Misconduct by employees and independent contractors, such as principal investigators, consultants and vendors, could include intentional failures to comply with FDA regulations, to provide accurate information to the FDA, to comply with health care fraud and abuse laws, to report financial information or data accurately or to disclose unauthorized activities to us. In particular, research, sales, marketing and business arrangements in the health care industry are subject to extensive laws intended to prevent fraud, misconduct, kickbacks, self-dealing and other abusive practices. These laws may restrict or prohibit a wide range of research, pricing, discounting, marketing and promotion, sales commission, customer incentive programs and other business arrangements. Employee and independent contractor misconduct could also involve the improper use of information obtained in the course of clinical trials, which could result in regulatory sanctions and serious harm to our reputation. We have adopted a written code of business conduct and ethics, but it is not always possible to identify and deter employee or independent contractor 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, exclusion from participation in government-funded healthcare programs, or other sanctions.

If we do not comply with laws regulating the protection of the environment and health and human safety, our business could be adversely affected.

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 research and development involve, and may in the future involve, the use of potentially hazardous materials and chemicals. Our operations may produce hazardous waste products. Although we believe that our safety procedures for handling and disposing of these materials comply with the standards mandated by local, state and federal laws and regulations, the risk of accidental contamination or injury from these materials cannot be eliminated. If an accident occurs, we could be held liable for resulting damages, which could be substantial. We are also subject to numerous environmental, health and workplace safety laws and regulations and fire and building codes, including those governing laboratory procedures, exposure to blood-borne pathogens, use and storage of flammable agents and the handling of biohazardous materials. Although we maintain workers' compensation insurance as prescribed by the State of California to cover us for costs and expenses, we may incur due to injuries to our employees resulting from the use of these 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. Additional laws and regulations affecting our operations may be adopted in the future. Current or future laws and regulations may impair our research, development or commercialization efforts. We may incur substantial costs to comply with, and substantial fines or penalties if we violate, any of these laws or regulations.

Inadequate funding for the FDA, the SEC and other government agencies could hinder their ability to hire and retain key leadership and other personnel, prevent new products and services from being developed or commercialized in a timely manner or otherwise prevent those agencies from performing normal business functions on which the operation of our business may rely, which could negatively impact our business.

The ability of the FDA to review and approve new products can be affected by a variety of factors, including government budget and funding levels and the ability to hire and retain key personnel. Average review times at the agency have fluctuated in recent years as a result. In addition, government funding of the Securities and Exchange Commission, or SEC, and other government agencies on which our operations may rely, including those that fund research and development activities is subject to the political process, which is inherently fluid and unpredictable. Disruptions at the FDA and other agencies, such as recent furloughs or government shutdowns, may also slow the time necessary for new drugs to be reviewed and/or approved by necessary government agencies, which would adversely affect our business.

Our business activities may be subject to the Foreign Corrupt Practices Act and similar anti-bribery and anti-corruption laws, as well as U.S. and certain foreign export controls, trade sanctions and import laws and regulations, all of which can subject us to criminal liability and other serious consequences for violations.

Our business activities may be subject to the U.S. Foreign Corrupt Practices Act, or FCPA, and similar anti-bribery or anti-corruption laws, regulations or rules of other countries in which we operate. These laws generally prohibit companies and their employees and third party business partners, representatives and agents from engaging in corruption and bribery, including offering, promising, giving or authorizing the provision of anything of value, either directly or indirectly, to a government official or commercial party in order to influence official action, direct business to any person, gain any improper advantage, or 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 government officials, including officials of non-U.S. governments.

Additionally, in many countries, healthcare providers are employed by the government, and the purchasers of biopharmaceuticals are government entities. As a result, our dealings with these providers and purchasers are subject to regulation and such healthcare providers and employees of such purchasers may be considered "foreign officials" as defined in the FCPA. Recently, the SEC and Department of Justice have increased their FCPA enforcement activities with respect to biotechnology companies. In addition to our own employees, we leverage third parties to conduct our business abroad, such as obtaining government licenses and approvals. We and our third-party business partners, representatives and agents may have direct or indirect interactions with officials and employees of government agencies, state-owned or affiliated entities and we may be held liable for the corrupt or other illegal activities of our employees, our third-party business partners, representatives and agents, even if we do not explicitly authorize such activities. There is no certainty that our employees or the employees of our third-party business partners, representatives and agents 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 whistleblower complaints, adverse media coverage, investigations, loss of export privileges, debarment from U.S. government contracts, substantial diversion of management's attention, significant legal fees and fines, severe criminal or civil sanctions against us, our officers or our employees, disgorgement and other penalties and remedial measures 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, financial condition and stock price.

In addition, our products may be subject to U.S. and foreign export controls, trade sanctions and import laws and regulations. Governmental regulation of the import or export of our products, or our failure to obtain any required import or export authorization for our products, when applicable, could harm our business. Furthermore, U.S. export control laws and economic sanctions prohibit the provision of certain products and services to countries, governments and persons targeted by U.S. sanctions. If we fail to comply with export and import regulations and such economic sanctions, penalties could be imposed, including fines and/or denial of certain export privileges.

Data collection under European and U.S. laws is governed by restrictive regulations addressing the collection, use, processing and, in the case of Europe, cross-border transfer, of personal information.

We may collect, process, use or transfer personal information from individuals located in the European Union in connection with our business, including in connection with conducting clinical trials in the European Union. Additionally, if any of our product candidates are approved, we may seek to commercialize those products in the European Union. The collection and use of personal health data in the European Union is governed, in part, by the provisions of the General Data Protection Regulation (EU) 2016/679, or the GDPR. This legislation imposes requirements relating to having legal bases for processing personal information relating to identifiable individuals and transferring such information outside of the European Economic Area, including to the United States, providing details to those individuals regarding the processing of their personal information, keeping personal information secure, having data processing agreements with third parties who process personal information, responding to individuals' requests to exercise their rights in respect of their personal information, reporting security breaches involving personal data to the competent national data protection authority and affected individuals, appointing data protection officers, conducting data protection impact assessments and record-keeping. The GDPR imposes additional responsibilities and liabilities in relation to personal data that we process, and we may be required to put in place additional mechanisms ensuring compliance. Failure to comply with the requirements of the GDPR and related national data protection laws of the member states of the European Union may result in substantial fines, other administrative penalties and civil claims being brought against us, which could have a material adverse effect on our business, financial condition and results of operations.

In addition, U.S. states are adopting new laws or amending existing laws, requiring attention to frequently changing regulatory requirements related to personal information. For example, California enacted the California Consumer Privacy Act, or the CCPA, in 2018, which took effect on January 1, 2020 and has been dubbed the first "GDPR-like" law in the United States. The CCPA gives California residents expanded rights to access and delete their personal information, opt out of certain personal information sharing and receive detailed information about how their personal information is used by requiring covered companies to provide new disclosures to California consumers (as that term is broadly defined and which can include any of our current or future employees who may be California residents or any other California residents whose data we collect or process) and provide such residents new ways to opt out of certain sales of personal information. The CCPA provides for civil penalties for violations, as well as a private right of action for data breaches that is expected to increase data breach litigation. As we expand our operations, preclinical studies and clinical trials, the CCPA may increase our compliance costs and potential liability. Other states are beginning to consider and pass similar laws.

Privacy and data security laws and regulations are not consistent across jurisdictions, and they may impose conflicting or uncertain obligations. Compliance with these and any other applicable privacy and data security laws and regulations is a rigorous, costly and time-intensive process, and we may be required to put in place additional mechanisms ensuring compliance with new and changing data protection obligations under these laws and regulations. Actual or alleged noncompliance with any such laws and regulations may lead to regulatory investigations, enforcement actions, claims and litigation, and if we fail to comply with any such laws or regulations, we may face significant fines and penalties. Any of these could adversely affect our business, financial condition and results of operations.

Risks Related to Intellectual Property

If we are unable to obtain, maintain and enforce patent protection for our product candidates and related technology, our business could be materially harmed.

Our strategy depends on our ability to identify, seek, obtain and maintain patent protection for our product candidates and other research and development discoveries. Our patent portfolio is relatively small compared to many large and more established pharmaceutical and biotechnology companies. As our patent portfolio grows, we expect patent protection will continue to be an important part of our strategy. The patent protection process is expensive and time-consuming, and we may not be able to file and prosecute all necessary or desirable patent applications or maintain and enforce any patents that may issue from such patent applications, at a reasonable cost or in a timely manner or in all jurisdictions where protection may be commercially advantageous. It is also possible

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that we will fail to identify patentable aspects of our research and development discoveries before it is too late to obtain patent protection. 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 have licensed from third parties. Therefore, our in-licensed patents and patent applications may not be prosecuted and enforced in a manner consistent with the best interests of our business. Our patent applications cannot be enforced against third parties practicing the technology claimed in such applications unless, and until, patents issue from such applications, and then only to the extent the issued claims cover the technology. The patent applications that we own or in-license may fail to result in issued patents with claims that cover our current and future product candidates in the United States or in foreign countries or may fail to effectively prevent third parties from commercializing competitive product candidates.

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. We may be subject to a third-party pre-issuance submission of prior art to the U.S. Patent and Trademark Office, or USPTO, and such prior art may affect the scope of any claims we ultimately get allowed or it may prevent our patent applications from issuing as patents. Further, the issuance of a patent does not ensure that it is valid or enforceable, nor is the issuance conclusive as to inventorship or the scope of any claims. Third parties may challenge the validity, enforceability or scope of our issued patents or claim that they should be inventors on such patents, and such patents may be narrowed, invalidated, circumvented or deemed unenforceable and such third parties may gain rights to such patents. We could also become involved in reexamination, *inter partes* review, post-grant review, opposition or derivation proceedings challenging our patent rights or the patent rights of others.

In addition, changes in law may introduce uncertainty in the enforceability or scope of patents owned by us. If our patents are narrowed, invalidated or held unenforceable, third parties may be able to commercialize our technology or products and compete directly with us without payment to us. There is no assurance that all potentially relevant prior art relating to our patents and patent applications has been found, and such prior art could potentially invalidate one or more of our patents or prevent a patent from issuing from one or more of our pending patent applications. There is also no assurance that there is no prior art that may ultimately be found to affect the validity or enforceability of a claim. Furthermore, even if our patents are unchallenged, they may not adequately protect our intellectual property, provide exclusivity for our product candidates, prevent others from designing around our claims or provide us with a competitive advantage. The legal systems of certain countries do not favor the aggressive enforcement of patents, and the laws of foreign countries may not allow us to protect our inventions with patents to the same extent as the laws of the United States. Because patent applications in the United States and many foreign jurisdictions are typically not published until 18 months after filing, or in some cases not at all, and because publications of discoveries in scientific literature lag behind actual discoveries, we cannot be certain that we were the first to make the inventions claimed in our issued patents or pending patent applications, or that we were the first to file for protection of the inventions set forth in our patents or patent applications. As a result, we may not be able to obtain or maintain protection for certain inventions.

For all of the foregoing reasons, the issuance, validity, enforceability, scope and commercial value of our patents in the United States and in foreign countries cannot be predicted with certainty and, as a result, any patents that we own or license may not provide sufficient protection against competitors. We may not be able to obtain or maintain patent protection from our pending patent applications, from those we may file in the future, or from those we may license from third parties. Moreover, even if we are able to obtain patent protection, such patent protection may be of insufficient scope to achieve our business objectives. In addition, the issuance of a patent does not give us the right to practice the patented invention. Third parties may have blocking patents that could prevent us from marketing our own patented product and practicing our own patented technology.

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

Filing, prosecuting and defending patents on product candidates in all countries throughout the world would be prohibitively expensive, and our intellectual property rights in some countries outside the United States can be less extensive than those 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 may not be able to prevent third parties from practicing our inventions in all countries outside the United States, or from selling or

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importing products made using our inventions in and into the United States or other jurisdictions. Competitors may use our technologies to develop their own products in jurisdictions where we have not obtained patent protection and further, may export otherwise infringing products to territories where we have patent protection, but enforcement is not as strong as that in the United States. These products may compete with our current or future products, if any, and our patents or other intellectual property rights may not be valid 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, trade secrets and other intellectual property protection, particularly those relating to biotechnology products, which could make it difficult for us to stop the infringement of our patents or marketing of competing products in violation of our proprietary rights generally. Proceedings to enforce our patent rights in foreign jurisdictions could result in substantial costs and divert our efforts and attention from other aspects of our business, could put our patents at risk of being invalidated or interpreted narrowly and our patent applications at risk of not issuing and could provoke third parties to assert claims against us. We may not prevail in any lawsuits that we initiate, and the damages or other remedies awarded, if any, may not be commercially meaningful. Accordingly, our efforts to enforce our intellectual property rights around the world may be inadequate to obtain a significant commercial advantage from the intellectual property that we develop or license.

Additionally, the requirements for patentability may differ in certain countries. For example, in India, unlike the United States, there is no link between regulatory approval of a drug and its patent status, and patenting of medical uses of a claimed drug are prohibited. In addition to India, certain countries in Europe and other countries, including China, have compulsory licensing laws under which a patent owner may be compelled to grant licenses to third parties. In those countries, we and our licensors may have limited remedies if patents are infringed or if we or our licensors are compelled to grant a license to a third party, which could materially diminish the value of those patents. This could limit our potential revenue opportunities. Accordingly, our efforts to enforce intellectual property rights around the world may be inadequate to obtain a significant commercial advantage from the intellectual property that we own or license.

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

Periodic maintenance fees, renewal fees, annuity fees and various other governmental fees on patents or applications will be due to the USPTO and various foreign patent offices at various points over the lifetime of our patents or applications. We have systems in place to remind us to pay these fees, and we rely on our outside patent annuity service to pay these fees automatically when due, but we must notify the provider of any new patents or applications. Additionally, the USPTO and various foreign patent offices require compliance with many procedural, documentary, fee payment and other similar provisions during the patent application process. We employ reputable law firms and other professionals to help us comply, and in many cases, an inadvertent lapse can be cured by payment of a late fee or by other means in accordance with rules applicable to the particular jurisdiction. However, 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. If such an event were to occur, it could have a material adverse effect on our business.

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

The patent positions of biotechnology companies can be highly uncertain and involve complex legal and factual questions for which important legal principles remain unresolved. Changes in either the patent laws or in the interpretations of patent laws in the United States and other countries may diminish the value of our intellectual property. We cannot predict the breadth of claims that may be allowed or found to be enforceable in our patents or in third-party patents. The United States has enacted and implemented wide-ranging patent reform legislation. Further, recent U.S. Supreme Court rulings have either narrowed the scope of patent protection available in certain circumstances or weakened the rights of patent owners in certain situations. In addition to increasing uncertainty with regard to our ability to obtain patents in the future, this combination of events has created uncertainty with respect to the validity, scope and value of patents, once obtained.

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For our U.S. patent applications containing a priority claim after March 16, 2013, there is a higher level of uncertainty in the patent law. In September 2011, the Leahy-Smith America Invents Act, also known as the America Invents Act, or AIA, was signed into law. The AIA includes a number of significant changes to U.S. patent law, including provisions that affect the way patent applications are prosecuted and may also affect patent litigation. The AIA and its implementation may 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 an adverse effect on our business. An important change introduced by the AIA is that, as of March 16, 2013, the United States transitioned to a “first-to-file” system for deciding which party should be granted a patent when two or more patent applications are filed by different parties disclosing or claiming the same invention. A third party that has filed, or does file a patent application in the USPTO after March 16, 2013 but before us, could be awarded a patent covering a given invention, even if we had made the invention before it was made by the third party. This requires us to be cognizant going forward of the time from invention to filing of a patent application.

Among some of the other changes introduced by the AIA are changes that limit where a patentee may file a patent infringement suit and providing opportunities for third parties to file third party submissions of prior art to the USPTO during patent prosecution and to challenge any issued patent in the USPTO (e.g., via post-grant reviews or *inter partes* reviews). Because of a lower evidentiary standard in USPTO proceedings compared to the evidentiary standard in U.S. federal court necessary to invalidate a patent claim, a third party could potentially provide evidence in a USPTO proceeding sufficient for the USPTO to hold a claim invalid even though the same evidence would be insufficient to invalidate the claim if first presented in a district court action. Accordingly, a third party may attempt to use the USPTO procedures to invalidate our patent claims that would not have been invalidated if first challenged by the third party as a defendant in a district court action.

Depending on decisions by the U.S. Congress, the U.S. federal courts, the USPTO or similar authorities in foreign jurisdictions, the laws and regulations governing patents could change in unpredictable ways that may weaken our and our licensors' ability to obtain new patents or to enforce existing patents we and our licensors or partners may obtain in the future.

Our patents covering one or more of our product candidates could be found invalid or unenforceable if challenged.

Any of our intellectual property rights could be challenged or invalidated despite measures we take to obtain patent and other intellectual property protection with respect to our product candidates and proprietary technology. For example, if we were to initiate legal proceedings against a third party to enforce a patent covering one of our product candidates, the defendant could counterclaim that our patent is invalid and/or unenforceable. In patent litigation in the United States and in some other jurisdictions, defendant counterclaims alleging invalidity and/or unenforceability are commonplace. Grounds for a validity challenge could be an alleged failure to meet any of several statutory requirements, for example, lack of novelty, obviousness or non-enablement. Grounds for an unenforceability assertion could be an allegation that someone connected with prosecution of the patent withheld material information from the USPTO, or the applicable foreign counterpart, or made a misleading statement, during prosecution. A litigant or the USPTO itself could challenge our patents on this basis even if we believe that we have conducted our patent prosecution in accordance with the duty of candor and in good faith. The outcome following such a challenge is unpredictable.

With respect to challenges to the validity of our patents, for example, there might be invalidating prior art, of which the patent examiner and we were unaware during prosecution. If a defendant were to prevail on a legal assertion of invalidity and/or unenforceability, we would lose at least part, and perhaps all, of the patent protection on a product candidate. Even if a defendant does not prevail on a legal assertion of invalidity and/or unenforceability, our patent claims may be construed in a manner that would limit our ability to enforce such claims against the defendant and others. The cost of defending such a challenge, particularly in a foreign jurisdiction, and any resulting loss of patent protection could have a material adverse impact on one or more of our product candidates and our business.

Enforcing our intellectual property rights against third parties may also cause such third parties to file other counterclaims against us, which could be costly to defend, particularly in a foreign jurisdiction, and could require us to pay substantial damages, cease the sale of certain products or enter into a license agreement and pay royalties (which may not be possible on commercially reasonable terms or at all). Any efforts to enforce our intellectual property rights are also likely to be costly and may divert the efforts of our scientific and management personnel.

Patent terms may be inadequate to protect our competitive position on our product candidates for an adequate amount of time.

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. non-provisional 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, we may be open to competition from competitive products, including biosimilars. Given 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.

Patent protection, prosecution, assertion and defense for some of our product candidates may be dependent on third parties.

There may be times in the future when certain patents that relate to our product candidates or any approved products are controlled by our licensees or licensors, such as with respect to our Stanford license agreements. Although we may, under such arrangements, have rights to consult with our strategic partners on actions taken as well as back-up rights of prosecution and enforcement, we have in the past and may in the future relinquish rights to prosecute and maintain patents and patent applications within our portfolio as well as the ability to assert such patents against infringers. If any current or future licensee or licensor with rights to prosecute, assert or defend patents related to our product candidates fails to appropriately prosecute and maintain patent protection for patents covering any of our product candidates, or if patents covering any of our product candidates are asserted against infringers or defended against claims of invalidity or unenforceability in a manner which adversely affects such coverage, our ability to develop and commercialize any such product candidate may be adversely affected and we may not be able to prevent competitors from making, using and selling competing products.

If we are unable to protect the confidentiality of our trade secrets and proprietary information or obtain proper assignment of such intellectual property, the value of our technology and products could be adversely affected.

In addition to patent protection, we also rely on other proprietary rights, including protection of trade secrets and other proprietary information. Trade secrets and know-how can be difficult to protect. Trade secrets and know-how can also in some instances be independently derived or reverse-engineered by a third party. We maintain the confidentiality of trade secrets and proprietary information in part by entering into confidentiality agreements with our employees, consultants, strategic partners and others upon the commencement of their relationships with us. These agreements require that all confidential information developed by the individual or made known to the individual by us during the course of the individual's relationship with us be kept confidential and not disclosed to third parties. Our agreements with employees and our personnel policies also provide that any inventions conceived by the individual in the course of rendering services to us shall be our exclusive property. However, we may not obtain these agreements in all circumstances, and even when we obtain these agreements, individuals with whom we have these agreements may not comply with their terms. Any of the parties to these agreements may breach such agreements and disclose our proprietary information, including our trade secrets, and we may not be able to obtain adequate remedies for such breaches. In the event of unauthorized use or disclosure of our trade secrets or proprietary information, these agreements, even if obtained, may not provide meaningful protection, particularly for our trade secrets or other confidential information. We may also become involved in inventorship disputes relating to inventions and patents developed by our employees or consultants under such agreements. To the extent that our employees, consultants or contractors use technology or know-how owned by third parties in their work for us, disputes may arise between us and those third parties as to the rights in related inventions. To the extent that an individual who is not obligated to assign rights in intellectual property to us is rightfully an inventor of intellectual property, we may need to obtain an assignment or a license to that intellectual property from that individual, or a third party or from that individual's assignee. Such assignment or license may not be available on commercially reasonable terms or at all.

Enforcing a claim that a party illegally disclosed or misappropriated a trade secret is difficult, expensive and time-consuming and the outcome is unpredictable. In addition, some courts in the United States and certain foreign

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jurisdictions are less willing or unwilling to protect trade secrets. The disclosure of our trade secrets would impair our competitive position and may materially harm our business, financial condition and results of operations. Costly and time-consuming litigation could be necessary to enforce and determine the scope of our proprietary rights, and failure to maintain trade secret protection could adversely affect our competitive business position. In addition, if any of our trade secrets were to be lawfully obtained or independently developed by a competitor, we would have no right to prevent such third party, or those to whom they communicate such technology or information, from using that technology or information to compete with us. If any of our trade secrets were to be disclosed to or independently developed by a competitor or if we otherwise lose protection for our trade secrets or proprietary know-how, the value of this information may be greatly reduced, and our business and competitive position could be harmed. Adequate remedies may not exist in the event of unauthorized use or disclosure of our proprietary information.

We may become involved in lawsuits to protect or enforce our patents and trade secrets, which could be expensive, time-consuming and unsuccessful.

Third parties may seek approval to market their own products similar to or otherwise competitive with our product candidates or biosimilar versions of any approved product candidates. In these circumstances, we may need to defend or assert our patents, including by filing lawsuits alleging patent infringement. If we were to initiate legal proceedings against a third party to enforce a patent covering our product candidates, the defendant could counterclaim that the patent covering our product candidate is invalid and/or unenforceable. In patent litigation in the United States, defendant counterclaims alleging invalidity and/or unenforceability are commonplace. Grounds for an invalidity challenge could be an alleged failure to meet any of several statutory requirements, including lack of novelty, obviousness, written description or enablement. Grounds for an unenforceability assertion could be an allegation that someone connected with prosecution of the patent withheld relevant information from the USPTO, or made a misleading statement, during prosecution. The outcome following legal assertions of invalidity and unenforceability is unpredictable. In any of these types of proceedings, a court or agency with jurisdiction may find our patents invalid or unenforceable. Even if we have valid and enforceable patents, these patents still may not provide protection against competing products sufficient to achieve our business objectives.

Even after they have issued, our patents and any patents that we license may be challenged, narrowed, invalidated or circumvented. If our patents are invalidated or otherwise limited or will expire prior to the commercialization of our product candidates, other companies may be better able to develop products that compete with ours, which could adversely affect our competitive business position, business prospects and financial condition. In addition, if the breadth or strength of protection provided by our patents and patent applications is threatened, it could dissuade companies from collaborating with us to license, develop or commercialize current or future product candidates.

The following are examples of litigation and other adversarial proceedings or disputes that we could become a party to involving our patents or patents licensed to us:

- we may initiate litigation or other proceedings against third parties to enforce our patent and trade secret rights;
- third parties may initiate litigation or other proceedings seeking to invalidate patents owned by or licensed to us or to obtain a declaratory judgment that their product or technology does not infringe our patents or patents licensed to us;
- third parties may initiate opposition or other proceedings challenging the validity or scope of our patent rights, requiring us and/or licensors to participate in such proceedings to defend the validity and scope of our patents;
- there may be a challenge or dispute regarding inventorship or ownership of patents or trade secrets currently identified as being owned by or licensed to us; or
- third parties may seek approval to market biosimilar versions of our future approved products prior to the expiration of relevant patents owned by or licensed to us under the Biologics Price Competition and Innovation Act of 2009, requiring us to defend our patents, including by filing lawsuits alleging patent infringement.

Any litigation or other proceedings would be costly and could affect our results of operations and divert the attention of our management and scientific personnel. Some of our competitors may be able to sustain the cost of such

litigation and proceedings more effectively than we can because of their substantially greater resources. There is a risk that a court would decide that we are infringing the third party's patents and would order us to stop the activities covered by the patents. In that event, we may not have a viable alternative to the technology protected by the patent and may need to halt work on the affected product candidate or cease commercialization of an approved drug. In addition, there is a risk that a court will order us to pay third party damages or some other monetary award, depending upon the jurisdiction. An adverse outcome in any litigation or other proceeding could subject us to significant liabilities to third parties, potentially including treble damages and attorneys' fees if we are found to have willfully infringed, and we may be required to cease using the technology that is at issue or to license the technology from third parties. We may not be able to obtain any required licenses on commercially acceptable terms or at all. We may not be able to prevent, alone or with our licensors, infringement or misappropriation of our intellectual property rights, particularly in countries where the laws may not protect those rights as fully as in the United States. Any litigation or other proceedings to enforce our intellectual property rights may fail, and even if successful, may result in substantial costs and distract our management and other employees.

In addition, because of the substantial amount of discovery required in connection with intellectual property litigation, there is a risk that some of our confidential information could be compromised by disclosure during this type of litigation. There could also be public announcements of the results of hearings, motions or other interim proceedings or developments. If securities analysts or investors perceive these results to be negative, it could have an adverse effect on the price of our common stock. In addition, any uncertainties resulting from the initiation and continuation of any litigation could have a material adverse effect on our ability to raise additional funds or on our business, results of operations, financial condition and prospects. Any of these outcomes could have a material adverse effect on our business.

We may be subject to claims that we or our employees or consultants have wrongfully used or disclosed alleged trade secrets or other proprietary information of our employees' or consultants' former employers or their clients.

We employ individuals who were previously or concurrently employed at research institutions and/or other biotechnology or pharmaceutical companies, including our competitors or potential competitors. We may be subject to claims that these employees, or we, have inadvertently or otherwise used or disclosed trade secrets or other proprietary information of their former employers, or that patents and applications we have filed to protect inventions of these employees, even those related to one or more of our product candidates, are rightfully owned by their former or concurrent employer. Litigation may be necessary to defend against these claims. If we fail in defending such claims, in addition to paying monetary damages, trade secrets or other proprietary information 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 license may not be available on commercially reasonable terms or at all. A loss of key research personnel or their work product could limit our ability to commercialize, or prevent us from commercializing, our current or future technologies or product candidates, which could materially harm our business. Even if we are successful in defending against these claims, litigation would expose us to the risk described above under "—We may become involved in lawsuits to protect or enforce our patents and trade secrets, which could be expensive, time consuming and unsuccessful."

Our commercial success depends significantly on our ability to operate without infringing the patents and other proprietary rights of third parties.

Our success will depend in part on our ability to operate without infringing the proprietary rights of third parties. Other entities may have or obtain patents or proprietary rights that could limit our ability to make, use, sell, offer for sale or import our future approved products or impair our competitive position. Our research, development and commercialization activities may be subject to claims that we infringe or otherwise violate patents or other intellectual property rights owned or controlled by third parties.

We are aware of third-party patents and patent applications containing claims in the immuno-oncology field based on scientific approaches that are the same as or similar to our approach, including with respect to the targeting of the CD47 and signal regulatory protein alpha, or SIRP α , pathways, and others that are based on entirely different approaches. These patents and applications could potentially be construed to cover our product candidates and their use. As the biotechnology industry expands and more patents are issued, the risk increases that we may be subject

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to claims of infringement of the patent rights of third parties. There is no assurance that there are not third-party patents or patent applications of which we are aware, but which we do not believe are relevant to our business, which may, nonetheless, ultimately be found to limit our ability to make, use, sell, offer for sale or import our future approved products or impair our competitive position.

Third parties may have or obtain valid and enforceable patents or proprietary rights that could block us from developing product candidates. These patents may not expire before we receive any marketing approval for our product candidates, and they could delay the commercial launch of one or more future product candidates. If our product candidates were to be found to infringe any such patents, and we were unable to invalidate those patents, or if licenses for them are not available on commercially reasonable terms or at all, our business, financial condition and results of operations could be materially harmed. Furthermore, even if a license is available, it may be non-exclusive, which could result in our competitors gaining access to the same intellectual property. Our failure to maintain a license to any technology that we require may also materially harm our business, financial condition and results of operations, and we would be exposed to a threat of litigation.

Any litigation resulting from claims of infringement or failure to license patents and proprietary rights of others would expose us to the risk described above under “—We may become involved in lawsuits to protect or enforce our patents and trade secrets, which could be expensive, time consuming and unsuccessful.” Any of the aforementioned threats to our competitive advantage could have a material adverse effect on our business.

Our intellectual property rights will not necessarily provide us with competitive advantages.

The degree of future protection afforded by our intellectual property rights is uncertain because intellectual property rights have limitations and may not adequately protect our business or permit us to maintain our competitive advantage. The following examples are illustrative:

- others may be able to make products that are similar to our product candidates but that are not covered by the claims of the patents that we own or have exclusively licensed;
- others may independently develop similar or alternative technologies without infringing our intellectual property rights;
- issued patents that we own or have exclusively licensed may not provide us with competitive advantages, or may be held invalid or unenforceable, as a result of legal challenges by our competitors;
- we may obtain patents for product candidates many years before we obtain marketing approval for such product candidates and because patents have a limited life, which may begin to run prior to the commercial sale of the related product, the commercial value of our patents may be limited;
- our competitors might conduct research and development activities in countries where we do not have patent rights and then use the information learned from such activities to develop competitive products for sale in our major commercial markets;
- we may fail to develop additional proprietary technologies that are patentable;
- the laws of certain foreign countries may not protect our intellectual property rights to the same extent as the laws of the United States, or we may fail to apply for or obtain adequate intellectual property protection in all the jurisdictions in which we operate; and
- the patents of others may have an adverse effect on our business, for example by preventing us from marketing one or more of our product candidates for one or more indications.

Any of the aforementioned threats to our competitive advantage could have a material adverse effect on our business.

We will need to obtain FDA approval for any proposed product candidate names, and any failure or delay associated with product candidate name approval may adversely affect our business.

Any proprietary name or trademark we intend to use for our product candidates will require approval from the FDA regardless of whether we have secured a formal trademark registration from the USPTO. The FDA typically conducts a review of proposed product candidate names, including an evaluation of the potential for confusion with other product names and potential pharmacy dispensing errors. The FDA may also object to a product name if it believes

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the name inappropriately implies certain medical claims or contributes to an overstatement of efficacy. If the FDA objects to any product candidate names we propose, we may be required to adopt an alternative name for our product candidates. If we adopt an alternative name, we would lose the benefit of any existing trademark applications for such product candidate and may be required to expend significant additional resources in an effort to identify a suitable product name that would qualify under applicable trademark laws, not infringe the existing rights of third parties and be acceptable to the FDA. We may be unable to build a successful brand identity for a new trademark in a timely manner or at all, which would limit our ability to commercialize our product candidates.

Our rights to develop and commercialize our product candidates may be subject, in part, to the terms and conditions of agreements with others.

Our current agreements do not, and future agreements we may enter into in the future may not, provide exclusive rights to use certain intellectual property and technology retained by a collaborator in all relevant fields of use and in all territories in which we may wish to develop or commercialize our technology and products in the future. As a result, we may not be able to prevent competitors or other third parties from developing and commercializing competitive products that utilize technology retained by such collaborators to the extent such products are not also covered by our intellectual property.

We may need to obtain additional intellectual property rights from others to advance our research or allow commercialization of product candidates we may develop. We may be unable to obtain additional intellectual property rights at a reasonable cost or on reasonable terms, if at all. In that event, we may be required to expend significant time and resources to redesign our technology, product candidates or the methods for manufacturing them or to develop or license replacement technology, all of which may not be feasible on a technical or commercial basis. If we are unable to do so, we may be unable to develop or commercialize the affected product candidates, which could harm our business, financial condition, results of operations and prospects significantly. We cannot provide any assurances that third-party patents do not exist which might be enforced against our current technology, manufacturing methods, product candidates or future methods or products resulting in either an injunction prohibiting our manufacture or future sales, or, with respect to our future sales, an obligation on our part to pay royalties and/or other forms of compensation to third parties, which could be significant.

Furthermore, our current or our future collaborators' patents may be subject to a reservation of rights by one or more third parties. The U.S. government may have certain rights to resulting intellectual property. When new technologies are developed with U.S. government funding, the U.S. government generally obtains certain rights in any resulting patents, including a non-exclusive license authorizing the U.S. government to use the invention or to have others use the invention on its behalf. The U.S. government's rights may also permit it to disclose the funded inventions and technology to third parties and to exercise march-in rights to use or allow third parties to use the technology developed using U.S. government funding. The U.S. government may exercise its march-in rights if it determines that action is necessary because we fail to achieve the practical application of the government funded technology, or because action is necessary to alleviate health or safety needs, to meet requirements of federal regulations, or to give preference to U.S. industry. In addition, our rights in such inventions may be subject to certain requirements to manufacture products embodying such inventions in facilities in the United States in certain circumstances and if this requirement is not waived. Any exercise by the U.S. government of such rights or by any third-party of its reserved rights could have a material adverse effect on our competitive position, business, financial condition, results of operations and prospects.

If we fail to comply with our obligations in agreements under which we option or license intellectual property rights from collaborators or licensors or otherwise experience disruptions to our business relationships with future collaborators or licensors, we could lose intellectual property rights that are important to our business.

Our current agreements do and our future agreements may impose various economic, development, diligence, commercialization and other obligations on us. Such agreements may also require us to meet development timelines, or to exercise commercially reasonable efforts to develop and commercialize licensed products. It might be concluded that we have materially breached our obligations under such agreements and licensors or collaborators might therefore terminate or seek damages under the agreements, thereby removing or limiting our ability to develop and commercialize products and technology covered by these agreements. Termination of these agreements could

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cause us to lose the rights to certain patents or other intellectual property, or the underlying patents could fail to provide the intended exclusivity, and competitors or other third parties may have the freedom to seek regulatory approval of, and to market, products similar to or identical to ours and we may be required to cease our development and commercialization of certain of our product candidates. Any of the foregoing could have a material adverse effect on our competitive position, business, financial conditions, results of operations and growth prospects.

Moreover, disputes may arise regarding intellectual property subject to a collaboration agreement, including:

- the scope of the option or license rights granted under the agreement and other interpretation-related issues;
- the extent to which our technology and processes infringe on intellectual property of the collaborator that is not subject to the option or license rights granted under the agreement;
- the sublicensing of patent and other rights under our collaborative development relationships;
- our diligence obligations under the 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 collaborators and us and our other partners; and
- the priority of invention of patented technology.

We may enter into agreements to option or license intellectual property or technology from third parties that are complex, and certain provisions in such agreements may be susceptible to multiple interpretations. The resolution of any contract interpretation disagreement that may arise could narrow what we believe to be the scope of our rights to the relevant intellectual property or technology, or increase what we believe to be our financial or other obligations under the relevant agreement, either of which could have a material adverse effect on our business, financial condition, results of operations and growth prospects. Moreover, if disputes over intellectual property that we have optioned or licensed prevent or impair our ability to maintain such arrangements on commercially acceptable terms, we may be unable to successfully develop and commercialize the affected product candidates, which could have a material adverse effect on our business, financial conditions, results of operations and growth prospects.

Risks Related to Our Operations

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.

As of April 1, 2020, we had 23 full-time employees, including 15 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, scientific, technical, medical, 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 ALX148 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 ALX148 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 specific 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

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may be extended, delayed or terminated, and we may not be able to obtain marketing approval of ALX148 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 ALX148 and other future product candidates and, accordingly, may not achieve our research, development and commercialization goals.

Our product candidates are based on a novel technology, which makes it difficult to predict the time and cost of product candidate development.

We have concentrated our product research and development efforts on our novel immuno-oncology approach, and our future success depends on the successful development of our lead product candidate, ALX148, and any future product candidates that we develop. There can be no assurance that any development problems we experience in the future related to our novel immuno-oncology approach will not cause significant delays or unanticipated costs or that such development problems can be solved. We may also experience delays in developing a sustainable, reproducible and scalable manufacturing process or transferring that process to commercial partners, which may prevent us from completing our clinical trials or commercializing our product candidates on a timely or profitable basis, if at all.

We are highly dependent on our key personnel, and if we are not successful in attracting, motivating and retaining highly qualified personnel, we may not be able to successfully implement our business strategy.

Our ability to compete in the highly competitive biotechnology and life science industries depends upon our ability to attract, motivate and retain highly qualified managerial, scientific and medical personnel. We are highly dependent on our management and our scientific, technical, business and medical personnel. The loss of the services provided by any of our executive officers, other key employees and other scientific and medical advisors, and our inability to find suitable replacements, could result in delays in the development of our product candidates and harm our business.

We conduct our operations at our facility in the San Francisco Bay Area of California, a region that is headquarters to many other biopharmaceutical companies and many academic and research institutions. To succeed, we must recruit, retain, manage and motivate qualified clinical, scientific, manufacturing and sales and marketing personnel, and we face significant competition for experienced personnel. In addition, we will need to expand and effectively manage our managerial, operational, financial, development and other resources in order to successfully pursue our research, development and commercialization efforts for our existing and future product candidates. Furthermore, replacing executive officers and key employees may be difficult and may take an extended period of time because of the limited talent pool in our industry due to the breadth of skills and experience required to successfully develop, gain regulatory approval of and commercialize products. Competition for skilled personnel is intense and the turnover rate can be high, which may limit our ability to hire and retain highly qualified personnel on acceptable terms or at all. We expect that we may need to recruit talent from outside of our region and doing so may be costly and difficult.

Many of the other biotechnology companies that we compete against for qualified personnel have considerably more financial and other resources, different risk profiles and a more extended 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 can offer. We also experience competition for the hiring of scientific and clinical personnel from universities and research institutions. 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. To induce valuable employees to remain at our company, in addition to salary and cash incentives, we have provided equity grants that vest over time. The value to employees of these equity grants that vest over time may be significantly affected by movements in our stock price that are beyond our control and may at any time be insufficient to counteract more lucrative offers from other companies. Although we have employment agreements with our key employees, these employment agreements provide for at-will employment, which means that any of our employees could leave our employment at any time,

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with or without notice. If we are unable to attract and incentivize quality personnel on acceptable terms, or at all, it may cause our business and operating results to suffer. Our international operations may expose us to business, regulatory, political, operational, financial, pricing and reimbursement risks associated with doing business outside of the United States.

Our predecessor company, which after our reorganization is now our wholly-owned subsidiary, was an Irish private company limited by shares. Our business is subject to risks associated with conducting business internationally. Some of our subsidiaries and operations, in addition to suppliers, industry partners and clinical study centers, are located outside of the United States. Furthermore, our business strategy incorporates potential international expansion as we seek to obtain regulatory approval for, and commercialize, our product candidates in patient populations outside the United States. If approved, we expect to hire sales representatives and conduct physician and patient association outreach activities outside of the United States. Doing business internationally involves a number of risks and complexities, including but not limited to:

- multiple, conflicting and changing laws and regulations such as privacy regulations, tax laws, export and import restrictions, employment laws, regulatory requirements and other governmental approvals, permits and licenses;
- failure by us to obtain and maintain regulatory approvals for the use of our products in various countries;
- rejection or qualification of foreign clinical trial data by the competent authorities of other countries;
- complexities and difficulties in obtaining, maintaining, protecting and enforcing our intellectual property, including as a result of potentially relevant third-party patent rights;
- difficulties in staffing and managing foreign operations;
- complexities associated with managing multiple payor reimbursement regimes, government payors or patient self-pay systems;
- limits in our ability to penetrate international markets;
- financial risks, such as longer payment cycles, difficulty collecting accounts receivable, the impact of local and regional financial crises on demand and payment for our drugs;
- exposure to foreign currency exchange rate fluctuations;
- political and economic instability, including wars, terrorism and political unrest, boycotts, curtailment of trade and other business restrictions;
- natural disasters, outbreaks or public health crises, such as the COVID-19 pandemic;
- certain expenses including, among others, expenses for travel, translation and insurance; and
- regulatory and compliance risks that relate to anti-corruption compliance and record-keeping that may fall within the purview of the FCPA, its accounting provisions or its anti-bribery provisions, or provisions of anti-corruption or anti-bribery laws in other countries.

Any of these factors could harm our future international expansion and operations and, consequently, our results of operations.

If any of the third parties that we rely on for various operational and administrative aspects of our business fail to provide timely, accurate and ongoing service or if the technology systems and infrastructure suffer outages that we are unable to mitigate, our business may be adversely affected.

We currently rely upon third-party consultants and contractors to provide specific operational and administrative services, including research and clinical consultation and management. The failure of any of these third parties to provide accurate and timely service may adversely impact our business operations. In addition, if such third-party service providers were to cease operations, temporarily or permanently, face financial distress or other business disruption, increase their fees or if our relationships with these providers deteriorate, we could suffer increased costs until an equivalent provider could be found, if at all, or we could develop internal capabilities, if ever. In addition, if we are unsuccessful in choosing or finding high-quality partners, if we fail to negotiate cost-effective relationships with them, or if we ineffectively manage these relationships, it could have an adverse impact on our business and financial performance.

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Further, our operations depend on the continuing and efficient operation of our information technology, communications systems and infrastructure, and on cloud-based platforms. Any of these systems and infrastructure are vulnerable to damage or interruption from earthquakes, vandalism, sabotage, terrorist attacks, floods, fires, power outages, telecommunications failures, computer viruses or other deliberate attempts to harm the systems. The occurrence of a natural or intentional disaster, any decision to close a facility we are using without adequate notice, or particularly an unanticipated problem at a cloud-based virtual server facility, could result in harmful interruptions in our service, resulting in adverse effects to our business.

We may become exposed to costly and damaging product liability claims, either when testing our product candidates in the clinic or at the commercial stage, and our product liability insurance may not cover all damages from such claims.

We are exposed to potential product liability and professional indemnity risks that are inherent in the research, development, manufacturing, marketing and use of pharmaceutical products. We currently have no products that have been approved for commercial sale. However, the current and future use of product candidates by us in clinical trials and the sale of any approved products in the future, may expose us to liability claims. These claims might be made by patients that use the product, healthcare providers, pharmaceutical companies or others selling such products. In addition, we have agreed to indemnify various counterparties related to our product candidates against certain liability claims and any agreements or collaborations in the future may include such indemnification obligations. Any claims against us, or with respect to which we are obligated to provide indemnification, regardless of their merit, could be difficult and costly to defend or settle and could compromise the market acceptance of our product candidates or any prospects for commercialization of our product candidates, if approved.

Although the clinical trial process is designed to identify and assess potential side effects, it is always possible that a drug, even after regulatory approval, may exhibit unforeseen side effects. If any of our product candidates were to cause adverse side effects during clinical trials or after approval of the product candidate, we may be exposed to substantial liabilities. Physicians and patients may not comply with any warnings that identify known potential adverse effects or that certain patients should not use our drugs for various reasons.

Although we maintain product liability insurance coverage, such insurance may not be adequate to cover all liabilities that we may incur. We may need to increase our insurance coverage each time we commence a clinical trial and if we successfully commercialize any product candidate. As the expense of insurance coverage is increasing, we may not be able to maintain insurance coverage at a reasonable cost or in an amount adequate to satisfy any liability that may arise. If a successful product liability claim or series of claims is brought against us for uninsured liabilities or in excess of insured liabilities, our assets may not be sufficient to cover such claims and our business operations could be impaired. We may expend our limited resources to pursue a particular product candidate or indication and fail to capitalize on product candidates or indications that may be more profitable or for which there is a greater likelihood of success.

Because we have limited financial and managerial resources, we focus on research programs that we identify for specific indications. As a result, we may forego or delay pursuit of opportunities with other product candidates or for other indications that later prove to have greater commercial potential. Our resource allocation decisions may cause us to fail to capitalize on viable commercial therapies or profitable market opportunities. Our spending on current and future research and development programs, such as ALX148, for specific indications may not yield any commercially viable products. If we do not accurately evaluate the commercial potential or target market for a particular product candidate, we may relinquish valuable rights to that product candidate through collaboration, licensing or other royalty arrangements in cases in which it would have been more advantageous for us to retain sole development and commercialization rights to such product candidate.

Business disruptions could seriously harm our future revenue and financial condition and increase our costs and expenses.

Our operations, and those of our service providers and suppliers and other contractors and consultants, could be subject to earthquakes, power shortages, telecommunications failures, water shortages, floods, hurricanes, typhoons, fires, extreme weather conditions, medical or public health crises, such as the COVID-19 pandemic, and other natural or man-made disasters or business interruptions, for which we are partly uninsured. The occurrence of any of these business disruptions could seriously harm our operations and financial condition and increase our costs and

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expenses. We rely on third-party manufacturers to produce and process our product candidates. Our ability to obtain clinical supplies of our product candidates could be disrupted if the operations of these suppliers are affected by a man-made or natural disaster or other business interruption.

The majority of our operations including our corporate headquarters are located in the San Francisco Bay Area in California. Damage or extended periods of interruption to our corporate, development or research facilities due to fire, natural disaster, power loss, communications failure, unauthorized entry or other events could cause us to cease or delay development of some or all of our product candidates. Although we maintain property damage and business interruption insurance coverage on these facilities, our insurance might not cover all losses under such circumstances and our business may be seriously harmed by such delays and interruption.

The COVID-19 pandemic could adversely impact our business including our ongoing and planned clinical trials and preclinical research.

In December 2019, COVID-19 was reported to have surfaced in Wuhan, China, resulting in significant disruptions to Chinese manufacturing and travel. Since then, the virus has spread to numerous other countries, including the United States, resulting in the World Health Organization characterizing COVID-19 as a pandemic. The extent to which the COVID-19 pandemic impacts our business will depend on future developments, which are highly uncertain and cannot be predicted, such as the ultimate geographic spread of the disease, the duration of the outbreak, travel restrictions and social distancing in the United States and other countries, business closures or business disruptions, and the effectiveness of actions taken in the United States and other countries to contain and treat the disease and to address its impact, including on financial markets or otherwise. As the COVID-19 pandemic continues to spread around the globe, we could experience other disruptions that could severely impact our business, current and planned clinical trials and preclinical research, including:

- delays or difficulties in enrolling and retaining subjects in our ongoing clinical trial of ALX148 and our future clinical trials;
- delays or difficulties in clinical site initiation, including difficulties in recruiting clinical site investigators and clinical site staff;
- diversion of healthcare resources away from the conduct of clinical trials, including the diversion of hospitals serving as our clinical trial sites and hospital staff supporting the conduct of clinical trials;
- interruption of key clinical trial activities, such as clinical trial site monitoring, due to limitations on travel imposed or recommended by federal or state governments, employers and others or interruption of clinical trial subject visits and study procedures, which may impact the integrity of subject data and clinical study endpoints;
- limitations in resources, including our employees, that would otherwise be focused on the conduct of our business or our current or planned clinical trials or preclinical research, including because of sickness, the desire to avoid contact with large groups of people, or restrictions on movement or access to our facility as a result of government-imposed “shelter in place” or similar working restrictions;
- interruptions or delays in the operations of the FDA or other domestic or foreign regulatory authorities, which may impact review and approval timelines;
- delays in receiving the supplies, materials and services needed to conduct clinical trials and preclinical research;
- changes in regulations as part of a response to the COVID-19 pandemic which may require us to change the ways in which our clinical trials are conducted, which may result in unexpected costs or require us to discontinue the clinical trial altogether;
- interruptions or delays to our development pipeline;
- delays in necessary interactions with regulators, ethics committees and other important agencies and contractors due to limitations in employee resources or furlough of government or contractor personnel; and
- refusal of the FDA to accept data from clinical trials in affected geographies outside of the United States.

We are still assessing the impact that COVID-19 may have on our ability to effectively conduct our business operations as planned and there can be no assurance that we will be able to avoid a material impact on our business

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from the spread of COVID-19 or its consequences, including disruption to our business and downturns in business sentiment generally or in our industry. For example, on March 16, 2020, San Mateo County, where our headquarters are located, issued a “shelter-in-place” order, effective March 17, 2020, and on March 19, 2020, the Executive Department of the State of California issued Executive Order N-33-20, ordering all individuals in the State of California to stay home or at their place of residence except as needed to maintain continuity of operations of the federal critical infrastructure sectors. Our primary operations are located in Burlingame, California. As a result of such county and California state orders, the majority of our employees are currently telecommuting, which may impact certain of our operations over the near term and long term.

Further, as a result of the COVID-19 pandemic, the extent and length of which is uncertain, we may be required to develop and implement additional clinical trial policies and procedures designed to help protect subjects from the COVID-19 virus, which may include using telemedicine visits, remote monitoring of subjects and clinical sites and measures to ensure that data from clinical trials that may be disrupted as a result of the pandemic are collected pursuant to the study protocol and consistent with GCPs, with any material protocol deviation reviewed and approved by the site Institutional Review Board. Subjects who may miss scheduled appointments, any interruption in study drug supply, or other consequences that may result in incomplete data being generated during a clinical trial as a result of the pandemic must be adequately documented and justified. For example, in March 2020, the FDA issued a guidance on conducting clinical trials during the pandemic, which describe a number of considerations for sponsors of clinical trials impacted by the pandemic, including the requirement to include in the clinical trial report contingency measures implemented to manage the trial, and any disruption of the trial as a result of the COVID-19 pandemic; a list of all subjects affected by the COVID-19-pandemic related study disruption by unique subject identifier and by investigational site and a description of how the individual's participation was altered; and analyses and corresponding discussions that address the impact of implemented contingency measures (e.g., participant discontinuation from investigational product and/or study, alternative procedures used to collect critical safety and/or efficacy data) on the safety and efficacy results reported for the trial.

The global outbreak of COVID-19 continues to rapidly evolve. While the extent of the impact of the COVID-19 pandemic on our business and financial results is uncertain, a continued and prolonged public health crisis such as the COVID-19 pandemic could have a material negative impact on our business, financial condition and operating results.

To the extent the COVID-19 pandemic adversely affects our business and financial results, it may also have the effect of heightening many of the other risks described in this section and in this “Risk Factors” section.

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, including personal information related to the subjects in our clinical trial, 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.

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We may seek to enter into collaborations, including strategic collaborations, licenses and other similar arrangements related to our product candidates and may not be successful in doing so, and even if we are, we may not be able to maintain or realize the benefits of such relationships. If we are not able to establish future collaborations, we may have to alter some of our future development and commercialization plans and our business could be adversely affected.

We may seek to enter into collaborations, licenses and other similar arrangements for the development or commercialization of our product candidates, due to capital costs required to develop or commercialize the product candidate in such markets. We may not be successful in our efforts to establish such collaborations for our product candidates because our product candidates may be deemed to be at too early of a stage of development for collaborative effort or third parties may not view our product candidates as having the requisite potential to demonstrate safety and efficacy or significant commercial opportunity. Further, any future collaboration agreements may restrict us from entering into additional agreements with potential collaborators. We cannot be certain that, following a strategic transaction or license, we will achieve an economic benefit that justifies such transaction.

Even if we are successful in our efforts to establish such collaborations, the terms that we agree upon may not be favorable to us, and we may not be able to maintain such collaborations if, for example, development of a product candidate is delayed, the safety of a product candidate is questioned or sales of an approved product are unsatisfactory. We also may not be able to realize the benefit of such collaborations if we are unable to successfully integrate them with our existing operations and company culture. In any such collaborations, we may likely have limited control over the amount and timing of resources that our collaborators dedicate to the development or commercialization of any product candidates we may seek to develop with them. We cannot predict the success of any collaboration that we may enter into.

We face significant competition in seeking appropriate collaborators and a number of more established companies may also be pursuing strategies to license or acquire third-party intellectual property rights that we may consider attractive. These established companies may have a competitive advantage over us due to their size, financial resources and greater clinical development and commercialization capabilities. In addition, companies that perceive us to be a competitor may be unwilling to assign or license rights to us. 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 similar foreign regulatory authorities, the potential market for the subject product candidate, the costs and complexities of manufacturing and delivering such product candidate to patients, competing products, the existence of uncertainty with respect to our ownership of technology, which can exist if there is a challenge to such ownership without regard to the merits of the challenge and industry and market conditions generally. The 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.

We may not be able to negotiate further collaborations on a timely basis, on acceptable terms, or at all. We also may find that our programs require the use of proprietary rights held by third parties, and the growth of our business may depend in part on our ability to acquire, in-license or use these proprietary rights. Even if we are able to obtain a license to intellectual property of interest, we may not be able to secure exclusive rights, in which case others could use the same rights and compete with us. Our future collaboration partners may not prioritize our product candidates or otherwise not effectively pursue the development of our product candidates which may delay, reduce or terminate the development of such product candidate, reduce or delay its development program, or delay its potential commercialization. Further, if we are unable to successfully obtain rights to required third-party intellectual property rights or maintain the existing intellectual property rights we have, we may have to delay, reduce or terminate the development of such 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. Any of the foregoing factors would likely harm our ability to execute our business plans. If we elect to increase our

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expenditures to fund development or commercialization activities on our own, we may need to obtain additional capital, which may not be available to us on acceptable terms or at all. If we do not have sufficient funds, we may not be able to further develop our product candidates or bring them to market and generate product revenue.

We may acquire businesses or assets and we may not realize the benefits of such acquisitions.

We may acquire businesses or assets or create joint ventures with third parties that we believe may complement our existing product candidates. We may not be able to realize the benefit of acquiring such businesses or joint ventures if we are not able to successfully integrate them with our existing operations and company culture. We may encounter difficulties in developing, manufacturing and marketing any new product candidates resulting from an acquisition or that delay or prevent us from realizing their expected benefits.

Also, the anticipated benefit of any joint venture or acquisition may not materialize or such joint venture or acquisition may be prohibited. The Loan Agreement which governs our term loan limits our ability to pursue certain mergers, acquisitions, amalgamations or consolidations that we may believe to be in our best interest. Additionally, future acquisitions or dispositions could result in potentially dilutive issuances of our equity securities, the incurrence of debt, contingent liabilities or amortization expenses or write-offs of goodwill, any of which could harm our financial condition. We cannot predict the number, timing or size of future joint ventures or acquisitions, or the effect that any such transactions might have on our operating results.

The terms of our Loan Agreement require us to meet certain operating and financial covenants and place restrictions on our operating and financial flexibility. If we raise additional capital through debt financing, the terms of any new debt could further restrict our ability to operate our business.

The loans under the Loan Agreement are secured by substantially all of our assets, except our intellectual property, which is the subject of a negative pledge. The \$6.0 million in term loans under the Loan Agreement bear interest at a floating per annum interest rate equal to the greater of 7.0% or 2.0% plus the prime rate as reported in The Wall Street Journal. We are required to make interest-only payments for the first 12 months after the closing of the Loan Agreement, followed by consecutive equal monthly payments of principal and interest commencing on January 1, 2021 and continuing through the maturity date of September 1, 2022. The Loan Agreement also provides for a final payment equal to 6.0% multiplied by the aggregate principal amount of the term loans funded, which is due on the maturity date, upon the acceleration of the term loans, or upon prepayment of the term loans. If we elect to prepay the term loans, there is also a prepayment fee of between 1.0% and 3.0% of the principal amount being prepaid depending on the timing and circumstances of prepayment.

The Loan Agreement contains customary affirmative and negative covenants, indemnification provisions and events of default. The affirmative covenants include, among others, covenants requiring us and our subsidiaries to maintain legal existence and good standing, deliver certain financial reports, keep inventory in good and marketable condition, timely file tax returns and reports, maintain insurance, maintain operating accounts and maintain certain intellectual property rights. The negative covenants include, among others, restrictions on transferring or licensing our assets, changing our business, engaging in mergers or acquisitions, incurring additional indebtedness, paying dividends or making other distributions and creating other liens on our assets, in each case subject to customary exceptions.

If we default under the Loan Agreement, the Lenders will be able to declare all obligations immediately due and payable and take control of our pledged assets, potentially requiring us to renegotiate our agreement on terms less favorable to us or to immediately cease operations. The Lenders could declare a default under the Loan Agreement upon the occurrence of any event that the Lenders interpret as a material adverse change as defined under the Loan Agreement, thereby requiring us to repay the loan immediately or to attempt to reverse the declaration of default through negotiation or litigation. Any declaration by the Lenders of an event of default could significantly harm our business and prospects and could cause the price of our common stock to decline. If we raise any additional debt financing, the terms of such additional debt could further restrict our operating and financial flexibility.

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

Under the U.S. 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

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rolling three-year period), the corporation's ability to use its pre-change net operating loss carryforwards and 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, 2019, we had net operating loss carryforwards for U.S. state income tax purposes of approximately \$30.9 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.

As of December 31, 2019, we had Irish net operating loss carryforwards of approximately \$4.0 million. These Irish net operating loss carryforwards do not expire but may not be fully utilized unless we generate sufficient income in Ireland. Under Irish law, where a company makes a loss in its trade, it can carry that loss forward to subsequent accounting periods and offset the loss against profits or gains of the same trade. The utilization of carried forward losses is disallowed where (i) the trade that gave rise to the losses is discontinued or (ii) within any period of three years, there is both a change in the ownership of a company and (whether earlier or later in that period or at the same time) a major change in the nature or conduct of a trade carried on by the company or (iii) at any time after the scale of the activities in a trade carried on by a company has become small or negligible and before any considerable revival of the trade, there is a change in ownership of the company. There are no legislative explanations of what constitutes a major change in the nature or conduct of a trade. Relevant case law indicates that there must be a difference in the kind of trade/goods (and not just a quantitative difference) or a major difference in client outlets or markets of the trade but whether there has been a major change in the nature or conduct of a trade is a qualitative matter, and one which is to be judged on the facts of any particular set of circumstances. We may experience ownership changes in the future as a result of this initial public offering and subsequent movements in our share ownership. If we also experience a major change in the nature or conduct of our trade or our trade becomes small or negligible, we may be limited in the amount of loss carryforwards that we can use in the future to offset taxable income for Irish corporation tax purposes. Furthermore, in the event we incur net income in certain jurisdictions but incur losses (or have loss carryforwards) in other jurisdictions, we cannot offset the income from one jurisdiction with the loss from another, which could increase our effective tax rate.

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. If an active market for our common stock does not continue, it may be difficult for our stockholders to sell their shares without depressing the market price for the shares or sell their shares at or above the prices at which they acquired their shares or sell their shares at the time they would like to sell. The initial public offering price of our common stock will be determined through negotiations between us and the underwriters. The initial public offering price may not be indicative of the market price of our common stock after the offering and the market value of our common stock may decrease from the initial public offering price. Any inactive trading market for our common stock may also impair our ability to raise capital to continue to fund our operations by selling shares and may impair our ability to acquire other companies or technologies by using our shares as consideration.

Investors in this offering will pay a much higher price than the book value of our common stock and therefore you will incur immediate and substantial dilution of your investment.

The initial public offering price will be substantially higher than the net tangible book value per common share based on the total value of our tangible assets less our total liabilities immediately following this offering. Therefore, if you purchase common stock in this offering, you will experience immediate and substantial dilution of approximately \$ _____ per share, representing the difference between our pro forma as adjusted net tangible book value per share after giving effect to this offering at an assumed initial public offering price of \$ _____ per share, the midpoint of the price range set forth on the cover page of this prospectus. As of _____ 2020, we have outstanding stock options to purchase _____ shares of our common stock, some of which have exercise prices below the assumed initial public

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offering price. In addition, following this offering, purchasers in this offering will have contributed approximately % of the total gross consideration paid by stockholders to us to purchase shares of our common stock, but will own only approximately % of the shares of common stock outstanding immediately after this offering. Furthermore, if the underwriters exercise their option to purchase additional shares, or outstanding options and warrants are exercised, you could experience further dilution. For a further description of the dilution that you will experience immediately after this offering, see the section titled "Dilution."

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

You should consider an investment in our common stock as risky and invest only if you can withstand a significant loss and wide fluctuations in the market value of your investment. You may be unable to sell your common stock at or above the initial public offering price due to fluctuations in the market price of our common stock arising from changes in our operating performance or prospects. In addition, the stock market has recently experienced significant volatility, particularly with respect to biotechnology and other life sciences company stocks. The volatility of biotechnology and other life sciences company stocks often does not relate to the operating performance of the companies represented by the stock. Some of the factors that may cause the market price of our common stock to fluctuate or decrease below the price paid in this offering include:

- results and timing of our preclinical studies and clinical trials and studies and trials of our competitors;
- failure or discontinuation of any of our development programs;
- issues in manufacturing our product candidates or any future approved products;
- regulatory developments or enforcement in the United States and foreign countries with respect to our product candidates or our competitors' products;
- competition from existing products or new products that may emerge;
- actual or anticipated changes in our growth and development relative to our competitors;
- developments or disputes concerning patents or other proprietary rights;
- introduction of new product candidates or technological innovations by us or our competitors;
- announcements by us, our future strategic partners or our competitors of significant acquisitions, strategic partnerships, joint ventures or capital commitments;
- actual or anticipated changes in estimates or recommendations by securities analysts, if any cover our common stock;
- fluctuations in the valuation of companies perceived by investors to be comparable to us;
- public concern over our product candidates or any future approved products;
- litigation;
- future sales of our common stock by us, our insiders or our other stockholders;
- expiration of market stand-off or lock-up agreements;
- share price and volume fluctuations attributable to inconsistent trading volume levels of our shares;
- additions or departures of key personnel;
- changes in the structure of health care payment systems in the United States or overseas;
- failure of any of our product candidates, if approved, to achieve commercial success;
- economic and other external factors such as macroeconomic, disasters, crises or health matters, including the impact of the COVID-19 pandemic;
- period-to-period fluctuations in our financial condition and results of operations, including the timing of payment or receipt of any future milestone or other payments under commercialization or licensing agreements;
- announcements or expectations of additional financing efforts;
- overall fluctuations in U.S. equity markets, general market conditions and market conditions for biotechnology stocks; and
- other factors that may be unanticipated or out of our control.

In addition, in the past, when the market price of a stock has been volatile, holders of that stock have instituted securities class action litigation against the company that issued the stock. If any of our stockholders brought a

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lawsuit against us, we could incur substantial costs defending the lawsuit and divert the time and attention of our management, which could seriously harm our business.

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.

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 product candidates and any future product candidates and research-stage programs, which will change from time to time;
- our ability to enroll subjects in clinical trials and the timing of enrollment;
- the cost of manufacturing our current product candidates and any future product candidates, which may vary depending on FDA, EMA or other comparable foreign regulatory authority 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 or other assets;
- the timing and outcomes of clinical trials for ALX148, and any of our other 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 ALX148 and any of our other 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 ALX148 or any of our other product candidates;
- the level of demand for ALX148 and any of our other 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 product candidates, if approved, and existing and potential future products that compete with ALX148 and any of our other product candidates;
- our ability to commercialize ALX148 and any of our other 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;
- the COVID-19 pandemic; and
- the changing and volatile global economic and political environment.

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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.

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, upon the expiration of the market standoff and lock-up agreements, the early release of these agreements, or the perception in the market that the holders of a large number of shares of common stock intend to sell shares, could reduce the market price of our common stock. After this offering and after giving effect to the automatic conversion of all outstanding shares of our convertible preferred stock into _____ shares of our common stock immediately prior to the completion of this offering, we will have shares of common stock outstanding based on _____ shares of our common stock outstanding as of _____. Of these shares, the shares we are selling in this offering may be resold in the public market immediately, unless purchased by our affiliates. The remaining _____ shares, or _____ % of our outstanding shares after this offering, are currently prohibited without the permission of the underwriters or otherwise restricted under securities laws, market standoff agreements entered into by our stockholders with us or lock-up agreements entered into by our directors, officers and stockholders with the underwriters. However, subject to applicable securities law restrictions and excluding shares of restricted stock that will remain unvested, these shares will be able to be sold in the public market beginning after the 180th day after the date of this prospectus. Shares issued upon the exercise of stock options outstanding under our equity incentive plans or pursuant to future awards granted under those plans will become available for sale in the public market to the extent permitted by the provisions of applicable vesting schedules, any applicable market standoff and lock-up agreements, and Rule 144 and Rule 701 under the Securities Act of 1933, as amended, or Securities Act. See the section titled "Shares Eligible for Future Sale" for additional information.

Moreover, after this offering, holders of an aggregate of _____ shares of our common stock will have rights, subject to 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 plan to register all shares of common stock that we may issue under our equity compensation plans. Once we register these shares, they can be freely sold in the public market upon issuance and once vested, subject to volume limitations applicable to affiliates and the lock-up agreements described in the section titled "Underwriting." If any of these additional shares are sold, or if it is perceived that they will be sold, in the public market, the market price of our common stock could decline.

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 Jefferies LLC, Credit Suisse Securities (USA) LLC and Piper Sandler & Co. 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, the underwriters 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 the description of the market stand-off agreement with us and the lock-up agreement with the underwriters in the section of this prospectus titled "Shares Eligible for Future Sale" for additional 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.

If securities or industry analysts do not publish research or publish inaccurate or unfavorable research about our business, our share price and trading volume could decline.

The trading market for our common stock is expected to depend on the research and reports that securities or industry analysts publish about us or our business. We do not have any control over these analysts. We cannot assure you that analysts will cover us or provide favorable coverage. If no or few securities or industry analysts commence coverage of us, the trading price for our stock would be negatively impacted. If one or more of the analysts who cover us downgrade our stock or change their opinion of our common stock, our share price would likely decline. If one or more of these analysts cease coverage of our company or fail to publish reports on us regularly, we could lose visibility in the financial markets, which could cause our share price or trading volume to decline.

We will incur significant increased costs and management resources as a result of operating as a public company.

As a public company, we will incur significant legal, accounting, compliance 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.” Our management and other personnel will need to devote a substantial amount of time and incur significant expense in connection with compliance initiatives. For example, in anticipation of becoming a public company, we will need to adopt additional internal controls and disclosure controls and procedures, retain a transfer agent and adopt an insider trading policy. As a public company, we will bear all of the internal and external costs of preparing and distributing periodic public reports in compliance with our obligations under the securities laws.

In addition, we anticipate implementing an enterprise resource planning, or ERP, system for our company. An ERP system is intended to combine and streamline the management of our financial, accounting, human resources, sales and marketing and other functions, enabling us to manage operations and track performance more effectively. However, an ERP system would likely require us to complete many processes and procedures for the effective use of the system or to run our business using the system, which may result in substantial costs. Additionally, in the future, we may be limited in our ability to convert any business that we acquire to the ERP. Any disruptions or difficulties in using an ERP system could adversely affect our controls and harm our business, including our ability to forecast or make sales and collect our receivables. Moreover, such disruption or difficulties could result in unanticipated costs and diversion of management attention.

In addition, regulations and standards relating to corporate governance and public disclosure, including the Sarbanes-Oxley Act, or SOX, and the related rules and regulations implemented by the SEC and the Nasdaq Stock Market LLC, or Nasdaq, have increased legal and financial compliance costs and will make some compliance activities more time-consuming. We intend to invest resources to comply with evolving laws, regulations and standards, and this investment will result in increased general and administrative expenses and may divert management’s time and attention from our other business activities. If our efforts to comply with new laws, regulations and standards differ from the activities intended by regulatory or governing bodies due to ambiguities related to practice, regulatory authorities may initiate legal proceedings against us, and our business may be harmed. In connection with this offering, we intend to increase our directors’ and officers’ insurance coverage, which will increase our insurance cost. In the future, it may be more expensive or more difficult for us to obtain director and officer liability insurance, and we may be required to accept reduced coverage or incur substantially higher costs to obtain coverage. These factors could also make it more difficult for us to attract and retain qualified members of our board of directors, particularly to serve on our audit committee and compensation committee, and qualified executive officers.

We are an “emerging growth company,” and any decision on our part to comply only with certain reduced reporting and disclosure requirements applicable to emerging growth companies could 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, or the JOBS Act. For as long as we continue to be an emerging growth company, we may choose to take advantage of exemptions from various reporting requirements applicable to other public companies that are not emerging growth companies, including, but not limited to, not being required to comply with the auditor attestation requirements of Section 404(b), reduced disclosure obligations regarding executive compensation in our periodic reports and proxy

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statements and exemptions from the requirements of holding a nonbinding advisory vote on executive compensation and stockholder approval of any golden parachute payments not previously approved. We could be an “emerging growth company” for up to five years following the completion of this offering, although, if we have more than \$1.07 billion in annual revenue, if the market value of our common stock held by non-affiliates exceeds \$700 million as of June 30 of any year, or we issue more than \$1.0 billion of non-convertible debt over a three-year period before the end of that five-year period, we would cease to be an “emerging growth company” as of the following December 31. Investors could find our common stock less attractive if we choose to rely on these exemptions. 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. We have elected to use this extended transition period. As a result, our consolidated financial statements may not be comparable to companies that comply with the new or revised accounting standards as of public company effective dates. If some investors find our common stock less attractive as a result of any of our reliance on these exemptions, there may be a less active trading market for our common stock and our share price may be more volatile.

Our management team will have broad discretion to use the net proceeds from this offering and its investment of these proceeds may not yield a favorable return.

Our management team will have broad discretion in the application of the net proceeds from this offering and could spend or invest the proceeds in ways with which our stockholders disagree. Accordingly, investors will need to rely on our management team’s judgment with respect to the use of these proceeds. We intend to use the proceeds from this offering in the manner described in the section titled “Use of Proceeds.” The failure by management to apply these funds effectively could negatively affect our ability to operate and grow our business. We cannot specify with certainty all of the particular uses for the net proceeds to be received upon the completion of this offering. In addition, the amount, allocation and timing of our actual expenditures will depend upon numerous factors, including any milestone payments received from any future strategic partnerships and royalties on sales of any future approved product. Accordingly, we will have broad discretion in using these proceeds. Until the net proceeds are used, they may be placed in investments that do not produce significant income or that may lose.

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 59.2% of our voting stock and, upon the completion 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 , assuming no exercise of the underwriters’ option to purchase additional shares, no exercise of outstanding options 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 completion 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 material 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.

We do not anticipate paying cash dividends and, accordingly, stockholders must rely on share appreciation for any return on their investment.

We have never paid any dividends on our capital stock. We currently intend to retain our future earnings, if any, to fund the development and growth of our businesses and do not anticipate that we will declare or pay any cash dividends on our capital stock in the foreseeable future. See the section titled “Dividend Policy.” In addition, the Loan Agreement restricts our ability to pay dividends or make other distributions. As a result, capital appreciation, if

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any, of our common stock will be your sole source of gain on your investment for the foreseeable future. Investors seeking cash dividends should not invest in our common stock.

Raising additional capital may cause dilution to our stockholders, including purchasers of our common stock in this offering, restrict our operations or require us to relinquish substantial rights.

To the extent that we raise additional capital through the sale of equity or convertible debt securities, your ownership interest will be diluted, and the terms of these new securities may include liquidation or other preferences that adversely affect your rights as a common stockholder. Debt financing, if available, may involve fixed payment obligations or agreements that include covenants limiting or restricting our ability to take specific actions such as incurring additional debt, making capital expenditures or declaring dividends. If we raise additional funds through partnerships, collaborations, strategic alliances or licensing arrangements with third parties, we may have to relinquish valuable rights to our technologies, product candidates or future revenue streams, or grant licenses on terms that are not favorable to us. We cannot assure you that we will be able to obtain additional funding if and when necessary. If we are unable to obtain adequate financing on a timely basis, we could be required to delay, scale back or eliminate one or more of our clinical or discovery programs or grant rights to develop and market product candidates that we would otherwise prefer to develop and market ourselves. 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.

Delaware law and provisions in our amended and restated certificate of incorporation and bylaws that will become effective upon the completion of this offering might discourage, delay or prevent a change in control of our company or changes in our management and, therefore, depress the trading price of our common stock.

Provisions in our amended and restated certificate of incorporation and bylaws that will become effective upon the completion of this offering may discourage, delay or prevent a merger, acquisition or other change in control that stockholders may consider favorable, including transactions in which you might otherwise receive a premium for your shares of our common stock. These provisions may also prevent or frustrate attempts by our stockholders to replace or remove our management. Therefore, these provisions could adversely affect the price of our common stock. Among other things, our charter documents will:

- establish that our board of directors is divided into three classes, with each class serving staggered three-year terms;
- provide that vacancies on our board of directors may be filled only by a majority of directors then in office, even though less than a quorum;
- provide that our directors may only be removed for cause;
- eliminate cumulative voting in the election of directors;
- authorize our board of directors to issue shares of convertible preferred stock and determine the price and other terms of those shares, including preferences and voting rights, without stockholder approval;
- provide our board of directors with the exclusive right to elect a director to fill a vacancy or newly created directorship;
- permit stockholders to only take actions at a duly called annual or special meeting and not by written consent;
- prohibit stockholders from calling a special meeting of stockholders;
- require that stockholders give advance notice to nominate directors or submit proposals for consideration at stockholder meetings;
- authorize our board of directors to amend the bylaws; and
- require the affirmative vote of at least 66 2/3% or more of the outstanding shares of common stock to amend many of the provisions described above.

In addition, Section 203 of the General Corporation Law of the State of Delaware prohibits a publicly-held Delaware corporation from engaging in a business combination with an interested stockholder, generally a person who together with its affiliates owns, or within the last three years has owned, 15% of our voting stock, for a period of three years

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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 bylaws that will become effective upon the completion of this offering provide that the Court of Chancery of the State of Delaware and the federal district courts of the United States 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 bylaws that will become effective upon the completion of this offering provide that the Court of Chancery of the State of Delaware (or, if the Court of Chancery does not have jurisdiction, another State court in Delaware or the federal district court for the District of Delaware) is the exclusive forum for the following (except for any claim as to which such court determines that there is an indispensable party not subject to the jurisdiction of such court (and the indispensable party does not consent to the personal jurisdiction of such court within ten days following such determination), which is vested in the exclusive jurisdiction of a court or forum other than such court or for which such court does not have subject matter jurisdiction):

- any derivative action or proceeding brought on behalf of us;
- any action asserting a claim of breach of a fiduciary duty;
- any action asserting a claim against us arising under the Delaware General Corporation Law, or DGCL, our amended and restated certificate of incorporation or our amended and restated bylaws (as either may be amended from time to time); and
- any action asserting a claim against us that is governed by the internal affairs doctrine.

This provision would not apply to suits brought to enforce a duty or liability created by the Securities Exchange Act of 1934, as amended, or Exchange Act, or any other claim for which the U.S. federal courts have exclusive jurisdiction.

Our amended and restated bylaws further provide that the federal district courts of the United States 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. Any person or entity purchasing or otherwise acquiring any interest in any of our securities shall be deemed to have notice of and consented to these provisions. There is uncertainty as to whether a court would enforce such provisions, and the enforceability of similar choice of forum provisions in other companies' charter documents has been challenged in legal proceedings. It is possible that a court could find these types of provisions to be inapplicable or unenforceable, and if a court were to find either exclusive-forum provision in our amended and restated bylaws 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.

We have identified material weaknesses in our internal control over financial reporting. If our remediation measures are not effective, we may not be able to report our financial condition or results of operations accurately or on a timely basis.

To date, we have never conducted a review of our internal control for the purpose of providing the reports required by SOX. During our review and testing, we may identify deficiencies and be unable to remediate them before we must provide the required reports. In connection with the audit of our consolidated financial statements for each of the years ended December 31, 2018 and December 31, 2019, we and our independent registered public accounting firm identified material weaknesses in our internal control over financial reporting resulting from a lack of sufficient qualified personnel. For the year ended December 31, 2018, the material weaknesses related to (i) independent reviews of journal entries not being performed prior to posting, (ii) account reconciliations not being performed and independently reviewed on a timely basis and (iii) lack of independent review of technical accounting matters. For

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the year ended in December 31, 2019, (i) and (ii) remained unremediated. A material weakness is a deficiency, or a combination of deficiencies, in internal control over financial reporting such that there is a reasonable possibility that a material misstatement of our consolidated financial statements will not be prevented or detected on a timely basis. We are in the process of implementing a remediation plan to establish more robust processes related to the review of complex accounting transactions, preparation of account reconciliations and review of journal entries and have undertaken specific remediation actions to address the control deficiencies in our financial reporting which are outlined elsewhere in this prospectus.

While we have begun taking measures and plan to continue to take measures to design and implement an effective control environment, we cannot assure you that the measures we have taken to date, and are continuing to implement, will be sufficient to remediate or prevent future material weaknesses. If we are unable to successfully maintain internal control over financial reporting, or identify any additional material weaknesses, the accuracy and timing of our financial reporting may be adversely affected. In addition, if we are unable to assert that our internal control over financial reporting is effective, or if our independent registered public accounting firm is unable to express an opinion as to the effectiveness of our internal control over financial reporting, when required, investors may lose confidence in the accuracy and completeness of our financial reports, we may face restricted access to the capital markets, and our stock price may be materially adversely affected. Moreover, we could become subject to investigations by regulatory authorities, which could require additional financial and management resources.

If we fail to maintain an effective system of internal control over financial reporting, we may not be able to accurately report our financial results or prevent fraud, which would harm our business and the trading price of our common stock.

Effective internal controls over financial reporting are necessary for us to provide reliable financial reports and, together with adequate disclosure controls and procedures, are designed to prevent fraud. Any failure to implement required new or improved controls, or difficulties encountered in their implementation, could cause us to fail to meet our reporting obligations. In addition, any testing by us conducted in connection with Section 404(a) of SOX or any subsequent testing by our independent registered public accounting firm in connection with Section 404(b) of SOX, may reveal deficiencies in our internal controls over financial reporting that are deemed to be significant deficiencies or material weaknesses or that may require prospective or retroactive changes to our consolidated financial statements or identify other areas for further attention or improvement. As discussed above, we have identified material weaknesses in the past which we are in the process of remedying. However, our efforts to remediate previous material weaknesses may not be effective or prevent any future deficiency in our internal control over financial reporting. Inferior internal controls could also cause investors to lose confidence in our reported financial information, which could have a negative effect on the trading price of our common stock.

In connection with our evaluation of our internal controls over financial reporting, we expect to upgrade our finance and accounting systems and team. If we are unable to accomplish these objectives in a timely and effective manner, our ability to comply with the financial reporting requirements and other rules that apply to reporting companies could be adversely impacted. Any failure to maintain effective internal control over financial reporting could have a material adverse effect on our business, financial condition and results of operations and the trading price of our common stock.

We will be required to disclose material changes made in our internal controls over financial reporting and procedures on a quarterly basis and our management will be required to assess the effectiveness of these controls annually. 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. However, for as long as we are an "emerging growth company" under the JOBS Act, our independent registered public accounting firm will not be required to attest to the effectiveness of our internal controls over financial reporting pursuant to Section 404(b).

To achieve compliance with Section 404(a) 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

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effectively and implement a continuous reporting and improvement process for internal control over financial reporting.

We could be an “emerging growth company” for up to five years. An independent assessment of the effectiveness of our internal controls could detect problems that our management’s assessment might not identify. Undetected material weaknesses in our internal controls could lead to consolidated financial statement restatements and require us to incur the expense of remediation.

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.

Participation in this offering by our existing stockholders and/or their affiliated entities may reduce the public float for our common stock.

To the extent certain of our existing stockholders and their affiliated entities participate in this offering, such purchases would reduce the non-affiliate public float of our shares, meaning the number of shares of our common stock that are not held by officers, directors and controlling stockholders. A reduction in the public float could reduce the number of shares that are available to be traded at any given time, thereby adversely impacting the liquidity of our common stock and depressing the price at which you may be able to sell shares of common stock purchased in this offering.

We are organized in a holding company structure and we are, and will be, dependent upon the results of operations and cash flows of our subsidiaries and distributions we receive from our subsidiaries.

ALX Oncology Holdings Inc. is a holding company that currently has no material assets other than cash and our ownership of all of the equity issued by ALX Oncology Limited. As such, ALX Oncology Holdings Inc. will have no independent means of generating revenue or cash flow, and our ability to pay our taxes and operating expenses or declare and pay dividends in the future, if any, will be dependent upon the results of operations and cash flows of ALX Oncology Limited and its consolidated subsidiaries, including any distributions we receive from ALX Oncology Limited. There can be no assurance that our direct and indirect subsidiaries will generate sufficient cash flow to distribute funds to us or that applicable law and contractual restrictions, such as negative covenants in any debt instruments, will permit such distributions. In addition, in the event that the board of directors and stockholders of ALX Oncology Holdings Inc. were to approve a sale of all of our equity in ALX Oncology Limited or any of our other indirect subsidiaries, your equity interest would be in a holding company with no material assets other than those assets and other consideration received in such transaction.

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.

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,” “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:

- our financial performance;
- the sufficiency of our existing cash to fund our future operating expenses and capital expenditure requirements;
- the accuracy of our estimates regarding expenses, future revenue, capital requirements, and needs for additional financing;
- our plans relating to commercializing our product candidates, if approved, including the geographic areas of focus and our ability to grow a sales team;
- the implementation of our strategic plans for our business and product candidates;
- the size of the market opportunity for our product candidates in each of the diseases we target;
- our ability to obtain and maintain regulatory approval of our product candidates and the timing or likelihood of regulatory filings and approvals, including our expectation to seek special designations, such as orphan drug designation, for our product candidates for various diseases;
- the beneficial characteristics, safety, efficacy and therapeutic effects of our product candidates;
- our estimates of the number of patients in the United States who suffer from the diseases we target and the number of subjects that will enroll in our clinical trials;
- the progress and focus of our current and future clinical trials, and the reporting of data from those trials;
- our ability to advance product candidates into and successfully complete clinical trials;
- the ability of our clinical trials to demonstrate the safety and efficacy of our product candidates, and other positive results;
- the success of competing therapies that are or may become available;
- developments relating to our competitors and our industry, including competing product candidates and therapies;
- our plans relating to the further development and manufacturing of our product candidates, including additional indications that we may pursue;
- existing regulations and regulatory developments in the United States and other jurisdictions;
- our potential and ability to successfully manufacture and supply our product candidates for clinical trials and for commercial use, if approved;
- our continued reliance on third parties to conduct additional clinical trials of our product candidates, and for the manufacture of our product candidates;
- our plans and ability to obtain or protect intellectual property rights, including extensions of existing patent terms where available;
- the scope of protection we are able to establish and maintain for intellectual property rights, including our technology platform and product candidates;

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- our ability to retain the continued service of our key personnel and to identify, hire, and then retain additional qualified personnel;
- our expectations regarding the impact of the COVID-19 pandemic on our business;
- our expectations regarding the period during which we will qualify as an emerging growth company under the JOBS Act; and
- our anticipated use of our existing cash and 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 dataset 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. In some cases, we do not expressly refer to the sources from which this information is derived. In that regard, when we refer to one or more sources of this type of information in any paragraph, you should assume that other information of this type appearing in the same paragraph is derived from the same sources, unless otherwise expressly stated or the context otherwise requires. 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 from our issuance and sale of 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 on an initial public offering price of \$ per share, which is the midpoint of the price range set forth on the cover page of this prospectus, and after deducting the underwriting discounts and commissions and estimated offering expenses payable by us.

Each \$1.00 increase or decrease in the assumed initial public offering price of \$ per share would increase or decrease, as applicable, the aggregate 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 the underwriting discounts and commissions and estimated offering expenses payable by us. Similarly, each increase or decrease of 1.0 million shares in the number of shares offered by us would increase or decrease, as applicable, 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 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 change 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 intend to use the net proceeds, together with our existing cash, from the offering as follows:

- approximately \$ million to \$ million to advance the clinical development of ALX148 through completion of our existing Phase 1b clinical trials in HNSCC and gastric/GEJ cancer;
- approximately \$ million to \$ million to advance the clinical development of ALX148 through initiation and completion of our Phase 1b/2 combination clinical trial in MDS;
- approximately \$ million to \$ million for manufacturing activities related to chemistry, manufacturing and controls, or CMC, activities;
- approximately \$ million to \$ million to advance the clinical development of ALX148 through initiation and completion of our Phase 2 combination clinical trials in HNSCC and gastric/GEJ cancer or alternative Phase 2 indications if there are compelling clinical data; and
- the remainder for working capital and other general corporate purposes.

Our expected use of proceeds from this offering represents our current intentions based on our present plans and business condition. As of the date of this prospectus, we cannot predict with certainty all of the particular uses for the proceeds to be received upon the completion of this offering or the actual amounts that we will spend on the uses set forth above. We may also use a portion of the proceeds to in-license, acquire or invest in additional businesses, technologies, products or assets. Although we have no specific agreements, commitments or understandings with respect to any in-licensing activity or acquisition, we evaluate these opportunities and engage in related discussions with other companies from time to time.

The net proceeds from this offering, together with our existing cash and cash subsequently raised in February 2020, will not be sufficient for us to fund our clinical programs, and we will need to raise additional capital to achieve our business objectives. Based on current business plans, we believe that the net proceeds from this offering, together with our existing cash and cash subsequently raised in February 2020, will be sufficient to fund our planned operations for at least the next months.

The amount and timing of our actual expenditures will depend on numerous factors, including the results of our research and development efforts, the timing and outcome of any ongoing or future preclinical studies and clinical trials the timing and outcome of regulatory submissions and any unforeseen cash needs. As a result, our management will have broad discretion over the use of the proceeds from this offering.

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. In addition, the terms of our Loan Agreement place certain limitations on the amount of cash dividends we can pay.

CAPITALIZATION

The following table sets forth our cash and capitalization as of _____, 2020:

- on an actual basis;
- on a pro forma basis to give effect to:
 - the automatic conversion of all of our outstanding shares of convertible preferred stock into an aggregate of _____ shares of common stock upon the completion of this offering as if such conversion had occurred on _____, 2020;
 - warrants to purchase an aggregate of _____ shares of our convertible preferred stock that were outstanding as of _____, 2020 that will be converted into warrants to purchase an aggregate of _____ shares of our common stock, with an exercise price of \$ _____ per share;
 - the filing and effectiveness of our amended and restated certificate of incorporation, which will occur immediately prior to the completion of this offering; and
- on a pro forma as adjusted basis, to give effect to:
 - the pro forma adjustments set forth above; and
 - the sale and issuance of _____ shares of our common stock by us in this offering, based upon the assumed initial public offering price of \$ _____ per share, which is the midpoint of the price range set forth on the cover page of this prospectus, after deducting underwriting discounts and commissions and estimated offering expenses payable by us.

The pro forma as adjusted information set forth in the table below is illustrative only and will be adjusted based on the actual initial public offering price and other terms of this offering determined at pricing.

You should read this information in conjunction with our consolidated financial statements and the related notes and the sections titled "Selected Consolidated Financial Data" and "Management's Discussion and Analysis of Financial Condition and Results of Operations" that are included elsewhere in this prospectus.

	AS OF _____, 2020		
	ACTUAL	PRO FORMA	PRO FORMA AS ADJUSTED ⁽¹⁾
	(in thousands, except share and per share amounts)		
Cash	\$ _____	\$ _____	\$ _____
Convertible preferred stock warrant liability	\$ _____	\$ _____	\$ _____
Term loan			
Convertible preferred stock, par value \$0.001 per share; _____ shares authorized, _____ shares issued and outstanding, actual; no shares authorized, issued or outstanding, pro forma and pro forma as adjusted			
Stockholders' deficit:			
Common stock, par value \$0.001 per share; _____ shares authorized, _____ shares issued and outstanding, actual; _____ shares authorized, _____ shares issued and outstanding, pro forma as adjusted			
Additional paid-in capital			
Accumulated deficit			
Total stockholders' deficit	_____	_____	_____
Total capitalization	\$ _____	\$ _____	\$ _____

(1) Each \$1.00 increase or decrease in the assumed initial public offering price of \$ _____ per share, which is the midpoint of the price range set forth on the cover page of this prospectus, would increase or decrease, as applicable, our cash, additional paid-in

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capital, total stockholders' deficit and total capitalization by approximately \$ _____ million, assuming that the number of shares of our common stock offered by us, as set forth on the cover page of this prospectus, remains the same and after deducting the underwriting discounts and commissions and estimated offering expenses payable by us. Similarly, each increase or decrease of 1.0 million shares in the number of shares offered by us would increase or decrease, as applicable, the amount of our cash and total stockholders' deficit by approximately \$ _____ million, based upon the assumed initial public offering price of \$ _____ per share, which is the midpoint of the price range set forth on the cover page of this prospectus, after deducting the underwriting discounts and commissions and estimated offering expenses payable by us.

The number of shares of our common stock to be outstanding after this offering, pro forma and pro forma as adjusted in the table above, is based on _____ shares of our common stock outstanding as of _____, 2020 (including _____ shares of common stock that are subject to a right of repurchase and our convertible preferred stock on an as-converted basis), and excludes:

- _____ shares of common stock issuable upon exercise of options outstanding as of _____, 2020, at a weighted-average exercise price of \$ _____ per share;
- _____ shares of common stock issuable upon exercise of options granted after _____, 2020, at a weighted-average exercise price of \$ _____ per share;
- _____ warrants to purchase an aggregate of _____ shares of our convertible preferred stock that were outstanding as of _____, 2020 that will be converted into warrants to purchase an aggregate of _____ shares of our common stock, with an exercise price of \$ _____ per share; and
- _____ shares of common stock reserved for issuance pursuant to future awards under our 2020 Plan, including the amendment thereto that will become effective in connection with this offering, and any additional shares that become available under our 2020 Plan pursuant to provisions thereof that automatically increase the share reserve under the plan each year.

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 _____, 2020 was \$ _____ million, or \$ _____ per share of our common stock. Our historical net tangible book value (deficit) is the amount of our total assets less our total liabilities and convertible preferred stock, which is not included in our stockholders' deficit. 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 _____, 2020 (including _____ shares of common stock that are subject to a right of repurchase).

Our pro forma net tangible book value as of _____, 2020 was \$ _____ million, or \$ _____ per share of our common stock. Pro forma net tangible book value represents the amount of our total assets less our total liabilities, after giving effect to the conversion of all outstanding shares of our convertible preferred stock into an aggregate of _____ shares of common stock upon the completion of this offering. This includes the impact to assets and stockholders' equity of _____ shares issuable upon conversion of our convertible preferred stock. 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 _____, 2020, after giving effect to the conversion of all outstanding shares of our convertible preferred stock into an aggregate of _____ shares of our common stock upon the completion of this offering (including _____ shares issuable upon conversion of our convertible preferred stock).

After giving further effect to our sale of _____ shares of common stock in this offering at the assumed initial public offering price of \$ _____ per share, which is the midpoint of the price range set forth on the cover page of this prospectus, and after deducting the underwriting discounts and commissions and estimated offering expenses payable by us, our pro forma as adjusted net tangible book value as of _____, 2020 would have been approximately \$ _____ million, or approximately \$ _____ per share. This represents an immediate increase in pro forma as adjusted net tangible book value of \$ _____ per share to our existing stockholders and an immediate dilution in pro forma as adjusted net tangible book value of approximately \$ _____ per share 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 _____, 2020	\$
Pro forma increase in net tangible book value (deficit) per share as of _____, 2020	_____
Pro forma net tangible book value (deficit) per share as of _____, 2020	_____
Increase in pro forma net tangible book value per share attributable to 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 or decrease in the assumed initial public offering price of \$ _____ per share, the midpoint of the estimated offering price range set forth on the cover page of this prospectus, would increase or decrease, as applicable, our pro forma as adjusted net tangible book value as of _____, 2020 after this offering by approximately \$ _____ million, or approximately \$ _____ per share, and would decrease (increase) dilution to investors in this offering by approximately \$ _____ per share, assuming that the number of shares offered by us, as set forth on the cover page of this prospectus, remains the same, after deducting the underwriting discounts and

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commissions and estimated offering expenses payable by us. We may also increase or decrease the number of shares we are offering. An increase or decrease of 1.0 million in the number of shares we are offering would increase or decrease, as applicable, our pro forma as adjusted net tangible book value as of _____, 2020 after this offering by approximately \$ _____ million, or approximately \$ _____ per share, and would decrease or increase, as applicable, dilution to investors in this offering by approximately \$ _____ per share, assuming the assumed initial public offering price per share remains the same, after deducting the underwriting discounts and commissions and estimated offering expenses payable by us. The pro forma as adjusted information is illustrative only, and we will adjust this information based on the actual initial public offering price and other terms of this offering determined at pricing.

If the underwriters fully exercise their option to purchase additional shares of common stock at the assumed initial public offering price of \$ _____ per share, which is the midpoint of the price range set forth on the cover of this prospectus, assuming the number of shares offered by us as set forth on the cover page of this prospectus remains the same, and after deducting underwriting discounts and commissions and estimated offering expenses payable by us, pro forma as adjusted net tangible book value after this offering would increase to approximately \$ _____ per share, and there would be an immediate dilution of approximately \$ _____ per share to new investors.

The following table summarizes, on a pro forma as adjusted basis, as of _____, 2020, the difference between the number of shares of common stock purchased from us (on an as converted to common stock basis), the total consideration paid, and the weighted-average price per share paid, by existing stockholders and by new investors in this offering, assuming an initial public offering price of \$ _____ per share, which is the midpoint of the price range set forth on the cover page of this prospectus, and before deducting underwriting discounts and commissions and estimated offering expenses payable by us.

	SHARES PURCHASED		TOTAL CONSIDERATION		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 or decrease in the assumed initial public offering price of \$ _____ per share, which is the midpoint of the price range set forth on the cover page of this prospectus, would increase or decrease, as applicable, 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 and after deducting the underwriting discounts and commissions payable by us. Similarly, an increase or decrease of 1.0 million shares in the number of shares offered by us would increase or decrease, as applicable, the total consideration paid by new investors by \$ _____ million, assuming no change in the assumed initial public offering price and after deducting the underwriting discounts and commissions payable by us.

The foregoing tables and calculations (other than the historical net tangible book value calculations) are based on _____ shares of our common stock outstanding as of _____, 2020 (including _____ shares of common stock that are subject to a right of repurchase and our convertible preferred stock on an as-converted basis), and excludes:

- _____ shares of common stock issuable upon exercise of options outstanding as of _____, 2020, at a weighted-average exercise price of \$ _____ per share;

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- shares of common stock issuable upon exercise of options granted after _____, 2020, at a weighted-average exercise price of \$ _____ per share;
- warrants to purchase an aggregate of _____ shares of our convertible preferred stock that were outstanding as of _____, 2020 that will be converted into warrants to purchase an aggregate of _____ shares of our common stock, with an exercise price of \$ _____ per share; and
- shares of common stock reserved for issuance pursuant to future awards under our 2020 Plan, including the amendment thereto that will become effective in connection with this offering, and any additional shares that become available under our 2020 Plan pursuant to provisions thereof that automatically increase the share reserve under the plan each year.

To the extent that any outstanding options are exercised or new options are issued under the equity benefit plans, the warrants described above are exercised or we issue additional shares of common stock or convertible securities in the future, there will be further dilution to investors participating in this offering.

SELECTED CONSOLIDATED FINANCIAL DATA

The following tables set forth our selected consolidated financial data for the periods and as of the dates indicated. We derived our consolidated statements of operations and comprehensive loss data for the years ended December 31, 2018 and December 31, 2019, and our consolidated balance sheet data as of December 31, 2018 and December 31, 2019, from our audited consolidated financial statements included elsewhere in this prospectus. Our historical results are not necessarily indicative of the results that may be expected in the future. You should read the following selected consolidated financial data in conjunction with our consolidated financial statements and related notes included elsewhere in this prospectus and the information in the section titled "Management's Discussion and Analysis of Financial Condition and Results of Operations."

	YEAR ENDED DECEMBER 31,	
	2018	2019
(in thousands, except share and per share amounts)		
Consolidated Statements of Operations and Comprehensive Loss Data:		
Related-party revenue	\$ 2,067	\$ 4,796
Operating expenses:		
Research and development	11,270	16,306
General and administrative	2,601	3,313
Cost of services for related-party revenue	1,880	4,360
Total operating expenses	<u>15,751</u>	<u>23,979</u>
Loss from operations	<u>(13,684)</u>	<u>(19,183)</u>
Interest expense	—	(21)
Other income (expense), net	(2)	(5)
Loss before income taxes	(13,686)	(19,209)
Income tax provision	(45)	(34)
Net loss and comprehensive loss	(13,731)	(19,243)
Cumulative dividends allocated to preferred shareholders	(3,671)	(4,028)
Net loss attributable to ordinary shareholders	<u>\$ (17,402)</u>	<u>\$ (23,271)</u>
Net loss per share attributable to ordinary shareholders, basic and diluted	<u>\$ (0.96)</u>	<u>\$ (1.15)</u>
Weighted-average shares used to compute net loss per share attributable to ordinary shareholders, basic and diluted	<u>18,102,402</u>	<u>20,245,115</u>
Pro forma net loss per share attributable to ordinary shareholders, basic and diluted (unaudited)(1)		<u>\$ (0.20)</u>
Weighted-average shares used to compute pro forma net loss per share attributable to ordinary shareholders, basic and diluted (unaudited)(1)		<u>94,274,058</u>

(1) See Note 12 to our audited consolidated financial statements included elsewhere in this prospectus for an explanation of the method used to calculate historical and pro forma basic and diluted net loss per share, 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,	
	2018	2019
(in thousands)		
Consolidated Balance Sheet Data:		
Cash	\$ 8,262	\$ 9,017
Working capital(1)	8,335	4,825
Total assets	11,164	10,676
Total liabilities	2,009	10,952
Convertible preferred shares	60,933	70,363
Accumulated deficit	(53,539)	(72,782)
Total shareholders' deficit	(51,778)	(70,639)

(1) We define working capital as current assets less current liabilities. See our consolidated financial statements 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 of our financial condition and results of operations together with the section titled "Selected Consolidated Financial Data" and our consolidated financial statements and related notes 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. Our actual results could differ materially from those anticipated in these forward-looking statements as a result of various factors, including those set forth under "Risk Factors" and elsewhere in this prospectus.

Overview

We are a clinical-stage immuno-oncology company focused on helping patients fight cancer by developing therapies that block the CD47 checkpoint pathway and bridge the innate and adaptive immune system. Cancer cells leverage CD47, a cell surface protein, as a "don't eat me" signal, to evade detection by the immune system. Our company is developing a next-generation checkpoint inhibitor designed to have a high affinity for CD47 and to avoid the limitations caused by hematologic toxicities inherent in other CD47 blocking approaches. We believe our lead product candidate, ALX148, will have a wide therapeutic window to safely and effectively block the "don't eat me" signal on cancer cells, and to leverage the immune activation of broadly used anti-cancer agents through combination strategies. We have dosed over 140 subjects with ALX148 and have demonstrated promising clinical activity across a range of hematologic and solid malignancies in combination with a number of leading anti-cancer agents. We intend to advance ALX148 into clinical development for the treatment of MDS and to continue clinical development for the treatment of solid tumors. Based on the clinical results to date showing strong evidence of efficacy in multiple tumor types, combined with favorable tolerability, we believe that ALX148 has the potential to become a cornerstone of future combination treatments in oncology.

Our predecessor company, ALX Oncology Limited, an Irish private company limited by shares, was initially incorporated in Ireland on March 13, 2015 under the name Alexo Therapeutics Limited and changed its name to ALX Oncology Limited on October 11, 2018. We were then incorporated in Delaware on April 1, 2020 under the name ALX Oncology Holdings Inc. and completed a reorganization effective as of the same date whereby ALX Oncology Limited became our wholly-owned subsidiary and all of the shareholders, warrant holders and option holders of ALX Oncology Limited became our stockholders, warrant holders and option holders, holding the same number of corresponding shares, warrants and/or options in us as they did in ALX Oncology Limited immediately prior to the reorganization. The information included herein are presented as that of ALX Oncology Holdings Inc., unless such information refers to a date prior to April 1, 2020, in which case it will reflect that of our predecessor company. Relatedly, our capitalization information will be presented as "preferred stock" and "common stock," while capitalization information from a date prior to April 1, 2020 will be presented as "preferred shares" and "ordinary shares."

Since our founding, we have devoted substantially all of our resources to identifying and developing ALX148, advancing preclinical programs, scaling up manufacturing, conducting clinical trials and providing general and administrative support for these operations. We have no products approved for marketing and we have never received any revenue from drug product sales. From inception through December 31, 2019, we have raised an aggregate of \$76.3 million to fund our operations, of which \$70.4 million were net proceeds from sales of our convertible preferred shares and \$5.9 million were net proceeds from borrowings under a term loan. In February 2020, we raised \$105.0 million of gross proceeds from the sale of our Series C convertible preferred shares.

We have incurred net losses in each year since inception. Our net losses were \$13.7 million and \$19.2 million for the years ended December 31, 2018 and December 31, 2019, respectively. As of December 31, 2018 and December 31, 2019, we had an accumulated deficit of \$53.5 million and \$72.8 million, respectively. Substantially all of our operating losses are a result of expenses incurred in connection with our research and development programs, primarily ALX148, and from general and administrative expenses associated with our operations.

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We expect to continue to incur significant expenses and increasing operating losses over at least the foreseeable future. We expect our expenses will increase substantially in connection with our ongoing activities, as we:

- advance ALX148 through multiple clinical trials in multiple indications;
- pursue regulatory approval of ALX148 in hematological malignancies and solid tumors;
- continue our discovery and preclinical and clinical development efforts;
- obtain and maintain patent, trade secret and other intellectual property protection and regulatory exclusivity for our product candidates;
- manufacture supplies for our preclinical studies and clinical trials; and
- continue to add operational, financial and management information systems to support ongoing operations as a public company.

Components of Results of Operations

Related-Party Revenue

To date, we have not generated any revenue from product sales, licenses or collaborations and do not expect to generate any revenue from the sale of products in the foreseeable future. We have recognized related-party revenue related to research and development services to Tollnine, Inc., or Tollnine, as further described in “—License and Collaboration Agreements—Related-Party Agreement” below. If our clinical development efforts for our product candidates are successful and result in regulatory approval, we may generate revenue from future product sales. If we enter into license or collaboration agreements for any of our product candidates or intellectual property, we may generate revenue in the future from payments as a result of such license or collaboration agreements. We cannot predict if, when, or to what extent we will generate revenue from the commercialization and sale of our product candidates including ALX148. We may never succeed in obtaining regulatory approval for any of our product candidates.

Operating Expenses

Research and Development Expenses

Research and development expenses consist primarily of costs incurred for the development of our lead product candidate, ALX148, which include:

- expenses incurred in connection with the preclinical and clinical development, including expenses incurred under agreements with CROs;
- employee-related expenses, including salaries, related benefits, travel and stock-based compensation expense for employees engaged in research and development functions;
- expenses related to production of clinical materials, including fees paid to CMOs;
- laboratory and vendor expenses related to the execution of preclinical studies and clinical trials; and
- facilities and other expenses, which include expenses for rent and maintenance of facilities, depreciation and amortization expense and other supplies.

We expense research and development costs as incurred. Nonrefundable advance payments for goods or services to be received in future periods for use in research and development activities are deferred and capitalized. The capitalized amounts are then expensed as the related goods are delivered or as services are performed. We record accruals for estimated costs of research, preclinical studies and clinical trials and manufacturing development, which are a significant component of research and development expenses. We determine the estimated costs through discussions with internal personnel and external service providers as to the progress or stage of completion of the services and the agreed-upon fees to be paid for such services.

Our research and development expenses consist primarily of costs associated with the development of our lead product candidate ALX148 and include external costs, such as fees paid to consultants, central laboratories, contractors, CMOs and CROs in connection with our preclinical and clinical development activities. We allocate expenses, such as employee salaries, benefits, facilities, travel and other miscellaneous expenses, based on an estimated percentage of time worked on each program.

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Almost all of our research and development expenses to date related to the clinical development of our lead product candidate, ALX148.

We expect our research and development expenses to increase substantially for the foreseeable future as we continue to invest in research and development activities related to developing our product candidates, as our product candidates advance into later stages of development and as we begin to conduct larger clinical trials. The process of conducting the necessary clinical trials to obtain regulatory approval is costly and time-consuming, and the successful development of our product candidates is highly uncertain. As a result, we are unable to determine the duration and completion costs of our research and development projects or when and to what extent we will generate revenue from the commercialization and sale of any of our product candidates.

The successful development of our current and future product candidates is highly uncertain. This is due to the numerous risks and uncertainties, including the following:

- successful completion of preclinical studies and clinical trials;
- delays in regulators or institutional review boards authorizing us or our investigators to commence our clinical trials or in our ability to negotiate agreements with clinical trial sites or CROs;
- the number and location of clinical sites included in the trials;
- raising additional funds necessary to complete clinical development of our product candidates;
- obtaining and maintaining patent, trade secret and other intellectual property protection and regulatory exclusivity for our product candidates;
- contracting with third-party manufacturers for clinical supplies of our product candidates;
- protecting and enforcing our rights in our intellectual property portfolio, including, if necessary, litigation; and
- maintaining a continued acceptable safety profile of the products following approval.

A change in the outcome of any of these variables with respect to the development of our product candidates may significantly impact the costs and timing associated with the development of our product candidates. We may never succeed in obtaining regulatory approval for any of our product candidates.

Research and development activities are central to our business model. There are numerous factors associated with the successful commercialization of any of our product candidates, including future trial design and various regulatory requirements, many of which cannot be determined with accuracy at this time based on our stage of development. In addition, future regulatory factors beyond our control may impact the success, cost or timing of our clinical development programs.

General and Administrative Expenses

General and administrative expenses consist primarily of personnel-related expenses, facilities expenses, depreciation and amortization expenses and professional services expenses, including legal, human resources, audit, accounting and tax-related services. Personnel and related costs consist of salaries, benefits and stock-based compensation. Facilities costs consist of rent and maintenance of facilities.

We anticipate that our general and administrative expenses will increase as a result of increased headcount, expanded infrastructure and higher consulting, legal, tax and regulatory-related services associated with maintaining compliance with stock exchange listing and Securities and Exchange Commission requirements, audit and investor relations costs, director and officer insurance premiums and other costs associated with being a public company.

Cost of Services for Related-Party Revenue

We incur costs associated with related-party contract research services including direct labor and associated employee benefits, laboratory supplies and other expenses. These costs are recorded in cost of services for related-party transactions as a component of total operating expenses in the accompanying consolidated statements of operations and comprehensive loss.

Results of Operations and Net Loss

The following table summarizes our results of operations for the years ended December 31, 2018 and December 31, 2019:

	YEAR ENDED DECEMBER 31,	
	2018	2019
	(in thousands)	
Related-party revenue	\$ 2,067	\$ 4,796
Operating expenses:		
Research and development	11,270	16,306
General and administrative	2,601	3,313
Cost of services for related-party revenue	1,880	4,360
Total operating expenses	<u>15,751</u>	<u>23,979</u>
Loss from operations	<u>(13,684)</u>	<u>(19,183)</u>
Interest expense	—	(21)
Other income (expense), net	(2)	(5)
Loss before income taxes	(13,686)	(19,209)
Income tax provision	(45)	(34)
Net loss and comprehensive loss	(13,731)	(19,243)
Cumulative dividends allocated to preferred shareholders	(3,671)	(4,028)
Net loss attributable to ordinary shareholders	<u><u>\$(17,402)</u></u>	<u><u>\$(23,271)</u></u>

Related-Party Revenue

Related-party revenue for the years ended December 31, 2018 and December 31, 2019 was \$2.1 million and \$4.8 million, respectively, which was generated solely from payments received for reimbursement of research and development expenses pursuant to the Research and Development Services Agreement, or Tollnine Agreement, as further described in “—License and Collaboration Agreements—Related-Party Agreement” below. The increase of \$2.7 million relates to increased fee-for-service hours provided to Tollnine during 2019.

Research and Development Expenses

The following table summarizes our research and development expenses incurred for the years ended December 31, 2018 and December 31, 2019:

	YEAR ENDED DECEMBER 31,	
	2018	2019
	(in thousands)	
Clinical development costs	\$ 7,654	\$14,011
Personnel and related costs	3,312	2,127
Stock-based compensation expense	195	105
Other research and development costs	109	63
Total research and development expenses	<u><u>\$11,270</u></u>	<u><u>\$16,306</u></u>

Research and development expenses for the year ended December 31, 2018 was \$11.3 million, compared to \$16.3 million for the year ended December 31, 2019. The increase of \$5.0 million was primarily due to increases in external research and development expenses related to our lead product candidate, as we significantly increased trial recruitment for our Phase 1 clinical trials for ALX 148 in the year ended December 31, 2019. In addition, in the year ended December 31, 2019, we incurred increased costs for additional preclinical studies and CMC manufacturing.

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General and Administrative Expenses

The following table summarizes our general and administrative expenses incurred for the years ended December 31, 2018 and December 31, 2019:

	YEAR ENDED DECEMBER 31,	
	2018	2019
	(in thousands)	
Personnel and related costs	\$ 695	\$ 834
Stock-based compensation expense	15	33
Other general and administrative costs	1,891	2,446
Total general and administrative expenses	<u>\$2,601</u>	<u>\$3,313</u>

General and administrative expenses for the year ended December 31, 2018 was \$2.6 million, compared to \$3.3 million during the year ended December 31, 2019. This increase of \$0.7 million was due to increased administrative costs supporting the increased activities in connection with our Phase 1 clinical trials for ALX 148, resulting in increased other general and administrative expenses of \$0.6 million, which included increases in business development activities, legal, accounting and audit services, as well as increased personnel-related costs of \$0.1 million.

Cost of Services for Related-Party Revenue

Cost of services for related-party revenue for the year ended December 31, 2018 was \$1.9 million, compared to \$4.4 million during the year ended December 31, 2019. This increase of \$2.5 million was attributable to an increase in services rendered to Tollnine.

Liquidity and Capital Resources; Plan of Operations

Sources of Liquidity

Since our inception, we have incurred significant operating losses and have not generated any product revenue. We have not yet commercialized any of our product candidates and we do not expect to generate revenue from sales of any product candidates for several years, if at all, subject to marketing approval of any of our product candidates. To date, we have funded our operations with proceeds from the sales of shares of our common stock and convertible preferred stock and borrowings under our term loan. Through December 31, 2019, we had received net proceeds of \$70.4 million from sales of our ordinary shares and convertible preferred shares and net proceeds of \$5.9 million borrowings under our term loan. As of December 31, 2019, we had cash of \$9.0 million. In February 2020, we raised \$105.0 million of gross proceeds from the sale of our Series C convertible preferred shares.

Silicon Valley Bank and West River Group Loan and Security Agreement

We and our wholly-owned subsidiaries Alexo Therapeutics International and Sirpant Therapeutics, as borrowers, entered into the Loan Agreement, with SVB and WestRiver, collectively as lenders, and SVB as administrative agent and collateral agent. The Loan Agreement provided for term loans in an aggregate principal amount of up to \$10.0 million funded in two tranches, subject to the satisfaction of a certain milestone. The first tranche, in the amount of \$6.0 million, was funded on the closing date of the Loan Agreement in December 2019. A second tranche of \$4.0 million was available on or before March 31, 2020, upon our achievement of an equity financing resulting in net cash proceeds in an amount of at least \$30.0 million to us. We elected not to draw down on the second tranche, which is no longer available.

The loans under the Loan Agreement bear interest at a floating per annum interest rate equal to the greater of 7.0% or 2.0% plus the prime rate as reported in The Wall Street Journal. The Wall Street Journal prime rate was 4.75% as of December 31, 2019. Therefore, the rate applicable to the Company as of December 31, 2019 was 7.0%.

We are required to make interest-only payments for the first 12 months after the closing of the Loan Agreement, followed by consecutive equal monthly payments of principal and interest commencing on January 1, 2021 and

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continuing through the maturity date of September 1, 2022. The Loan Agreement also provides for a final payment equal to 6.0% multiplied by the aggregate principal amount of the term loans funded, which is due on the maturity date, upon the acceleration of the term loans or upon prepayment of the term loans. If we elect to prepay the term loans, there is also a prepayment fee of between 1.0% and 3.0% of the principal amount being prepaid depending on the timing and circumstances of prepayment.

In conjunction with the Loan Agreement, we issued warrants to purchase 403,348 shares of Series B convertible preferred stock to SVB and WestRiver with an exercise price of \$1.4432 per share. The estimated fair value of the warrants at the date of issuance was approximately \$0.4 million. The fair value of the Series B convertible preferred stock warrant liability was determined using the Black-Scholes option-pricing-model. As of December 20, 2019, the various assumptions used in the Black-Scholes option-pricing model were time to liquidity of 2.0 to 10.0 years, volatility of 85.5%, risk-free rate of 1.7% and equity value of \$345.0 million. The warrant liability was recorded at its fair value at inception and is being remeasured at each financial reporting period with any changes in fair value being recognized as a component of other income (expense), net in the accompanying consolidated statement of operations and comprehensive loss. As of December 31, 2019, the fair value of the Series B convertible preferred stock warrant liabilities was approximately \$0.4 million and was recorded in other long-term liabilities on the consolidated balance sheets.

The loans under the Loan Agreement are secured by substantially all of our assets, except our intellectual property, which is the subject of a negative pledge.

We determined that certain loan features were embedded derivatives requiring bifurcation and separate accounting. Those embedded derivatives were bundled together as a single, compound embedded derivative and then bifurcated and accounted for separately from the host contract. We recorded a term loan compound derivative liability of \$51,000, which will be marked-to-market in future periods. We calculated the fair values of the compound derivative by computing the difference between the fair value of the term loans and the compound derivative using the “with and without” method under the income approach, and the fair value of the term loans without the compound derivative. We calculated the fair values using a probability-weighted discounted cash flow analysis. The key valuation assumptions used consist of the discount rate and the probability of a change in control event. The term loan compound derivative liability is being remeasured at each financial reporting period with any changes in fair value being recognized as a component of other income (expense), net in the consolidated statements of operations and comprehensive loss. As of December 31, 2019, the fair value of the compound derivative liability was approximately \$51,000 and was recorded in other long-term liabilities on the consolidated balance sheets.

The fair value of Series B convertible preferred stock warrant liability at issuance, fair value of embedded derivatives which were bifurcated and other debt issuance costs have been treated as debt discounts on our consolidated balance sheets and together with the final payment are being amortized to interest expense throughout the life of the term loans using the effective interest rate method.

Funding Requirements

We expect our expenses to increase substantially in connection with our ongoing activities, particularly as we advance the preclinical activities and clinical trials for our product candidates in development. In addition, upon the closing of this offering, we expect to incur additional costs associated with operating as a public company. Management recognizes the need to raise additional capital to fully implement its business plan. The timing and amount of such future capital requirements are difficult to forecast and will depend on many factors, including:

- the timing and progress of preclinical and clinical development activities;
- successful enrollment in and completion of clinical trials;
- the timing and outcome of regulatory review of our product candidates;
- our ability to establish agreements with third-party manufacturers for clinical supply for our clinical trials and, if any of our product candidates are approved, commercial manufacturing;
- addition and retention of key research and development personnel;
- our efforts to enhance operational, financial and information management systems, and hire additional personnel, including personnel to support development of our product candidates;
- the costs and timing of future commercialization activities, including product manufacturing, marketing, sales and distribution, for any of our product candidates for which we obtain marketing approval;

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- the legal patent costs involved in prosecuting patent applications and enforcing patent claims and other intellectual property claims; and
- the terms and timing of any collaboration, license or other arrangement, including the terms and timing of any milestone and royalty payments thereunder.

Until such time, if ever, as we can generate substantial product revenue, we expect to finance our operations through a combination of equity offerings, debt financings, collaborations, strategic alliances and marketing, distribution or licensing arrangements. We do not currently have any committed external source of funds. To the extent that we raise additional capital through the sale of equity or convertible debt securities, your ownership interest will be diluted, and the terms of these securities may include liquidation or other preferences that adversely affect your rights as a common stockholder. Debt financing and preferred equity financing, if available, may involve agreements that include covenants limiting or restricting our ability to take specific actions, such as incurring additional debt, making acquisitions or capital expenditures or declaring dividends. If we raise additional funds through collaborations, strategic alliances or marketing, distribution or licensing arrangements with third parties, we may have to relinquish valuable rights to our technologies, future revenue streams, research programs or drug candidates or grant licenses on terms that may not be favorable to us. If we are unable to raise additional funds through equity or debt financings or other arrangements when needed, we may be required to delay, limit, reduce or terminate our research, product development or future commercialization efforts or grant rights to develop and market drug candidates that we would otherwise prefer to develop and market ourselves.

Without giving effect to the anticipated net proceeds from this offering, we believe that our existing cash and cash subsequently raised in February 2020 will enable us to fund our operating expenses and capital expenditure requirements for at least the next 12 months.

We estimate that our net proceeds from this offering will be approximately \$ _____ million based on an assumed initial public offering price of \$ _____ per share (the midpoint of the price range set forth on the cover page of this prospectus), after deducting the underwriting discounts and commissions and estimated offering expenses payable by us. We believe that the net proceeds from this offering, together with our existing cash and cash subsequently raised in February 2020, will enable us to fund our operating expenses and capital expenditure requirements for at least the next _____ months. We have based these estimates on assumptions that may prove to be wrong, and we could utilize our available capital resources sooner than we expect. Our Loan Agreement includes covenants limiting or restricting our ability to take specific actions, such as incurring additional debt.

Cash Flows

The following table summarizes our sources and uses of cash for each of the periods presented:

	YEARS ENDED DECEMBER 31,	
	2018	2019
	(in thousands)	
Net cash provided by (used in):		
Operating activities	\$(13,190)	\$(14,249)
Investing activities	(653)	(353)
Financing activities	1	15,357
Net (decrease) increase in cash	<u>\$(13,842)</u>	<u>\$ 755</u>

Operating Activities

In the year ended December 31, 2018, cash used in operating activities of \$13.2 million was attributable to a net loss of \$13.7 million partially offset by \$0.7 million in non-cash charges and a net change of \$0.2 million in our net operating assets and liabilities. The non-cash charges consisted of stock-based compensation expense of \$0.3 million and depreciation and amortization expense of \$0.4 million. The change in operating assets and liabilities was primarily due to a \$0.9 million increase in receivables due from a related-party and \$0.3 million

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decrease in accounts payable. This was partially offset by a \$0.9 million decrease in prepaid expenses and other current assets resulting from the timing of prepayments made for research and development activities.

In the year ended December 31, 2019, cash used in operating activities of \$14.2 million was attributable to a net loss of \$19.2 million and a net change of \$4.3 million in our net operating assets and liabilities, partially offset by \$0.7 million in non-cash charges. The non-cash charges primarily consisted of stock-based compensation expense of \$0.3 million and depreciation and amortization expense of \$0.4 million. The change in operating assets and liabilities was primarily due to a \$3.0 million increase in accounts payable, a \$0.7 million decrease in prepaid expenses and other current assets and a \$0.4 million decrease in receivables due from a related-party. The increase in accounts payable is primarily due to the timing of cash payments and increased activities to support overall business growth.

Investing Activities

In the year ended December 31, 2018, cash used for investing activities of \$0.7 million was related to capital expenditures on the purchase of property and equipment.

In the year ended December 31, 2019, cash used for investing activities of \$0.4 million was related to capital expenditures on the purchase of property and equipment.

Financing Activities

In the year ended December 31, 2018, cash provided by financing activities was nominal.

In the year ended December 31, 2019, cash provided by financing activities of \$15.4 million was related to net proceeds of \$9.4 million from the issuance of convertible preferred shares and \$5.9 million from the net proceeds from a term loan entered into in December 2019.

Contractual Obligations and Commitments

The following table summarizes our commitments and contractual obligations as of December 31, 2019:

	PAYMENTS DUE BY PERIOD				
	TOTAL	LESS THAN 1 YEAR	1-3 YEARS	3-5 YEARS	MORE THAN 5 YEARS
Operating lease obligations (1)	\$ 1,928	\$ 544	\$ 1,137	\$ 247	\$ —
Manufacturing and service contracts (2)	6,731	926	5,805	—	—
Term loan (3)	7,151	401	6,750	—	—
Total	\$15,810	\$ 1,871	\$13,692	\$ 247	\$ —

(1) Payments due for our lease of office and laboratory space in Burlingame, California under a single operating lease agreement that expires in 2023.

(2) In November 2015, we entered into a Master Service Agreement, or the MSA, with KBI Biopharma, Inc. relating to formulation development, process development and cGMP manufacturing of ALX148 for use in clinical trials on a project basis. The MSA had an initial term of three years with successive one-year renewal periods, is cancellable upon notice and is non-exclusive. Statements of work under the MSA commit us to certain purchase obligations of approximately \$6.7 million. These amounts are based on non-cancellable commitments and forecasts that include estimates of future market demand, quantity discounts and manufacturing efficiencies that may impact timing of purchases.

(3) On December 20, 2019, we borrowed a loan pursuant to the Loan Agreement as described above under "—Silicon Valley Bank and West River Group Loan and Security Agreement."

We enter into contracts in the normal course of business with various third parties for clinical trials, preclinical research studies and testing, manufacturing and other services and products for operating purposes. These contracts generally provide for termination upon notice. Payments due upon cancellation consist only of payments for services provided or expenses incurred, including non-cancellable obligations of our service providers, up to the date of cancellation. These payments are not included in the table of contractual obligations above.

Cumulative Dividends on Convertible Preferred Shares

As of December 31, 2019, there were \$12.7 million of cumulative dividends on our Series A and B convertible preferred shares, which are payable upon the occurrence of certain change of control and liquidation events and

upon the conversion of such convertible preferred shares upon a qualifying initial public offering, each as described in our organizational documents.

License and Collaboration Agreements

Exclusive (Equity) Agreement with The Board of Trustees of the Leland Stanford Junior University

In March 2015, we entered into a license agreement, or the Stanford Agreement, with the Board of Trustees of the Leland Stanford Junior University, or Stanford, under which we obtained a worldwide, royalty-bearing, sublicensable license under certain patents relating to our current product candidates, to develop, manufacture and commercialize products for use in certain licensed fields, the scope of which would include the application of the licensed intellectual property in oncology. The license granted to us in the Stanford Agreement includes an exclusive grant, subject to certain pre-existing non-exclusive or exclusive rights that Stanford retained for grant to third parties with respect to certain categories of the licensed patents in certain fields of use and retained rights by Stanford and all other nonprofit institutions to use and practice the licensed patents and technology for internal research and other nonprofit purposes. The license granted to us in the Stanford Agreement also includes non-exclusive grants to certain Stanford patents.

In consideration for the rights granted to us under the Stanford Agreement, we paid Stanford a nonrefundable license royalty and reimbursed Stanford for past patent expenses, together totaling less than \$0.1 million, and granted Stanford a specified number of our ordinary shares. In addition, we are obligated to pay Stanford ongoing patent expenses and an annual license maintenance fee, which are nominal and will be creditable against any royalties payable to Stanford in the applicable year. We are required to make milestone payments up to a specified amount in respect of a specified number of licensed products that successfully satisfy certain clinical and regulatory milestones. No milestone payments have been made through December 31, 2019. We also agreed to pay Stanford tiered royalties on a specified percentage of net sales made by us, our affiliates and our sublicensees of licensed products at rates ranging within low single-digit percentages, subject to certain reductions and offsets. Our license, on a licensed product-by-licensed product and country-by-country basis, shall become royalty-free and fully paid-up upon the later of the date on which the last valid claim included in the exclusively or non-exclusively licensed patents expires and certain number of years after the first commercial sale of the licensed product in such country.

The Company may terminate the Stanford Agreement, on a licensed product-by-licensed product basis, at any time for any reason by providing at least 60 days' written notice to Stanford. Stanford may terminate the Stanford Agreement, if the Company is in breach of any provision of the Stanford Agreement and fail to remedy such breach within 60 days after written notice of such breach by Stanford. In addition, Stanford has the right to terminate the Stanford Agreement, on a licensed product-by-licensed product basis, if the Company is not diligently developing and commercializing such licensed product under certain conditions or if the Company fails to achieve specified development milestones for such licensed product by certain dates, subject to the Company's extension rights.

Commercial License Agreement with Selexis SA

In June 2016, we entered into a license agreement with Selexis SA, or Selexis, under which we obtained a worldwide, royalty-bearing, sublicensable license under certain patents, know-how and other intellectual property, to use Selexis generated cell lines to manufacture ALX148 and to make, use and sell licensed products containing such compound in all fields of use. The rights granted under this agreement include the rights to grant sublicenses to contractors or other collaboration partners, in each case to develop production processes or manufacture licensed products, containing ALX148.

In consideration for the rights granted to us under the agreement, we paid Selexis a nominal one-time fee and will pay Selexis an annual maintenance fee. We also agreed to pay Selexis milestone payments in respect of each licensed product developed and/or commercialized under the grant, that successfully satisfies certain milestone events. We also agreed to pay Selexis a flat royalty of a very low single-digit percentage on net sales made by us, our affiliates and our sublicensees of products. This royalty obligation, on a product-by-product and country-by-country basis, shall terminate and become fully paid-up upon the passing of certain number of years after the first commercial sale of the product in such country or our exercise of the royalty buyout option, exercisable at any time prior to the first commercial sale of a licensed product.

We may terminate the license agreement at any time for any reason with at least 60 days' written notice to Selexis. Either party may terminate the license agreement if the other party enters into a bankruptcy event or in the event of

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a material breach of the agreement (that cannot be cured or remains uncured for 60 days after the date that the defaulting party is provided with written notice of such breach). Our obligations to make payments that are accrued or accruable will survive any termination of the agreement, and in certain circumstances the licenses granted under the agreement will terminate unless they have become fully paid up as described in the previous paragraph.

Commercial Antibody Agreement with Crystal Bioscience, Inc. (Now a Subsidiary of Ligand Pharmaceuticals Incorporated)

In March 2017, we entered into an agreement with Crystal Bioscience, Inc. (now a subsidiary of Ligand Pharmaceuticals Incorporated), or Crystal, under which we obtained an assignment of certain patents, covering certain SIRP_a antibodies. Under this agreement, we also received a worldwide, royalty-bearing non-exclusive license, with the right to grant sublicenses through multiple tiers of sublicenses, under certain of Crystal's background patents and know-how necessary to commercialize the rights under the assigned patents.

In consideration for the rights granted to us under the agreement, we agreed to pay Crystal milestone payments up to \$11.1 million in respect of all licensed products developed under the assigned patents, that successfully satisfy certain clinical and regulatory milestones, each milestone being paid only once for all products. We also agreed to pay Crystal tiered royalties on net sales of licensed products made by us, our affiliates and our sublicensees of products at rates ranging within low single-digit percentages, subject to certain potential reductions. This royalty obligation, on a product-by-product and country-by-country basis, shall terminate and become fully paid-up upon the later of the date on which the last valid claim included in the licensed patents expires and a certain number of years after the first commercial sale of the product in such country.

We agreed to use commercially reasonable efforts to develop and commercialize licensed products, including meeting defined development milestones by certain specified dates.

We may terminate the agreement at any time for any reason with at least 60 days' written notice to Crystal. Either party may terminate the agreement if the other party enters into a bankruptcy event or in the event of material breach of the agreement (that remains uncured for 60 days after the date that it is provided with written notice of such breach). Our obligations to pay royalties and milestone payments which accrued pre-termination or accrue post-termination will survive any termination.

Related-Party Agreement

In June 2018, we entered into the Tollnine Agreement with Tollnine, a related-party, to provide research and development services to Tollnine. Since June 2018 to April 2020, our Chief Executive Officer was also the Chief Executive Officer of Tollnine and currently two of our investors are also investors in Tollnine. In April 2020, our Chief Scientific Officer replaced our Chief Executive Officer to become the Chief Executive Officer of Tollnine. As such, Tollnine was deemed to be a related-party. The Tollnine Agreement has an initial term of three years, to be automatically renewed for additional one-year terms unless terminated by either party. The services are to be provided at a price based on the costs incurred by us plus a mark-up equal to 10.0% of such costs. We recognize revenue when Tollnine, as our customer, obtains control of promised goods or services, in an amount that reflects the consideration which we expect to receive in exchange for those goods or services.

For the years ended December 31, 2018 and December 31, 2019, we recognized related-party revenues of \$2.1 million and \$4.8 million, respectively, under the Tollnine Agreement.

As of December 31, 2018 and December 31, 2019, we had outstanding related-party receivables from Tollnine of \$0.9 million and \$0.5 million, respectively.

Internal Control Over Financial Reporting

In connection with the audit of our consolidated financial statements for each of the years ended December 31, 2018 and December 31, 2019, we and our independent registered public accounting firm identified material weaknesses in our internal control over financial reporting resulting from a lack of sufficient qualified personnel. For the year ended December 31, 2018, the material weaknesses related to (i) independent reviews of journal entries not being performed prior to posting, (ii) account reconciliations not being performed and independently reviewed on a timely basis and (iii) lack of independent review of technical accounting matters. For the year ended December 31, 2019, (i) and (ii) remained unremediated. A material weakness is a deficiency, or a combination of deficiencies, in internal

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control over financial reporting such that there is a reasonable possibility that a material misstatement of our consolidated financial statements will not be prevented or detected on a timely basis. We are in the process of implementing a remediation plan to establish more robust processes related to the review of complex accounting transactions, the preparation of account reconciliations and the review of journal entries, and we have undertaken specific remediation actions to address the control deficiencies in our financial reporting. These remediation actions included hiring a full time Chief Financial Officer in January 2020 and a Vice President, Finance and Chief Accounting Officer in March 2020, both of whom have extensive experience in developing and implementing internal controls and executing plans to remediate control deficiencies. We added new control activities, modified existing controls, and enhanced the documentation that evidences that controls are performed. While two of the three material weaknesses remain un-remediated as of December 31, 2019, we expect our comprehensive plan of effective remediation to be fully implemented by the end of the first half of 2020. If remediation of these material weaknesses is not effective, or if we fail to develop and maintain an effective system of disclosure controls and internal control over financial reporting, our ability to produce timely and accurate consolidated financial statements or comply with applicable laws and regulations could be impaired. See "Risk Factors—Risks Related to Our Operations—We identified material weaknesses in our internal control over financial reporting. If our remediation measures are not effective, we may not be able to report our financial condition or results of operations accurately or on a timely basis."

Off-Balance Sheet Arrangements

During the period presented, we did not have, nor do we currently have, any off-balance sheet arrangements, as defined in the rules and regulations of the SEC.

Quantitative and Qualitative Disclosures about Market Risks

Interest Rate Risk

We are exposed to market risks in the ordinary course of our business. These risks primarily include interest rate sensitivities. We held cash of \$9.0 million as of December 31, 2019. We generally hold our cash in interest-bearing bank accounts. Our primary exposure to market risk is interest rate sensitivity, which is affected by changes in the general level of U.S. interest rates. An immediate 100 basis point change in interest rates would not have a material effect on the fair market value of our cash.

Financial Institution Risk

Substantially all of our cash is held with a single financial institution. Due to its size, this financial institution represents a minimal credit risk. Cash amounts held at financial institutions are insured by the Federal Deposit Insurance Corporation up to \$250,000. At December 31, 2019, we had \$8.8 million in excess of this insured limit.

Foreign Currency Risk

Our expenses are generally denominated in U.S. dollars. However, we have entered into a limited number of contracts with vendors for services with payments denominated in foreign currencies, primarily the Euro. We are subject to foreign currency transaction gains or losses on our contracts denominated in foreign currencies. To date, foreign currency transaction gains and losses have not been material to our consolidated financial statements, and we have not had a formal hedging program with respect to foreign currency. A 10.0% increase or decrease in current exchange rates would not have a material effect on our financial results.

Effects of Inflation

Inflation generally affects us by increasing our cost of labor and clinical trial costs. We do not believe that inflation has had a material effect on our results of operations during the periods presented.

Emerging Growth Company Status

We are an "emerging growth company," as defined in the JOBS Act, and may take advantage of reduced reporting requirements that are otherwise applicable to public companies. Section 107 of the JOBS Act exempts emerging growth companies from being required to comply with new or revised financial accounting standards until private companies are required to comply with those standards. We have elected to take advantage of the extended transition period for complying with new or revised accounting standards. As a result of this election, our consolidated financial statements may not be comparable to companies that comply with public company effective dates. The JOBS Act also exempts us from having to provide an auditor attestation of internal control over financial reporting under SOX Section 404(b).

We will remain an “emerging growth company” until the earliest of (1) the last day of the fiscal year in which we have total annual gross revenues of \$1.07 billion or more, (2) the last day of the fiscal year following the fifth anniversary of the completion of this initial public offering, (3) the date on which we have issued more than \$1.0 billion in nonconvertible debt during the previous three years or (4) the date on which we are deemed to be a large accelerated filer under the rules of the SEC, which generally is when we have more than \$700 million in market value of our stock held by non-affiliates and we have been a public company for at least 12 months and have filed one annual report on Form 10-K.

Critical Accounting Policies and Significant Judgments and Estimates

Our management’s discussion and analysis of our financial condition and results of operations are based on our consolidated financial statements, which have been prepared in accordance with U.S. generally accepted accounting principles. The preparation of our consolidated financial statements and related disclosures requires us to make estimates and judgments that affect the reported amounts of assets, liabilities, expenses and the disclosure of our contingent liabilities in our consolidated financial statements. We base our estimates on historical experience, known trends and events and various other factors that we believe are 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. We evaluate our estimates and assumptions on an ongoing basis. Our actual results may differ from these estimates under different assumptions or conditions.

While our significant accounting policies are described in more detail in Note 1 to our audited consolidated financial statements elsewhere in this prospectus, we believe that the following accounting policies are those most critical to the judgments and estimates used in the preparation of our audited consolidated financial statements.

Clinical and Manufacturing Accruals

We accrue for estimated costs of research and development activities conducted by third-party service providers, which include the conduct of clinical trials and contract manufacturing activities. We record the estimated costs of research and development activities based upon the estimated amount of services provided. These costs are included in either prepaid expenses and other current assets or accrued expenses and other current liabilities in the consolidated balance sheets and within research and development expense in the consolidated statements of operations and comprehensive loss. We accrue for these costs based on factors such as estimates of the work completed and in accordance with agreements established with its third-party service providers. We record prepaid expenses which consists of amounts paid in advance for services that have not yet been incurred as of the end of the fiscal year.

Stock-Based Compensation Expense

We account for stock-based compensation by measuring and recognizing compensation expense for all stock-based payments made to employees, directors and non-employees based on estimated grant-date fair values. We use the straight-line method to allocate compensation cost to reporting periods over each optionee’s requisite service period, which is generally the vesting period, and estimates the fair value of stock-based awards to employees, directors and non-employees using the Black-Scholes option-pricing model. The Black-Scholes option-pricing model requires the input of subjective assumptions, including expected volatility, expected dividend yield, expected term, risk-free rate of return, and the estimated fair value of the underlying common shares on the date of grant.

Expected Term—We have opted to use the “simplified method” for estimating the expected term of options, whereby the expected term equals the arithmetic average of the vesting term and the original contractual term of the option (generally 10 years).

Risk-Free Interest Rate—The risk-free rate assumption is based on the U.S. Treasury instruments with maturities similar to the expected term of our stock options.

Expected Dividend—We have not issued any dividends and do not expect to issue dividends over the life of the options. As a result, we have estimated the dividend yield to be zero.

Expected Volatility—Due to our limited operating history and a lack of company specific historical and implied volatility data, we have based our estimate of expected volatility on the historical volatility of a group of similar

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companies that are publicly traded. The historical volatility data was computed using the daily closing prices for the selected companies' shares during the equivalent period of the calculated expected term of the stock-based awards.

The estimated fair value of stock options granted to employees and non-employee service providers are expensed over the requisite service period (generally the vesting term) on a straight-line basis. We account for the impact of forfeitures as they occur.

The fair values of the stock options granted during the years ended December 31, 2018 and December 31, 2019 were estimated at the date of grant using the Black-Scholes option-pricing model with the following assumptions:

	YEAR ENDED DECEMBER 31,	
	2018	2019
Expected term (in years)	5.2—6.0	4.4—6.0
Risk-free interest rate	2.6—3.0%	1.7—2.1%
Expected dividend rate	—	—
Expected share price volatility	66.5—68.7%	75.2—80.5%

Stock-based compensation expense, net of forfeitures, is reflected in the consolidated statements of operations and comprehensive loss as follows (in thousands):

	YEAR ENDED DECEMBER 31,	
	2018	2019
Research and development	\$ 16	\$ 105
General and administrative	195	33
Cost of services for related-party revenue	58	159
Total	\$ 269	\$ 297

As of December 31, 2019, total unamortized stock-based compensation expense was \$0.6 million.

The intrinsic value of all outstanding stock options as of December 31, 2019 was approximately \$ million based on the common stock fair value of \$ per share, the midpoint of the price range set forth on the cover page of this prospectus.

Determination of the Fair Value of Common Stock

We are required to estimate the fair value of the common stock underlying our stock-based awards when performing the fair value calculations using the Black-Scholes option pricing model. Because our common stock is not currently publicly traded, the fair value of the common stock underlying our stock-based awards has been determined on each grant date by our board of directors, with input from management, considering our most recently available third-party valuation of common shares. All options to purchase shares of our common stock are intended to be granted with an exercise price per share no less than the fair value per share of our common stock underlying those options on the date of grant, based on the information known to us on the date of grant.

In the absence of a public trading market for our common stock, on each grant date, our board of directors made a reasonable determination of the fair value of our common stock based on the information known to us on the date of grant, upon a review of any recent events and their potential impact on the estimated fair value per share of the common stock, and timely valuations from an independent third-party valuation in accordance with guidance provided by the American Institute of Certified Public Accountants Practice Aid, *Valuation of Privately-Held-Company Equity Securities Issued as Compensation*, or Practice Aid. In addition, our board of directors considered various objective and subjective factors to determine the fair value of our common stock, including:

- the estimated value of each security both outstanding and anticipated;
- the anticipated capital structure that will directly impact the value of the currently outstanding securities;

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- our results of operations and financial position;
- the status of our research and development efforts;
- the composition of, and changes to, our management team and board of directors;
- the lack of liquidity of our common stock as a private company;
- our stage of development and business strategy and the material risks related to our business and industry;
- external market conditions affecting the life sciences and biotechnology industry sectors;
- U.S. and global economic conditions;
- the likelihood of achieving a liquidity event for the holders of our common stock, such as an initial public offering or a sale of our company, given prevailing market conditions; and
- the market value and volatility of comparable companies.

The Practice Aid identifies various available methods for allocating enterprise value across classes and series of capital stock to determine the estimated fair value of common stock at each valuation date. In accordance with the Practice Aid, our board of directors considered the following methods:

- *Option Pricing Method.* Under the option pricing method, or OPM, shares are valued by creating a series of call options with exercise prices based on the liquidation preferences and conversion terms of each equity class. The estimated fair values of the preferred and common stock are inferred by analyzing these options.
- *Probability-Weighted Expected Return Method.* The probability-weighted expected return method, or PWERM, is a scenario-based analysis that estimates value per share based on the probability-weighted present value of expected future investment returns, considering each of the possible outcomes available to us, as well as the economic and control rights of each share class
- *Current Value Method.* Under the Current Value Method, or CVM, our value is determined based on our balance sheet. This value is then first allocated based on the liquidation preference associated with convertible preferred stock issued as of the valuation date, and then any residual value is assigned to the common stock.
- *Hybrid Methods of Enterprise Value Allocation.* The hybrid method is a hybrid between the PWERM and OPM, estimating the probability-weighted value across multiple scenarios but using the OPM to estimate the allocation of value within one or more of those scenarios. The hybrid method can be a useful alternative to explicitly modeling all PWERM scenarios in situations when the company has transparency into one or more near-term exits but is unsure about what will occur if the current plans fall through.

Based on our early stage of development and other relevant factors, we determined that an OPM was the most appropriate method for allocating our enterprise value to determine the estimated fair value of our common stock for valuations performed through December 31, 2019.

The April 15, 2019 ordinary share valuation was based on a back-solve method of OPM, which derives the implied equity value for one type of equity security from a contemporaneous transaction involving another type of security, the Series B convertible preferred shares in this instance.

For valuations performed after this date, we began using a hybrid of the OPM and the PWERM methods to determine the estimated fair value of our common stock. In determining the estimated fair value of our common stock, our board of directors also considered the fact that our stockholders could not freely trade our common stock in the public markets. Accordingly, we applied discounts to reflect the lack of marketability of our common stock based on the weighted-average expected time to liquidity.

For the February 10, 2020 ordinary share valuation, we have used a hybrid method to determine the fair value of our common stock, in addition to giving consideration to recent sale of Series C convertible preferred shares. Under the hybrid method, multiple valuation approaches were used and then combined into a single probability-weighted valuation, consistent with the Practice Aid. Our approach included the use of initial public offering scenario and an OPM.

Application of these approaches involves the use of estimates, judgment and assumptions that are highly complex and subjective, such as those regarding our expected future revenue, expenses, cash flows, discount rates, market

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multiples, the selection of comparable companies and the probability of future events. Changes in any or all of these estimates and assumptions, or the relationships between those assumptions, impact our valuations as of each valuation date and may have a material impact on the valuation of common stock.

Our board of directors and management develop best estimates based on application of these approaches and the assumptions underlying these valuations, giving careful consideration to the advice from our third-party valuation expert. Such estimates involve inherent uncertainties and the application of significant judgment. As a result, if factors or expected outcomes change and we use significantly different assumptions or estimates, our equity-based compensation could be materially different.

Following the closing of this offering, the fair value of our common stock will be the closing price of our common stock on the Nasdaq Global Select Market as reported on the date of the grant.

Recent Accounting Pronouncements

From time to time, new accounting pronouncements are issued by the Financial Accounting Standards Board, or FASB, or other standard setting bodies and adopted by us as of the specified effective date. Unless otherwise discussed, the impact of recently issued standards that are not yet effective are not expected to have a material impact on our financial position or results of operations upon adoption.

In February 2016, the FASB issued ASU No. 2016-02 (Topic 842), 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 No. 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. In November 2019, the FASB issued ASU No. 2019-10, which extends the effective date of ASU No. 2016-02 for non-public business entities, including smaller reporting companies, to fiscal years beginning after December 15, 2020. The new standard is effective for us beginning January 1, 2021. Early adoption is permitted. We are currently evaluating the effects of the adoption of this guidance on our consolidated financial statements and related disclosures.

In June 2016, the FASB issued ASU No. 2016-13, Financial Instruments-Credit Losses (Topic 326), which requires entities to measure all expected credit losses for financial assets held at the reporting date based on historical experience, current conditions and reasonable and supportable forecasts. This replaces the existing incurred loss model and is applicable to the measurement of credit losses on financial assets measured at amortized cost. In February 2020, the FASB issued ASU No. 2020-02 and delayed the effective date of Topic 326 until fiscal year beginning after December 15, 2022. The new standard is effective for us beginning January 1, 2023. Early adoption is permitted. We are currently evaluating the effects of the adoption of this guidance on our consolidated financial statements and related disclosures.

In December 2019, the FASB issued ASU No. 2019-12, Income Taxes (Topic 740): Simplifying the Accounting for Income Taxes, which is intended to simplify various aspects related to accounting for income taxes. The pronouncement is effective for fiscal years, and for interim periods within those fiscal years, beginning after December 15, 2021. ASU 2019-12 is effective for us beginning January 1, 2022. Early adoption is permitted. We are currently in the process of evaluating the effects of the adoption of this guidance on our consolidated financial statements and do not expect it to have a material impact on our consolidated financial statements.

BUSINESS

Overview

We are a clinical stage immuno-oncology company focused on helping patients fight cancer by developing therapies that block the CD47 checkpoint pathway and bridge the innate and adaptive immune system. Cancer cells leverage CD47, a cell surface protein, as a “don’t eat me” signal, to evade detection by the immune system. Our company is developing a next-generation checkpoint inhibitor designed to have a high affinity for CD47 and to avoid the limitations caused by hematologic toxicities inherent in other CD47 blocking approaches. We believe our lead product candidate, ALX148, will have a wide therapeutic window to safely and effectively block the “don’t eat me” signal on cancer cells, and to leverage the immune activation of broadly used anti-cancer agents through combination strategies. We have dosed over 140 subjects with ALX148 and have demonstrated promising clinical activity across a range of hematologic and solid malignancies in combination with a number of leading anti-cancer agents. We intend to advance ALX148 into clinical development for the treatment of myelodysplastic syndromes, or MDS, and to continue clinical development for the treatment of a range of solid tumor indications. Based on the clinical results to date showing strong evidence of efficacy in multiple oncology indications, combined with favorable tolerability, we believe that ALX148 has the potential to become a cornerstone of future combination treatments in oncology.

Anti-cancer agents, including many chemotherapies, other small molecules and anti-cancer antibodies, can stimulate immune cells such as macrophages to engulf and kill cancer cells, a process known as phagocytosis, by providing so-called “eat me” signals on cancer cells. In response, cancer cells frequently overexpress CD47 to counteract these “eat me” signals. As a result, high expression of CD47 on cancer cells has been associated with reduced patient survival in multiple cancers. The therapeutic blockade of CD47 in combination with an “eat me” signal enables the immune system to detect and phagocytose cancer cells. However, healthy blood cells and nearly all other cells in the body also express CD47 as a way to protect against pathologic phagocytosis by immune cells. There have been a number of approaches to blocking CD47, including monoclonal antibodies and fusion proteins that include an active Fc region. These approaches have encountered limitations, including limited dosing and therapeutic window, limited ability to combine with other anti-cancer agents, limited efficacy in solid tumors and limited indications due to patient selection, that have challenged their ability to maximize the full potential of CD47 blockade. In addition, most of these therapeutic approaches to CD47 blockade have resulted in the destruction of patients’ healthy blood cells, causing cytopenias that limit the dosing and therapeutic potential of those molecules.

ALX Oncology was founded by Corey Goodman, Ph.D., K. Christopher Garcia, Ph.D., and Jaume Pons, Ph.D. to address fundamental challenges in blocking CD47 and to realize the full potential of this therapeutic target. We have developed a new approach to CD47 blockade that is designed to maximize clinical activity and minimize toxicities. All competing clinical data to date have come from product candidates that incorporate an active antibody Fc region in addition to a CD47 blocking region. The Fc region provides a positive, pro-phagocytic “eat me” signal to macrophages and other cells of the immune system. Since healthy blood cells also express CD47, these competing therapeutic approaches can cause a reduction in the number of blood cells in the body, resulting in anemia, thrombocytopenia and neutropenia, which can be dangerous to patients and may limit the ability to combine these agents with other anti-cancer medicines.

Our lead product candidate, ALX148, is a next-generation CD47 blocking therapeutic that we believe has significantly enhanced properties compared to competing CD47 blocking approaches. ALX148 is a fusion protein that combines a high-affinity CD47 binding domain with an inactivated proprietary Fc domain. The CD47 binding domain of ALX148 is an affinity enhanced extracellular domain of SIRP α , a protein that is the natural receptor to CD47 found on myeloid cells. We have engineered the Fc domain of ALX148 so that it does not provide a pro-phagocytic signal while still maintaining an antibody-like half-life for the molecule. We believe our inactive Fc approach may significantly improve safety and tolerability, when compared to other CD47 blocking approaches that have an Fc domain that engages activating receptors on macrophages, causing phagocytosis and death of healthy cells in addition to cancer cells.

ALX148’s design has several advantages that we believe will make it broadly applicable to treating a number of oncology indications. Due to the inactive Fc, ALX148 is specifically designed for use in combination with other anti-

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cancer agents that provide a positive immune-stimulating signal. We believe ALX148 has a favorable tolerability profile that may enable higher dosing levels and greater combination potential with other leading anti-cancer agents. Additionally, the molecular weight of ALX148 is half that of a typical antibody. The relatively smaller size of our molecule may facilitate increased penetrance into the tumor microenvironment. We believe these properties may enable ALX148 to provide superior therapeutic benefits and become a backbone of combination treatment for many different cancers.

Clinical data to date in ALX148 have not shown dose-dependent hematologic toxicities, which are characteristic of other CD47 blockers that incorporate an active Fc domain. At least 115 subjects have been treated with ALX148 in combination with targeted anti-cancer agents and checkpoint inhibitors as of the Efficacy Cut-Off Date, January 21, 2020 for NHL and September 23, 2019 for solid tumors. As of the Safety Cut-Off Date, November 1, 2019 for NHL and April 18, 2019 for solid tumors, two subjects (2%) experienced treatment-related grade 3+ anemia and only four subjects (4%) treatment-related serious adverse events of any kind. ALX148 has not reached a maximum tolerated dose in any of the combinations evaluated to date.

We plan to advance ALX148 for the treatment of MDS. In our ongoing Phase 1b trial of ALX148 in combination with an anti-CD20 agent to treat subjects with relapsed/refractory non-Hodgkin's lymphoma, or NHL, ALX148 demonstrated a higher 62.5% objective response rate, or ORR, in the highest dose (15 mg/kg once per week, or QW) cohort as compared to a 40.9% ORR at the lower dose (10 mg/kg QW) cohort. We view this ORR as compelling evidence for the role of ALX148 in treating hematologic malignancies and as a favorable comparison to outcomes reported by other CD47 blocking agents in a similar patient population. Furthermore, other CD47 blocking agents in development have demonstrated clinical evidence supporting the role of CD47 blockade in treating hematologic malignancies, specifically in MDS, albeit with high rates of cytopenias. We have conducted preclinical studies of ALX148 combined with azacitidine, a standard of care agent for the treatment of MDS, that support our clinical development plan in MDS. Our studies and those of others show that azacitidine increases calreticulin display, an "eat me" signal, in tumor models. The addition of ALX148 to azacitidine shows increased phagocytic activity and tumor growth inhibition as compared to azacitidine alone in these in vitro models. We are planning to advance ALX148 into a Phase 1b/2 trial in combination with azacitidine for the first-line treatment of subjects with higher-risk MDS by the end of 2020.

ALX148 has also generated promising clinical data in solid tumors in combinations with a leading tumor antigen targeting antibody and a leading checkpoint inhibitor. We believe that ALX148 induces multiple responses that bridge innate and adaptive immunity. In Phase 1b clinical trials, ALX148 has demonstrated both promising levels of activity and safety in combination with other broadly utilized cancer agents. Based on these results, the Food & Drug Administration, or FDA, has granted Fast Track designation for ALX148 for both the treatment of patients with HNSCC in the first-line setting and for patients with advanced HER2-positive gastric/gastroesophageal junction, or GEJ, carcinoma in the second-line setting. While other CD47 blockers have failed to achieve meaningful clinical activity in the treatment of solid tumors, we believe ALX148's properties, including favorable tolerability and ability to escalate to higher doses, coupled with high affinity and small size for enhanced solid tumor penetration, may underlie the observed efficacy in solid tumors. We are planning to advance ALX148 into Phase 2 trials in subjects with HNSCC in combination with pembrolizumab, marketed as Keytruda and the market leading anti-programmed cell death protein-1, or PD-1, checkpoint inhibitor, in the first half of 2021, and gastric/GEJ carcinoma in combination with trastuzumab, marketed as Herceptin and the market-leading anti-HER2 antibody, in the second half of 2021.

Our team of industry veterans plans to continue to advance a broad development plan for ALX148 that balances speed to market, scale of unmet need and existing clinical evidence for ALX148's combination mechanisms. Members of our management team have brought multiple drugs to FDA approval. Our President, Chief Executive Officer and founder, Jaume Pons, Ph.D., was Chief Science Officer of Rinat (a subsidiary of Pfizer), invented fremanezumab (FDA approved in 2018), tanezumab (Biologics License Application, or BLA, filed in 2020) and additional antibodies in late-stage development at Pfizer and advanced nine more drugs into human trials. Our Chief Medical Officer, Sophia Randolph, M.D., Ph.D., was the global clinical franchise lead for Ibrance at Pfizer, where she oversaw the program from first-in-human trials to regulatory approval. Our Executive Chairman and founder, Corey Goodman, Ph.D., an elected member of the National Academy of Sciences, has co-founded seven

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biopharmaceutical companies, including Exelixis and Labrys (acquired by Teva Pharmaceuticals in 2014), and led Pfizer's Biotherapeutics and Bioinnovation Center. Our Chief Financial Officer, Peter Garcia, has over 20 years of experience guiding public and private life science companies and has raised over \$1.5 billion in debt and equity offerings. We have funded ALX Oncology to date primarily through the issuance and sale of our convertible preferred stock to investors including venBio, Lightstone Ventures, Vivo Capital, Logos Capital, Janus Henderson, Foresite Capital, Stanford University, Cormorant Asset Management, BVF Partners, HBM Healthcare Investments and the Longevity Fund. We own global rights to all of our product candidates.

Our Strategy

Our goal is to transform treatment options for patients with cancer by developing ALX148 as a foundational checkpoint immunotherapy.

Key elements of our strategy to support this goal include:

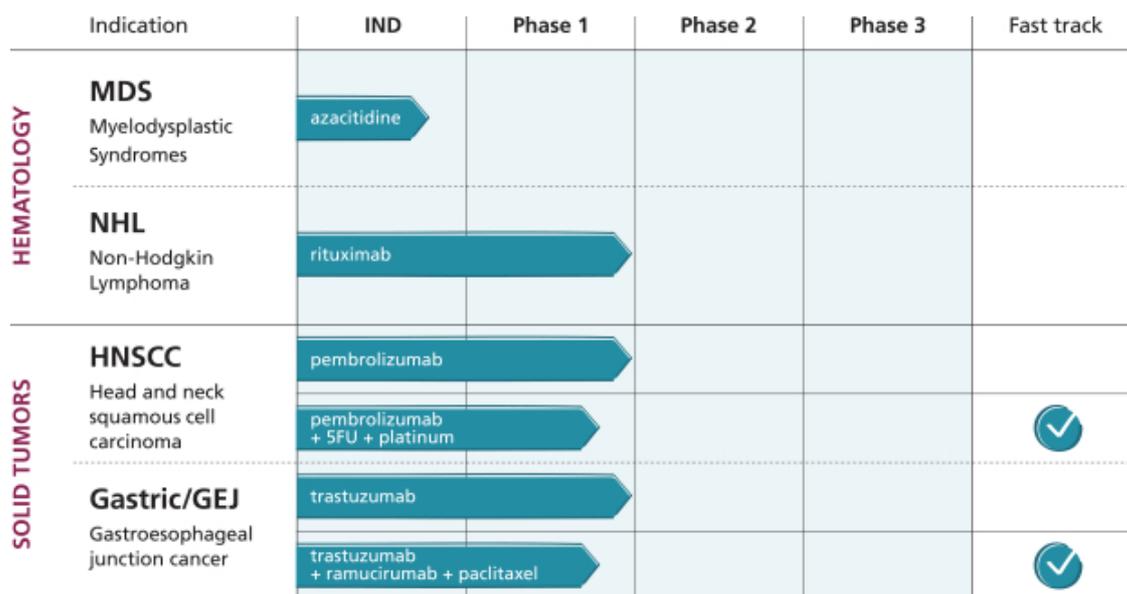
- **Pursuing fast to market trials for our lead product candidate, ALX148, in MDS.** We plan to initiate a Phase 1b/2 trial of ALX148, in combination with azacitidine, for the first-line treatment of patients with higher-risk MDS by the end of 2020. Given the limitations of current treatment options for patients with MDS, strong preclinical activity of ALX148 in combination with azacitidine, clinical data from competitor programs and the differentiated tolerability profile of ALX148, we believe the data generated from this Phase 1b/2 trial could potentially support accelerated approval of ALX148 in the first-line treatment of high-risk MDS.
- **Expanding the therapeutic potential of CD47 blockade into solid tumors.** We believe ALX148 can overcome the limitations of other CD47 blocking approaches in solid tumors. We have generated encouraging data in subjects with HNSCC treated with ALX148 in combination with a PD-1 checkpoint inhibitor and in subjects with HER2-positive gastric/GEJ cancer, who have progressed on prior HER2-targeted therapy and chemotherapy, treated in combination with a HER2-targeted antibody. We have initiated additional Phase 1b cohorts for the first-line treatment of subjects with HNSCC and patients with HER2-positive gastric/GEJ cancer, with Phase 1b data expected in 2021. The FDA has granted ALX148 Fast Track designation in first-line HNSCC and advanced gastric/GEJ cancer. We believe the data generated from our planned Phase 2 randomized trials of ALX148 and pembrolizumab with and without chemotherapy in first-line HNSCC could potentially support accelerated approval. We are also planning a randomized Phase 2 trial of ALX148, trastuzumab and chemotherapy in first-line HER2-positive gastric/GEJ cancer to inform future paths to registration in this indication.
- **Continuing development of a pipeline of innovative therapeutics based on our protein engineering expertise and knowledge of the immune system and cancer biology.** We specialize in designing and developing drug candidates that engage the immune system. We continue to develop a pipeline of immuno-oncology programs that represent complementary, but differentiated, approaches to engaging the innate and adaptive immune systems.
- **Developing strategic partnerships to broaden the potential impact of our current and future product candidates across patient populations.** In order to advance treatment options for the most patients, we may partner with other companies with complementary resources that will maximize the value of our current and future product candidates. Such partnerships may allow us to pair ALX148 and our future product candidates with other novel agents owned fully or in part by strategic partners. Partnerships may also help realize the full potential of our product candidates in markets where we are unlikely to pursue development or commercialization on our own. We intend to maintain significant economic interest in our product candidates and selectively consider partnership opportunities.

Pipeline

Our initial programs are focused on targeting CD47 across various oncology indications. Many forms of cancer use CD47 expression as a means of evading immune response. We are targeting the hematologic malignancies and solid tumor indications where we believe we have the greatest potential to address large markets and unmet medical needs.

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The chart below summarizes the development status of our product candidate pipeline.



We are also developing preclinical programs that may offer additional ways to engage the innate and adaptive immune response to cancer.

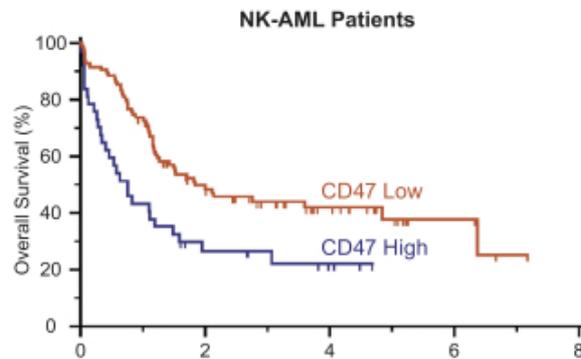
CD47 Scientific Background

Cancer immunotherapies targeting adaptive immune system checkpoints, notably those related to T cells, have transformed the standard of care in oncology across multiple cancer types. Initial clinical successes in this area have focused on stimulating the adaptive immune system. However, emerging evidence demonstrates that the innate immune system plays a crucial role in the first line of defense to eliminate transformed malignant cells and the subsequent activation of the adaptive immune system. Dendritic cells and macrophages are a type of myeloid cell and are important parts of the innate immune system. These cells eliminate cancer cells by phagocytosis and present tumor-derived antigens to T cells, a process known as cross-priming, which activates the adaptive immune system.

Cancer cells evade phagocytosis by up-regulating CD47, a transmembrane protein that mainly functions as an anti-phagocytic “don’t eat me” signal for healthy cells. CD47 interacts with its cognate receptor SIRP α , a regulatory membrane glycoprotein, that is expressed on macrophages and other myeloid cells and serves to prevent phagocytosis when bound to CD47. By overexpressing CD47, cancer cells are able to avoid phagocytosis by macrophages and thereby evade subsequent detection by the adaptive immune system.

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High CD47 expression in cancer cells has been shown to be a prognostic indicator of decreased survival in multiple oncology indications. A study published by Majeti, et al. in 2009, assessed this association in a validation cohort of 137 subjects with acute myeloid leukemia, or AML. As shown in the figure below, subjects with high levels of CD47 expression had shorter median overall survival, or mOS, of 9.1 months compared to subjects with low levels of CD47 expression who had an mOS of 22.1 months.

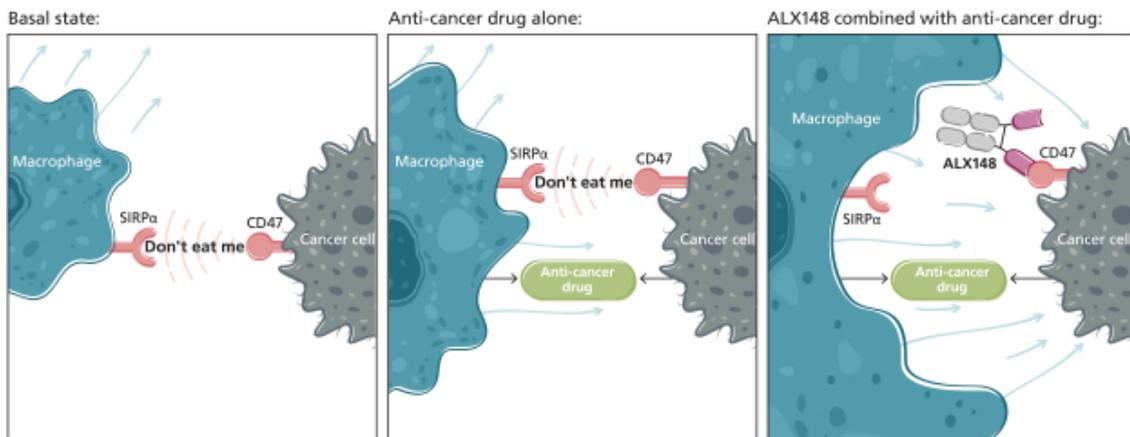


CD47 as a therapeutic checkpoint target

Data generated by our and other studies in the field have demonstrated that activating the immune system against cancer requires both blocking phagocytosis checkpoints and inducing pro-phagocytic signals. This can be achieved by combining CD47 blockade with either conventional chemotherapies or targeted therapies, which together promote phagocytosis by macrophages and maximize adaptive immune system response.

Existing anti-cancer therapeutics can increase "eat me" signals on cancer cells. For example, both the hypomethylating agent, or HMA, azacitidine and the B-cell lymphoma 2, or BCL-2, inhibitor venetoclax activate the immune system by increasing display of calreticulin, a multifunctional protein, on cancer cells. Calreticulin is an important example of a pro-phagocytic "eat me" signal that potentiates immune response when expressed on cancer cells. Therapeutic antibodies that target tumor-specific antigens, such as the HER2 receptor, also induce cellular phagocytosis, but through a slightly different mechanism. These antibodies direct macrophages to cancer cells by binding to the tumor-specific antigen and activating the macrophage by engaging the Fcγ receptors to induce phagocytosis. However, if CD47 is not blocked, the "don't eat me" signal can limit the activity of this mechanism. CD47 blocking therapies can therefore maximize a combination agent's clinical efficacy by overcoming the "don't eat me" signal that is co-opted by cancer cells.

Our lead product candidate targets CD47 to maximize phagocytosis of cancer cells and activation of the adaptive immune system.



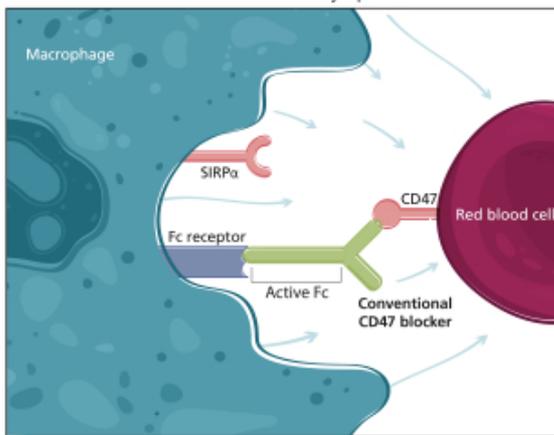
Cancer cells can also modulate their environment to suppress detection by immune cells. Overexpression of CD47 helps cancer cells avoid innate immune system detection by dendritic cells and subsequent antigen presentation to T cells, thereby limiting anti-tumor immune response. PD(L)-1 targeting immunotherapies are designed to reduce the suppression of T cells but do not address the initial evasion of the innate immune system by cancer cells. By removing the suppression of dendritic cells, CD47 blocking therapies in combination with PD(L)-1 targeted therapies can complement their T cell stimulatory activities.

Limitations of Current Approaches to Blocking CD47

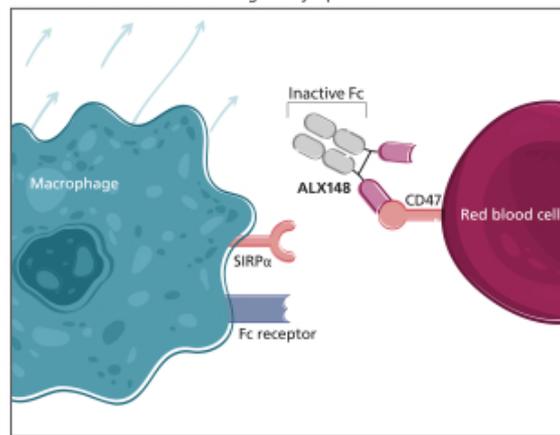
There have been a number of approaches to blocking CD47, including monoclonal antibodies and fusion proteins that include an active Fc region. These approaches have encountered limitations that have challenged their ability to maximize the full potential of CD47 blockade. These include:

- **Limited dosing and therapeutic window:** All clinical data to date from other CD47 blocking agents have come from approaches that incorporate an active Fc region that provides an “eat me” signal to macrophages. Given that healthy blood cells express CD47, the presence of an “eat me” signal coupled with CD47 binding in a single-agent leads to destruction of blood cells. This mechanism is illustrated in the figure below. The trials of these other CD47 blocking agents have resulted in frequent occurrence of treatment-related cytopenias that we believe limits the therapeutic window of these agents. In addition to limiting the dosing, cytopenias can be dangerous for patients undergoing treatment for cancer as they may already have a compromised immune system related to intensive treatment regimens and disease progression.
- **Limited ability to combine with other anti-cancer agents:** Combination therapies continue to play an important role in treating patients with cancer. Overlapping toxicities of these agents dictate which agents can and cannot be combined. The overlapping toxicity profiles of other CD47 blocking agents and most other anti-cancer agents create challenges for combination dosing. When combination dosing is possible, the therapeutic benefit of the combination is limited due to the minimal amount of the CD47 blocking agent that can be safely dosed. Moreover, many combinations are precluded entirely due to overlapping toxicity. In addition, an active Fc domain can compete with anti-cancer antibodies when used in combination treatments and can prevent such antibodies from binding with Fcγ receptors on immune cells.
- **Limited efficacy in solid tumors:** To date, other CD47 blocking agents have failed to achieve meaningful clinical activity in the treatment of solid tumors, as the balance between managing cytopenias and maximizing efficacy may lead to tolerable doses that are too low to facilitate tumor penetration and efficacy.
- **Limited indications due to patient selection:** Toxicities associated with other CD47 blocking agents may require careful patient selection when evaluating potential indications. In some cases, only subjects with lower risk of hematologic complications have been selected for treatment for other CD47 blocking agents due to drug related risk of severe cytopenias. Several sponsors have chosen to initially develop these investigational medicines in indications such as MDS, where patients are often already cytopenic upon presentation and receive regular transfusions, potentially obscuring the side effects of their CD47 blocking approaches.

CD47 blockers with an active Fc result in cytopenias:



ALX148 with an inactive Fc mitigates cytopenias:



Advantages of ALX's Approach to Blocking CD47

We founded ALX Oncology because we believed the limitations described above would prevent CD47 blockade from reaching its full potential as a therapy for patients with cancer. From the company's inception, we designed ALX148 to overcome these limitations and to maximize the utility of CD47 blockade as an effective anti-cancer therapeutic for a broad range of tumors. Specifically, we believe ALX148 may provide the following significant advantages:

- **Broader therapeutic window:** We believe ALX148's broader therapeutic window will allow for greater drug exposure than other CD47 blocking agents potentially translating into improved efficacy across a range of cancers, including MDS, compared to other CD47 blocking agents. To date, we have not yet reached a maximum tolerated dose, or MTD, for ALX148. Furthermore, flexibility in dosing could allow for several administration schedules (weekly, bi-weekly, every three weeks, monthly) that are more amenable to combination therapy dosing schedules, potentially improving a patient's quality of life.
- **Strong potential for combination with other anti-cancer agents:** CD47 blocking agents are combined with other therapeutics in order to maximize their potential in treating patients with cancer. Unlike other CD47 blocking agents, ALX148 was specifically designed to be combined with other anti-cancer agents. We believe ALX148's favorable toxicity profile will enable it to be combined with a wider range of anti-cancer agents, including chemotherapy and cytotoxic containing regimens, compared to other CD47 blocking agents. Furthermore, we believe that ALX148's inactive Fc domain will neither compete with nor potentially limit the efficacy of anti-cancer antibodies when used in combination treatments.
- **Encouraging efficacy in solid tumors:** ALX148 has demonstrated meaningful Phase 1 clinical data in the treatment of solid tumors. While other CD47 blocking agents have failed to demonstrate meaningful clinical activity in solid tumors, ALX148's differentiated properties may underlie its encouraging results. We believe that the data generated with ALX148 in combination with anti-cancer antibodies and checkpoint inhibitors suggest that ALX148 has a significant opportunity to become a cornerstone therapy for the treatment of solid tumors.
- **Broader potential indications:** We believe ALX148's tolerability profile will allow for broad treatment of patient populations in a wide range of oncology indications. Toxicities such as cytopenias associated with other CD47 blocking agents may potentially constrain their development strategies. While initial activity of other CD47 blocking agents has been reported in indications such as MDS where many patients already suffer from disease-induced cytopenias, their development in oncology indications that do not include associated cytopenias may be challenged. We believe ALX148 is well positioned to expand the therapeutic potential of CD47 blockade across a broad spectrum of hematologic and solid tumor indications.

ALX148

Our lead product candidate, ALX148, is a CD47 blocking biologic in development as a combination therapy with other anti-cancer agents for treatment of various oncology indications, including MDS, HNSCC and gastric/GEJ. We engineered ALX148 to maximize CD47 blockade and to avoid hematologic toxicities. We believe ALX148 enhances the efficacy of both anti-cancer targeted antibodies, numerous small molecule drugs and T cell checkpoint inhibitors and exhibits no dose-dependent cytopenias. ALX148 has demonstrated encouraging clinical activity in combination with multiple anti-cancer regimens for both hematologic and solid malignancies.

Other companies have pursued CD47 blocking approaches that prioritize single-agent activity, albeit with limited success. Rather than designing the molecule for monotherapy activity that has been associated with cytopenias, we designed ALX148 for use in combination with anti-cancer agents. Our product candidate exclusively blocks the "don't eat me" pathway. A combination anti-cancer agent provides a specific pro-phagocytic signal on cancer cells. This approach may both increase the specificity to cancer cells and avoid dose-dependent destruction of healthy blood cells.

Fusion Protein Design

ALX148 is a first-in-class fusion protein designed to provide a high CD47 blocking potency while potentially eliminating any associated toxicities. Our fusion protein comprises an engineered CD47-binding domain of SIRP α that has been genetically linked to a modified human immunoglobulin-derived Fc domain that does not bind to Fc γ receptors. We engineered ALX148 in two important ways:

- We mutated the binding domain to optimize CD47 affinity. ALX148 binding domain demonstrates an affinity that is over 3,000 times stronger than wildtype SIRP α .
- We fused the CD47-binding region of SIRP α to an inactive Fc domain. Incorporating an inactive Fc domain was intended to eliminate single-agent activation of macrophages while still maintaining an antibody-like pharmacokinetic, or PK, profile.

The successful design of ALX148 required in-house generation of approximately 280 different protein constructs to thoroughly evaluate and optimize the impact of differing designs on multiple important evaluation criteria.

In order to optimize ALX148's properties we conducted the following processes:

- Design of the high-affinity CD47 binding domain:
 - Optimization of binding affinity for human CD47;
 - Optimization of cross-reactivity to rodent and monkey CD47 to enable key translational experiments; and
 - Elimination of partially glycosylated sites in SIRP α to remove heterogeneity and enable consistent manufacturing.
- Design of the optimal fusion combination for PK extension:
 - Selection of an immunoglobulin isotype to prevent hemagglutination; and
 - Selection of mutations to immunoglobulin G1, or IgG1, to functionally eliminate Fc γ binding and avoid associated cytopenias while maintaining neonatal Fc receptor binding that enables antibody-like PK.

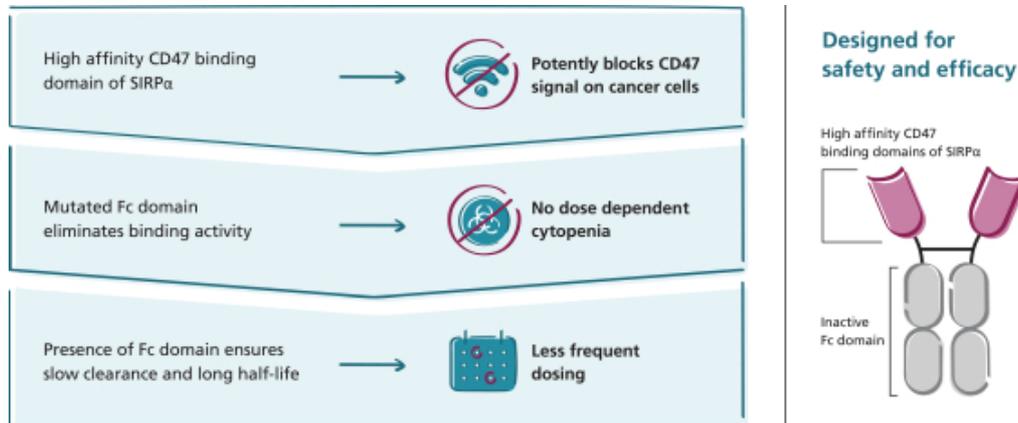
As illustrated in the figure below, ALX148 comprises:

- A SIRP α binding domain optimized to bind to CD47 with high affinity at a picomolar level; and
- An inactive Fc domain that reduces cytopenias while preserving the desired PK properties of antibodies with an active Fc domain.

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The resulting fusion protein has approximately one-half the molecular weight of a typical antibody. ALX148's lower molecular weight enables it to deliver the molar equivalent of an antibody at one half the dose. For example, a 30 mg/kg dose of ALX148, the highest level that we have dosed to date, is approximately equivalent to a 60 mg/kg dose of an antibody. ALX148's lower molecular weight may also facilitate increased solid tumor penetration and provide greater potency within the tumor microenvironment. Furthermore, ALX148 can be efficiently and consistently produced at high yield at commercial scale utilizing standard monoclonal antibody manufacturing techniques. We believe ALX148's differentiated properties potentially overcome the limitations of other CD47 blocking agents and may position it as a cornerstone of future combination treatments in oncology.

Our lead candidate is a fusion protein that potently and selectively binds CD47 to block the SIRPα interaction.



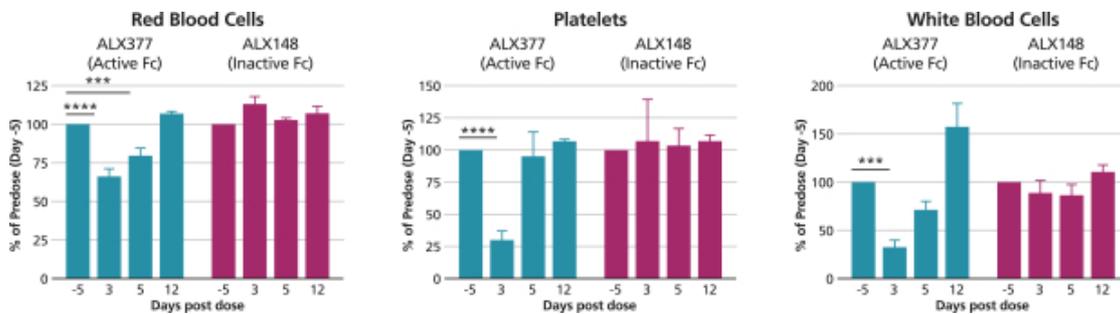
Pre-Clinical Differentiation

Our preclinical studies of ALX148 support a target product profile of favorable tolerability, the ability to be dosed in high levels and increased anti-tumor activity as compared to other CD47 blocking agents. These data include the following.

Lack of hematologic side effects

Our preclinical data demonstrate that CD47 blocking agents with an active Fc domain directly cause adverse hematologic side effects. To support this hypothesis, we engineered a fusion protein with a SIRPα CD47-binding domain identical to ALX148's binding domain but fused to an active, wild-type IgG1 Fc domain, ALX377. We administered 30 mg/kg ALX148 and 30 mg/kg ALX377 in mouse models and measured red blood cell, or RBC, platelet and white blood cell (lymphocyte, monocytes and granulocytes) counts. As shown in the figure below, mice treated with ALX148 having an inactive Fc domain showed blood count levels that were similar to the pre-dose baseline. In contrast, mice treated with ALX377 having an active Fc domain showed average decreases of 34% in RBC count, 70% in platelet count and 67% in white blood cell count three days post-dosing as compared to baseline counts.

The inactive Fc domain on ALX148 is responsible for improved hematologic tolerability in preclinical models.



*** p<0.001
**** p<0.0001

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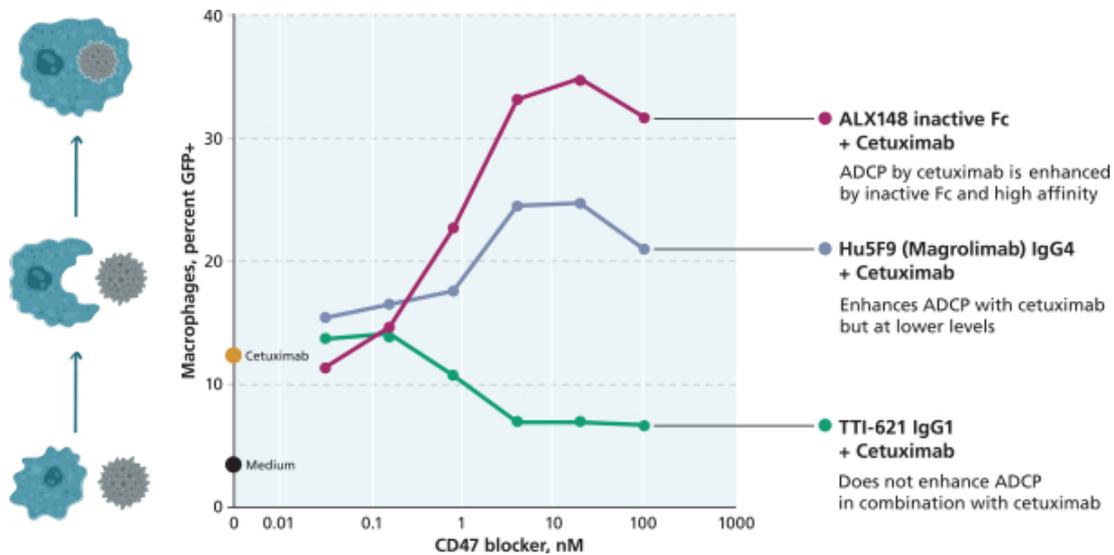
To further evaluate ALX148's preclinical tolerability, cynomolgus monkeys were treated by weekly intravenous injections at doses of zero (control), 10, 30 and 100 mg/kg for five consecutive weeks. No toxicity or adverse findings related to CD47 blockade by ALX148 were seen in analysis of RBCs, white blood cells, platelets, body weight, ophthalmic examination, cytokine analysis, ECG parameters and anatomical pathology assessment. The no-observable-adverse-effect-level in the study was the highest dose tested, 100 mg/kg.

Together, these preclinical studies demonstrate that inactivation of the Fc domain of ALX148 avoids adverse effects on normal blood cells seen on other CD47 blocking agents with an active Fc domain. They also supported our expectation that ALX148's lack of overlapping toxicities with other anti-cancer therapies would result in fewer adverse outcomes in a clinic when combined with these therapies than combinations with conventional CD47 blocking agents.

ALX148 elicits superior phagocytosis in combination with anti-cancer antibodies

The inactive Fc of ALX148 does not compete with the active Fc domain of other therapeutic antibodies for binding with Fc γ receptors on effector cells of the immune system. This fact, coupled with the high-affinity CD47 binding of our agent, results in enhanced phagocytosis from ALX148 in combination with other anti-cancer antibodies to a greater extent than other CD47 blockers. We believe this will allow us to explore ALX148 in combination with a higher number of leading anti-cancer antibodies compared to other CD47 blocking agents in both hematologic malignancies and solid tumors. In order to investigate the potential effects of the Fc domain and CD47 binding affinity on phagocytic activity, we produced two CD47 blocking agents with either an IgG4 or IgG1 active Fc domain, based on published sequences from two other clinical CD47 blockade programs. We combined these agents and ALX148 with cetuximab, an epidermal growth factor receptor, or EGFR, inhibitor that is FDA approved for several solid tumors, to assess phagocytic activity as compared to single-agent cetuximab. Both cetuximab and the active Fc domain of a CD47 blocking agent bind to the same cell surface Fc γ receptors on a macrophage, potentially creating competition. IgG1 binds to receptors with higher affinity than IgG4 does, and ALX148's inactive Fc does not bind. This experiment shows that CD47 blocking agents with active Fc domains and lower affinity, combined with cetuximab result in lower phagocytic activity from macrophages as compared to ALX148 with cetuximab. This experiment suggests ALX148, the only clinical CD47 blocking agent with an inactive Fc domain and high-affinity CD47 binding, may be unique in its anti-tumor activity when combined with anti-tumor antibodies.

ALX148 has shown superior antibody-dependent cellular phagocytosis, or ADCP, of solid tumor cells compared to CD47 blockers with an active Fc domain and lower CD47 affinity when combined with an anti-tumor antibody.



Clinical Data

Favorable safety profile

Clinical trials to date continue to support ALX148’s differentiated approach to CD47 blockade. ALX148 has been administered in over 140 subjects with advanced solid or hematologic malignancies, including in combination with a range of standard of care anti-cancer regimens. ALX148 has been consistently well-tolerated, with low occurrences of cytopenias and other toxicities. Adverse events are reported as of the Safety Cut-Off Date.

We have not yet reached a maximum tolerated dose in any trial of ALX148 and are continuing to test higher doses. Because the half-life of ALX148 is longer with higher dose levels, such dosing may allow up to Q4W dosing. Furthermore, ALX148’s tolerability profile could potentially result in a broad therapeutic window. We believe its tolerability profile to date supports initiation of trials in combination with highly effective, but more toxic, standard of care agents, such as chemotherapies that can cause cytopenias. Many other CD47 blocking agents are unable to combine with these anti-cancer agents due to overlapping toxicity profiles. We believe ALX148 may be uniquely positioned in its ability to combine with standard of care agents including those with associated cytopenias.

Initial data suggests that ALX148 demonstrates a consistent tolerability profile in Phase 1 trial cohorts.

Treatment related adverse events	ALX148 + Pembrolizumab (N=52)		ALX148 + Trastuzumab (N=30)		ALX148 + Rituximab (N=29)	
	Total n (%)	≥Grade 3	Total n (%)	≥Grade 3	Total n (%)	≥Grade 3
AST increased	8 (15.4%)	-	-	-	-	-
ALT increased	7 (13.5%)	1 (1.9%)	-	-	-	-
Fatigue	6 (11.5%)	-	8 (26.7%)	-	2 (7.0%)	-
Pruritus	5 (9.6%)	-	-	-	-	-
Rash	2 (3.8%)	-	-	-	5 (17.0%)	-
Anemia	4 (7.7%)	1 (1.9%)	2 (6.7%)	-	2 (7.0%)	1 (3.0%)
Infusion reaction	4 (7.7%)	-	-	-	-	-
Platelets decreased	4 (7.7%)	2 (3.8%)	4 (13.3%)	2 (6.7%)	-	-
Alkaline phosphatase incr	3 (5.7%)	-	-	-	-	-
Arthralgia	3 (5.8%)	-	-	-	-	-
Pyrexia	3 (5.8%)	-	3 (10.0%)	-	-	-
WBC decreased	3 (5.8%)	-	-	-	-	-
Decreased appetite	2 (3.8%)	-	3 (10.0%)	-	-	-
Myalgia	2 (3.8%)	-	-	-	-	-
Nausea	2 (3.8%)	-	2 (6.7%)	-	2 (7.0%)	-
Neutropenia	2 (3.8%)	1 (1.9%)	2 (6.7%)	2 (6.7%)	2 (7.0%)	2 (7.0%)

As of Safety Cut-Off Date. Treatment-related adverse events occurring in ≥2 subjects in all histologies.

Single-digit incident rates of treatment-related grade three and higher cytopenias occurred across each of the trial cohorts in this heavily pre-treated group of subjects who are typical participants in early stage cancer trials and are often hematologically fragile at baseline. Additionally, the majority of treatment-related adverse events were of low-grade and were easily managed. Overall, ALX148 was well tolerated in an advanced cancer population and can be combined with a wide range of anti-cancer therapeutics.

All other CD47 blockers that have reported clinical data have reported high rates of both all grade and high grade cytopenias. A magrolimab clinical trial in solid tumors resulted in 56% anemia in the first 48 subjects dosed, despite each subject receiving an initial priming dose to mitigate anemia. A recent trial of magrolimab in 62 subjects with higher-risk MDS or AML presented in December 2019 reported over 35% grade 3 or 4 treatment-related anemia, over 20% grade 3 or 4 treatment-related neutropenia and over 15% grade 4 treatment-related thrombocytopenia. An unfavorable tolerability profile such as this could present challenges to these agents. In contrast, ALX148’s tolerability profile may enhance the breadth of clinical development by providing better treatment options for patients with cancer.

Clinical PK and PD Data

Initial clinical trials have confirmed that ALX148 exhibits favorable PK, and CD47 target occupancy, or TO. Human PK following intravenous, or IV, doses of ALX148 ranging from 0.3 to 30 mg/kg either as a single-agent, or in combination with pembrolizumab, trastuzumab or rituximab have been characterized in 131 subjects as of January 21, 2020. ALX148's PK profiles demonstrated a non-linear PK trend with faster clearance at lower doses and slower clearance at higher doses of 10 mg/kg QW and 30 mg/kg once every other week, or QoW. ALX148's PK profile was not affected by combination with rituximab, trastuzumab or pembrolizumab.

The pharmacodynamics, or PD, following ALX148 IV infusion either as a single-agent or in combination with pembrolizumab, trastuzumab or rituximab have been characterized in 139 subjects in as of January 21, 2020. Target engagement has been confirmed based on CD47 TO in peripheral blood T lymphocytes and erythrocytes measured by a flow cytometry assay. At lower doses of 0.3 mg/kg and 1 mg/kg, a dose-dependent increase of TO was observed. Increased TO was observed following the subsequent IV dosing compared to the first IV infusion. Complete TO (> 85%) in peripheral blood was observed at doses ³ 3 mg/kg QW. Complete TO in peripheral blood was also observed for ALX148 dosed at 10 mg/kg QW in combination with pembrolizumab, trastuzumab or rituximab. Based in part on this data, Phase 1b expansion trials used 10 mg/kg QW dosing of ALX148.

In our Phase 1b expansion trial to date, we have observed what may be a dose-response in subjects with NHL. While our data support full TO in the periphery at 10 mg/kg, enhanced tumor penetration may explain the higher response rate seen at 15 mg/kg in the clinic. Given the favorable tolerability observed to date at doses up to 15 mg/kg QW, we plan to evaluate these higher doses of ALX148.

Clinical Development of ALX148 in Hematologic Malignancies

The potential role of CD47 blockade to date has been clearly demonstrated in hematologic malignancies. This includes both our trials of ALX148 as well as trials by other CD47 blockade programs. We are planning to advance ALX148 in MDS based on our initial trials in relapsed/refractory NHL, preclinical studies and evidence for the clinical utility of the CD47 blockade from other programs.

NHL Proof-of-Principle

ALX148's initial hematologic clinical trial is an ongoing Phase 1b expansion trial in combination with rituximab to treat subjects with relapsed/refractory NHL. This is an open-label, multisite trial to assess safety. Subjects received ALX148 10 mg/kg QW or 15 mg/kg QW in combination with rituximab 375 mg/m² administered as an intravenous infusion QW for four doses followed by once monthly for eight doses. In order to meet inclusion criteria, subjects must have had no curative therapy or standard approved therapy option available to them. Across all cohorts, as of the Efficacy Cut-Off Date, subjects had received a median of three lines of therapy prior to enrollment in the ALX148 trial. These were heavily pre-treated subjects, all of whom had progressed on previous rituximab-containing regimens.

Responses were evaluated according to Lugano 2014 response criteria and reported as of the Efficacy Cut-Off Date. As of the Efficacy Cut-Off Date, there were 30 response evaluable subjects, of whom ten had indolent lymphomas and 20 had aggressive lymphomas. There were eight response evaluable subjects in the higher dose 15 mg/kg QW cohort. This cohort achieved an ORR of 62.5% (5/8). The ORR in the lower dose 10 mg/kg QW cohort was 40.9% (9/22).

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Phase 1b NHL 10mg/kg cohort:				Phase 1b NHL 15mg/kg cohort:			
	Population	N	ORR		Population	N	ORR
 Response evaluable patients N=22 Relapsed/Refractory NHL, prior regimen with Rituximab  Treatment: ALX148 10 mg/kg once a week (QW) + Rituximab 375 mg/m ² once a week for 4 weeks, once monthly for 8 months	All	22	40.9%	 Response evaluable patients N=8 Relapsed/Refractory NHL, prior regimen with Rituximab  Treatment: ALX148 15 mg/kg once a week (QW) + Rituximab 375 mg/m ² once a week for 4 weeks, once monthly for 8 months	All	8	62.5%
	Aggressive	15	33.3%		Aggressive	5	40.0%
	Indolent	7	57.1%		Indolent	3	100%

Indolent = Follicular Lymphoma and Marginal Zone Lymphoma; Aggressive = Relapse/refractory Diffuse Large B Cell Lymphoma and Mantle Cell Lymphoma; ORR = Objective Response Rate.

As of Efficacy Cut-Off Date.

We view ALX148's initial activity in heavily pre-treated subjects with NHL as compelling evidence for the role of ALX148 in treating hematologic malignancies and as a favorable comparison to outcomes reported by other CD47 blocking agents in similar subjects. We believe the data in our 10 and 15 mg/kg QW cohorts may show a dose-dependent response that demonstrates the clinical activity of ALX148 and supports higher dose administration in trials for subjects with MDS.

Based on the activities seen at the 10 and 15 mg/kg QW doses coupled with a favorable tolerability profile, we are intending to test higher doses, up to 60 mg/kg Q4W in MDS. We believe this dosing schedule may be unique among CD47 blockade programs and can potentially provide a more convenient regimen in combination with monthly azacitidine for patients. This data set also supported our decision to advance ALX148 into solid tumor indications at higher doses of 45 mg/kg once every three weeks, or Q3W, in combination with standard agents also administered Q3W.

ALX148 for the Treatment of MDS

Our development of ALX148 in hematologic indications is focused on MDS. There are approximately 70,000 people living with diagnosed MDS in the U.S. Patients with MDS have a wide range of expected outcomes that can be estimated from their Revised International Prognostic Scoring System, or IPSS-R, risk category. Patients with very low IPSS-R have an mOS of 8.8 years, whereas those with very high IPSS-R have an mOS of under ten months. Since nearly 75% of new cases are in patients aged 70 or older, balancing a patient's age at prognosis with potential treatment-related impact on quality of life is important in considering treatment options. Regardless of age, treatment goals for patients with MDS are a balance of improved survival, symptom alleviation and quality of life.

For patients with higher-risk MDS (intermediate, high and very high IPSS-R), standard of care treatments include stem cell transplant, or SCT, high and low-intensity chemotherapy regimens and HMAs. SCT is the only therapy that is potentially curative; however, the procedure is difficult to tolerate, especially for older patients, and has a non-relapse mortality rate of approximately 40% at 200 days for all patients with MDS.

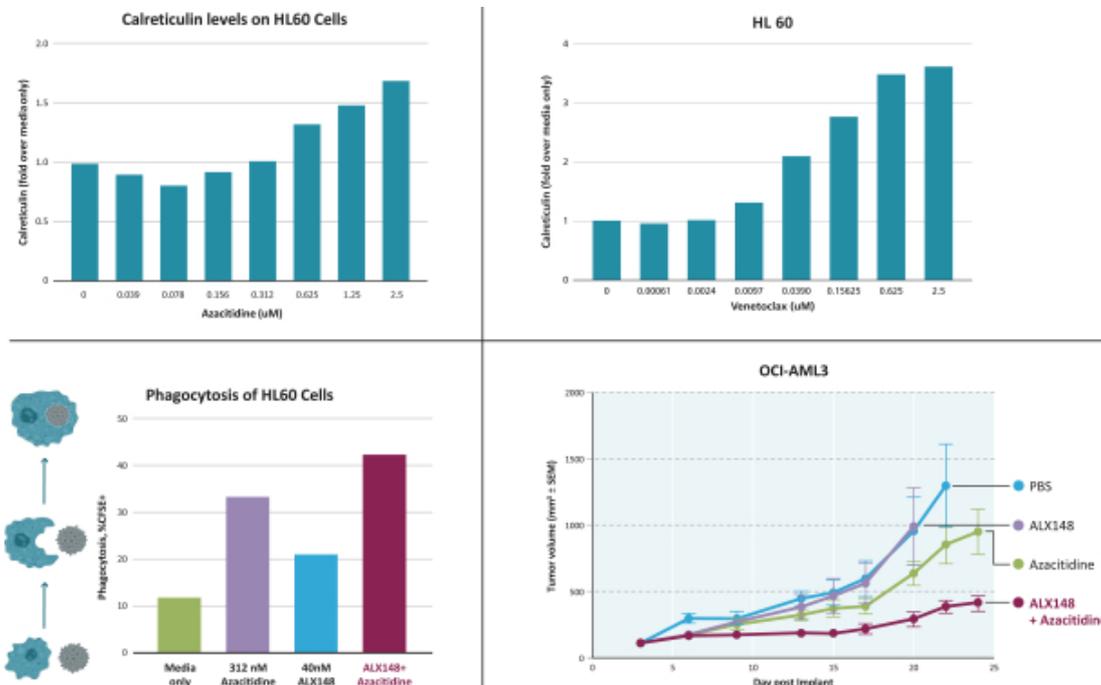
For patients who are ineligible for SCT, azacitidine, an HMA, is a standard backbone therapy for combination treatment regimens in MDS. The drug continues to be used in combination with investigational agents in a number of current MDS trials. Single-agent azacitidine is one of the few FDA-approved agents for patients with MDS. However, its FDA label indicates a complete response, or CR, rate of only 5.6% and an mOS of 2.0 years. A clinical complete response comprises normalizing peripheral blood counts, resolution of bone marrow dysplasia and reduction in the percentage of immature blood cells, or myeloblasts, to less than 5%. CD47 blockade in combination with azacitidine has shown early clinical evidence that suggests it may improve CR rates in MDS. For patients with higher-risk MDS, achieving a CR and improving overall survival are the central treatment goals. Treatment goals for patients with lower-risk MDS are different. The primary goal for those patients is resolution of cytopenias.

Red blood cell transfusions are a key element of treatment intended to address cytopenias in patients with MDS. The majority of patients have a hemoglobin count of less than 10 g/dL and approximately one-third of patients are RBC transfusion dependent. Transfusions impose significant time and cost burdens on patients and also cause clinical sequelae such as iron overload and associated liver fibrosis and cardiomyopathy. Therefore, achieving transfusion

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independence is an important secondary goal of treating patients with higher-risk MDS. A competitive CD47 blocking agent has generated encouraging clinical data, however, it is associated with high rates of anemia that may require additional transfusions upon treatment initiation, mitigating any success in peripheral blood count normalization.

The promising clinical data with CD47 blocking agents in MDS underscore the need for combination of two agents to achieve CRs. As previously discussed, pro-phagocytic signals in ALX148-based combinations can be provided by drugs that increase display of the “eat me” signal calreticulin on the surface of tumor cells. Azacitidine and venetoclax are two such drugs. Venetoclax is a BCL-2 inhibitor that is FDA-approved for the treatment of patients with AML and other hematologic malignancies and has shown encouraging activity in patients with MDS when combined with azacitidine. We have conducted preclinical studies that show that both of these agents increase display of the “eat me” signal calreticulin on AML cell lines. Azacitidine and ALX148 combination produces increased phagocytosis and anti-tumor activity compared to azacitidine alone.



Recent data from a competitive CD47 blockade program, magrolimab, further support trials of ALX148 for treatment of MDS. Magrolimab was studied both as a single-agent and in combination with azacitidine in subjects with higher-risk MDS or AML. Magrolimab plus azacitidine achieved a 50% CR rate in previously untreated MDS and a 41% CR in previously untreated AML. As a single-agent, magrolimab achieved no CRs in relapsed/refractory MDS and AML, suggesting that a separate pro-phagocytic signal is required for the observed clinical activity. Despite the high rate of CRs achieved in combination, over 35% of subjects in these trials have experienced grade 3 or higher treatment-related anemia. Notwithstanding these limitations, magrolimab’s data support the potential role of CD47 blockade in treating these subjects.

We believe that ALX148 could become the cornerstone of a best-in-class treatment option for patients with higher-risk MDS. Our preclinical models, encouraging activity of ALX148 in NHL where magrolimab has reported similar data and available CD47 clinical data in this indication support a potential role for ALX148 for treatment of patients with MDS. Baseline characteristics of subjects in a recent trial of azacitidine plus venetoclax in treatment-naïve higher-risk MDS illustrated the need for therapies that do not induce cytopenias. Prior to treatment, 56% of subjects had grade 3 or higher neutropenia, 33% had grade 3 or higher thrombocytopenia, 40% had grade 3 or higher

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leukopenia and 12% had grade 3 or higher anemia. We believe that it is important to develop a CD47 blocking therapy that does not exacerbate cytopenias that patients may already exhibit pre-treatment. ALX148's tolerability profile to date suggests it may address this unmet need in patients who suffer from MDS.

We plan to initiate a Phase 1/2 trial of ALX148 in combination with azacitidine for the first-line treatment of subjects with higher-risk MDS by the end of 2020. The Phase 1 portion of the trial will seek to evaluate up to 60 mg/kg Q4W of ALX148 plus standard azacitidine in subjects with relapsed/refractory and previously untreated MDS. The Phase 2 portion of the trial will assess the combination of ALX148 and azacitidine in subjects with previously untreated higher-risk MDS. The primary endpoint will be complete remission rate by six months. We believe that the data generated from the Phase 1b/2 trial could support accelerated approval of ALX148 in MDS.

ALX148 in Solid Tumors

We have generated promising clinical data with ALX148 in solid tumors. We believe the smaller molecular weight of ALX148 as compared to a typical antibody may facilitate greater penetration into solid tumors. In addition, we believe the favorable tolerability profile of ALX148 will allow for higher administered doses in a range of combination strategies with leading therapies for solid tumors. Solid tumors represent the largest markets within oncology and many of these oncology indications are poorly served by current therapies, both in front-line as well as in the relapsed and refractory settings. We have demonstrated proof of concept with ALX148 in combination treatment in two solid tumor settings in initial clinical trials: HNSCC and HER2-positive gastric/GEJ cancer. We believe these indications offer registration pathways in combination with existing approved therapies and we intend to advance ALX148 into randomized Phase 2 trials in both oncology indications in 2021.

ALX148 can be combined with PD-1/programmed death-ligand 1, or PD-(L)1, agents in a broad range of solid tumors. As part of our development strategy, we are exploring the use of ALX148 in combination with a PD-1 inhibitor in HNSCC. PD-(L)1 inhibitors are currently approved by the FDA for 18 indications and had over \$20 billion in 2019 sales. Other CD47 blocking approaches may be limited in their ability to combine with PD-(L)1 inhibitors due to cumulative or overlapping toxicities. We believe that ALX148 has the potential to become a new foundational therapy that could be used in combination with PD-(L)1 inhibitors in a range of solid tumor settings.

We are investigating ALX148 in subjects with solid tumors in additional cohorts as part of an extensive and ongoing Phase 1 trial. Part 1 was a dose escalation trial of single-agent ALX148 intended to examine tolerability and recommended dosing and was not expected to show single-agent activity. Sixteen subjects with solid tumors received ALX148 as a single-agent on a QW schedule at doses ranging from 0.1 mg/kg to 10 mg/kg and 12 subjects received ALX148 as a single-agent on a QoW dosing schedule at a dose of 30 mg/kg. The maximum tolerated dose was not determined on either schedule. However, the maximum administered dose was 30 mg/kg for the Q2W dosing schedule and 10 mg/kg for the QW schedule.

Part 2, which is ongoing, is comprised of ALX148 escalation and expansion cohorts. In subjects with solid tumors, ALX148 was combined with various anti-cancer agents including pembrolizumab, trastuzumab and chemotherapy. Adverse events from the ALX148 plus pembrolizumab cohort and ALX148 plus trastuzumab cohort are reported above. As previously discussed, ALX148 has consistently displayed a favorable safety profile. Many of the reported adverse events have been associated with either pembrolizumab or trastuzumab.

In HNSCC, our initial Phase 1b expansion trial combined ALX148 with pembrolizumab, an anti-PD-1 agent, which is a standard of care for subjects with HNSCC. ALX148 plus pembrolizumab combination studies provided the first demonstration of ALX148's ability to enhance checkpoint inhibitor antibody activity in solid tumors and is the basis for FDA Fast Track designation in first-line treatment of HNSCC. Data from this trial support our recently initiated trial in first-line recurrent/metastatic HNSCC.

In HER2-positive gastric/GEJ cancer, our initial expansion trial included a combination with trastuzumab, an anti-HER2 agent, that is the standard of care for subjects with HER2-positive gastric/GEJ cancer and is FDA-approved for other HER2-expressing tumors. ALX148 combined with trastuzumab provided the first demonstration of ALX148 activity with an anti-tumor targeted antibody in subjects with solid tumors. Data from this trial formed the basis for FDA Fast Track designation in second-line subjects with advanced HER2-positive gastric/GEJ cancer and supports our recently initiated trial in gastric/GEJ cancer.

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Overall, we believe our development plan for ALX148 in solid tumors has significant potential and represents a strong complement to our program in hematologic malignancies. With encouraging data in multiple drug combinations initially evaluated in the clinic, we plan to advance trials to assess efficacy in the solid tumor indications with substantial unmet medical need.

ALX148 in HNSCC

Disease background

There are estimated to be over 38,000 people living in the United States with metastatic HNSCC, with over 50,000 newly incident cases at all stages estimated to be diagnosed in 2020. Five-year survival is 85% for patients diagnosed with localized disease but decreases to only 40% for those diagnosed with metastatic disease, underlying the need for improved treatment options.

FDA-approved and National Comprehensive Cancer Network, or NCCN, recommended therapies for the first-line treatment of recurrent/metastatic disease include pembrolizumab monotherapy, pembrolizumab combined with chemotherapy, platinum and fluorouracil, and cetuximab, an anti-epidermal growth factor receptor antibody, combined with chemotherapy among other treatments. The KEYNOTE-048 clinical trial led to the FDA approval of pembrolizumab monotherapy as a first-line treatment in patients with HNSCC whose tumors express PD-L1 on a Combined Positive Score, or CPS, ≥ 1 and approval of pembrolizumab plus chemotherapy as a first-line treatment in patients with HNSCC regardless of CPS. In KEYNOTE-048, pembrolizumab monotherapy achieved 17% ORR with a median progression-free survival, or mPFS, of 2.3 months in subjects with HNSCC regardless of CPS. Of particular note, in subjects with CPS < 1 pembrolizumab monotherapy only achieved a 5% ORR.

Pembrolizumab monotherapy in previously treated HNSCC was reported in the Phase 3 KEYNOTE-040 trial. Subjects were excluded if they had prior therapy with an anti-PD-1 or anti-PD-L1 therapy. In KEYNOTE-040, pembrolizumab achieved a 15% ORR, mPFS of only 2.1 months and mOS of 8.4 months. While we believe pembrolizumab is an important treatment option for both first- and second-line HNSCC, the majority of patients do not have an objective response to pembrolizumab-based therapy.

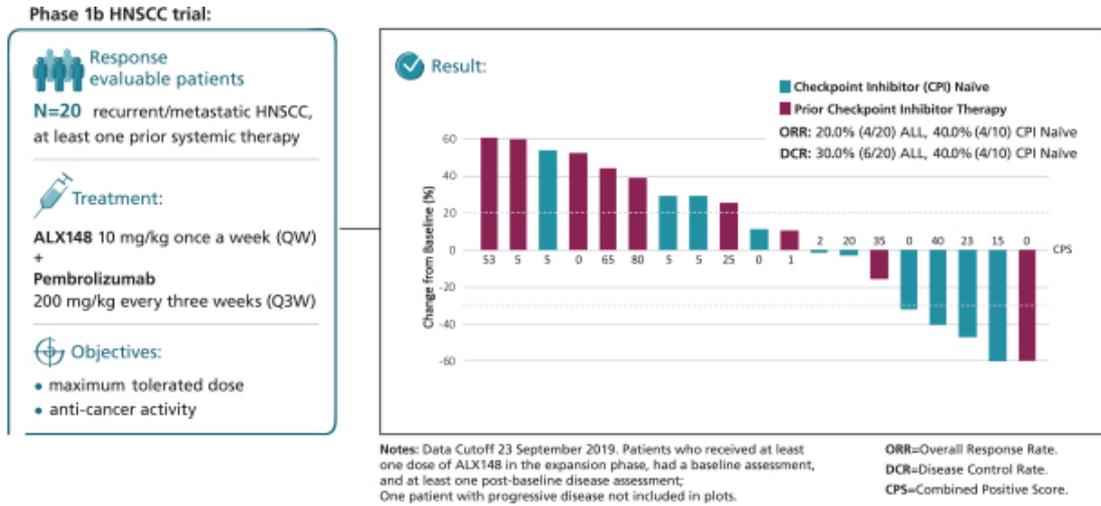
Despite the recent approval of pembrolizumab, we believe that there is significant unmet need remaining for patients with HNSCC. The addition of ALX148 to pembrolizumab, or pembrolizumab plus chemotherapy, may have the potential to improve response rates and provide additional clinical benefit to patients with metastatic HNSCC. We have evaluated ALX148 in subjects with metastatic HNSCC and continue to develop ALX148 in this setting.

Trial design

ALX148 was investigated in combination with pembrolizumab in subjects with recurrent/metastatic HNSCC who had received at least one prior systemic therapy. The clinical evaluation of ALX148 in HNSCC was an open-label, multisite expansion of our Phase 1 trial to assess safety and tolerability with response rate and duration as secondary endpoints. There was no requirement for PD-L1 expression. Subjects received ALX148 10 mg/kg QW in combination with pembrolizumab 200 mg on a Q3W dosing schedule. Subject response was evaluated based on RECIST version 1.1. As of the Efficacy Cut-Off Date, there were 20 response evaluable subjects in the HNSCC expansion cohort. Because standard of care in first-line HNSCC was evolving during the course of this trial to include checkpoint inhibitors, 50% (10) of the subjects who enrolled were checkpoint inhibitor naïve and 50% (10) had previously received a checkpoint inhibitor.

Outcomes

The primary objective of the trial is to assess safety. As reported above in the summary tables of treatment-related adverse events from all ALX148 trials, the combination was well tolerated. As of the Efficacy Cut-Off Date, ALX148 with pembrolizumab achieved an ORR of 40% (4/10) in checkpoint inhibitor naïve subjects while maintaining a tolerability profile consistent with earlier trials. Some of the 20 subjects had a CPS of zero and response was also observed within this subject population. We believe the addition of ALX148 to pembrolizumab represents a potentially significant advance over pembrolizumab monotherapy based on a review of the KEYNOTE-040 trial results that showed an ORR of 15%. Based on our clinical trial data, the FDA granted ALX148 Fast Track designation for first-line treatment of patients with HNSCC.



We also analyzed paired pre and on-treatment tumor biopsies from subjects for the presence of CD8+ T cells, CD68+ and CD163+ myeloid cells. After treatment with ALX148, tumor samples showed increased infiltration of CD8+, CD68+ and CD163+ cells in the tumor, which suggests that ALX148 also engages the innate and adaptive immune system consistent with its mechanism of action.

Clinical development plan

Our HNSCC development plan is to build on the initial results of ALX148 in checkpoint inhibitor naïve patients in combination with pembrolizumab. Given the results of KEYNOTE-048, we expect pembrolizumab, or pembrolizumab plus chemotherapy, to continue to be widely used in the first-line treatment of metastatic HNSCC. Therefore, our future plans will be focused on establishing additional efficacy, in the context of acceptable safety and tolerability, over pembrolizumab alone, or pembrolizumab plus chemotherapy, in the front-line metastatic HNSCC setting. In January 2020, we initiated a Phase 1b trial that is evaluating ALX148 plus pembrolizumab plus chemotherapy in subjects with no PD-L1 expression requirements. Additionally, a higher dosing will be explored with 15 mg/kg QW dosing plan. We anticipate initiation of a Phase 2 trial of ALX148 and pembrolizumab by the first half of 2021.

ALX148 in HER2-Positive Gastric/GEJ

Disease background

Over 25,000 people are estimated to be living in the United States with diagnosed metastatic gastric/GEJ carcinoma. A large, international Phase 3 trial of trastuzumab in gastric/GEJ cancer found that of the nearly 4,000 subjects screened for inclusion in the trial, 22% of them were HER2-positive, which suggests a general HER2-positive rate for patients with gastric/GEJ cancer. In East Asian countries, gastric/GEJ cancer is much more common than in the United States, with incidence rates 4-10 times higher. China alone has a diagnosed incidence of over 900,000 patients with gastric/GEJ cancer per year.

First-line standard of care treatment is trastuzumab combined with the chemotherapy agents platinum and fluoropyrimidine. Trastuzumab, marketed as Herceptin, is an anti-HER2 antibody that has multiple FDA approvals in patients with HER2-positive cancers. In the second-line HER2-positive gastric setting, there are no HER2 targeted FDA-approved therapies. As such, the standard of care regimen in the U.S. is ramucirumab, marketed as Cyramza, a vascular endothelial growth factor 2 receptor monoclonal antibody, in combination with paclitaxel, a widely used chemotherapy. In a Phase 3 trial leading to FDA approval, ramucirumab plus paclitaxel achieved a 28% ORR with a 9.6 month MOS in subjects with previously treated gastric/GEJ cancer.

HER2-positive patients with gastric/GEJ cancers in second-line treatment are likely to have received an anti-HER2 antibody-based treatment in their first line of treatment. A recently reported prospective clinical trial studied trastuzumab plus paclitaxel compared to paclitaxel alone in previously treated HER2-positive subjects with gastric/GEJ cancer. Subjects were required to have progressed during the first line of treatment with trastuzumab plus

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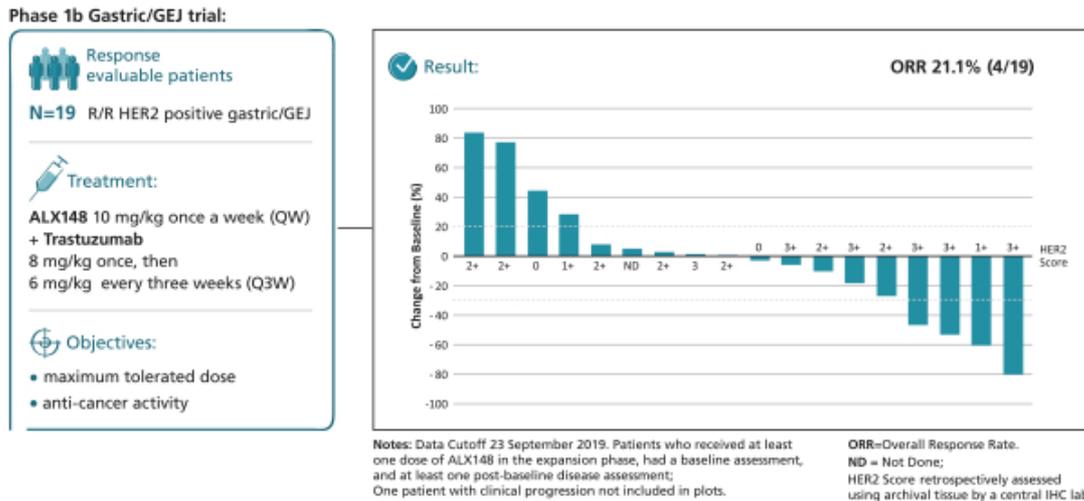
chemotherapy (fluoropyrimidine plus platinum). The objective of this trial was to assess the clinical effect of trastuzumab after patients had progressed on prior trastuzumab treatment. The trial results showed that the addition of trastuzumab added no meaningful clinical benefit over paclitaxel alone. There was no significant improvement in mOS, mPFS or ORR compared to the paclitaxel arm. Based on these data, we hypothesized that we could attribute any observed responses when treating a similar subject population with ALX148 paired with trastuzumab, to a combination effect of the two agents and not simply a response to trastuzumab alone.

Trial design

ALX148 was investigated in combination with trastuzumab in subjects with relapsed/refractory HER2-positive gastric/GEJ cancer. This trial was an open-label, multisite expansion of our Phase 1 trial to assess safety and tolerability with response rate and duration as secondary endpoints. Subjects received ALX148 10 mg/kg QW in combination with trastuzumab at an initial dose of 8 mg/kg followed by 6 mg/kg intravenous infusion Q3W.

As of the Efficacy Cut-Off Date, in our trial of ALX148 plus trastuzumab, 18 of 19 response evaluable subjects from the gastric/GEJ expansion cohort, including all subjects who achieved a response, had been treated with at least one HER2-containing regimen prior to enrollment. Multiple subjects also received an investigational anti-HER2 agent and a PD-1 checkpoint inhibitor as prior treatment.

Outcomes



The primary objective of the trial was to assess safety and the combination regimen was well tolerated as of the Safety Cut-Off Date. Importantly, ALX148 with trastuzumab achieved an ORR of 21.1% (4/19) in these subjects. The FDA granted ALX148 Fast Track designation for second-line treatment of advanced HER2-positive gastric/GEJ carcinoma partly due to this data. Based on prior studies, one of which is described above, any observed response can likely be attributed to the combination effect and not a response to single-agent trastuzumab. We believe that an ORR of 21.1% in this second-line or later population supports further development of ALX148 in HER2-positive cancers.

Clinical development plans

Based on ALX148's activity in second-line and later subjects, in December 2019, we initiated a Phase 1b trial in HER2-positive subjects who previously received a trastuzumab-containing regimen. In this trial, we are combining ALX148 with trastuzumab, ramucirumab and paclitaxel to demonstrate the tolerability of ALX148, at doses of 10 mg/kg and 15 mg/kg QW, and an anti-HER2 antibody when combined with second-line standard-of-care treatment.

We intend to initiate a randomized Phase 2 trial of trastuzumab and chemotherapy with and without ALX148 for subjects with untreated HER2-positive gastric/GEJ cancer by the second half of 2021. Data from this trial would confirm whether ALX148 improves the response rate to anti-HER2-based therapy in patients with HER2-positive gastric/GEJ cancer. Of note, there are multiple emerging agents, predominantly antibody-based therapies, in

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development for patients with HER2-positive cancer. Because these agents target HER2 as does trastuzumab, we believe that ALX148 has the potential to maximize the efficacy of these novel agents should they supplant trastuzumab in the treatment paradigm for these patients.

Research Programs

In addition to ALX148, we are also developing preclinical programs that may offer additional ways to engage the innate and adaptive immune response to cancer.

Licensing and Intellectual Property

Our commercial success depends in part on our ability to obtain and maintain proprietary protection for our current and future product candidates, novel discoveries, product development technologies and knowhow and to operate without infringing on the proprietary rights of others. We seek to protect our proprietary position by, among other methods, filing or in-licensing U.S. and foreign patents and patent applications related to technology, inventions and improvements that are important to the development and implementation of our business. We also rely on trademarks, trade secrets, knowhow, continuing technological innovation and confidential information to develop and maintain our proprietary position.

As of April 13, 2020, we own one issued U.S. patent, and six U.S. nonprovisional patent applications, four U.S. provisional patent applications and a portfolio of national patent application filings in a variety of non-U.S. jurisdictions. Our portfolio of exclusively licensed patents, which we license from the Board of Trustees of the Leland Stanford Junior University, or Stanford, includes five issued patents (one of which is in the United States) and applications are pending in six jurisdictions (including the United States and the European Patent Office). For more information regarding our license agreement with Stanford, please see “—Exclusive (Equity) Agreement with The Board of Trustees of the Leland Stanford Junior University.”

Our patent portfolio licensed from Stanford contains patent families directed to our product candidates, which is comprised of one issued patent in each of U.S., Australia, China, Hong Kong and Japan, one pending U.S. patent application and one pending European patent application, which has been allowed and will be validated as national patents in 37 different European countries. These patents are subject to retained rights by Stanford to allow academic and nonprofit research institutions to practice the licensed technology and patents for noncommercial purposes. In addition, these patents are subject to certain pre-existing rights that Stanford has granted to two third parties. These patents are expected to expire in 2033 excluding any extension of patent term that may be available.

We are aware of a revoked European patent (EP 2 429 574) owned by University Health Network, or UHN, and The Hospital for Sick Children that may encompass certain therapies for the treatment of cancer using polypeptides comprising soluble human SIRP α , or a CD47-binding fragment thereof. This revoked patent related to the treatment of cancer with polypeptides comprising soluble human SIRP α , or a CD47-binding fragment thereof. This patent was revoked by the European Patent Office and UHN and The Hospital for Sick Children have appealed the decision. The U.S. counterpart is not yet granted.

For more information regarding the risks related to our intellectual property, including the above referenced intellectual property proceedings, see “Risk Factors—Risks Related to Our Intellectual Property.”

Exclusive (Equity) Agreement with The Board of Trustees of the Leland Stanford Junior University

In March 2015, we entered into a license agreement, or the Stanford Agreement, with Stanford under which we obtained a worldwide, royalty-bearing, sublicensable license under certain patents relating to our current product candidates, to develop, manufacture and commercialize products for use in certain licensed fields, the scope of which would include the application of the licensed intellectual property in oncology. The license granted to us in the Stanford Agreement includes an exclusive grant, subject to certain pre-existing non-exclusive or exclusive rights that Stanford retained for grant to third parties with respect to certain categories of the licensed patents in certain fields of use and retained rights by Stanford and all other nonprofit institutions to use and practice the licensed patents and technology for internal research and other nonprofit purposes. The license granted to us in the Stanford Agreement also includes non-exclusive grants to certain Stanford patents.

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In consideration for the rights granted to us under the Stanford Agreement, we paid Stanford a nonrefundable license royalty and reimbursed Stanford for past patent expenses, together totaling less than \$0.1 million, and granted Stanford a specified number of our ordinary shares. In addition, we are obligated to pay Stanford ongoing patent expenses and an annual license maintenance fee, which are nominal and will be creditable against any royalties payable to Stanford in the applicable year. We are required to make milestone payments up to a specified amount in respect of a specified number of licensed products that successfully satisfy certain clinical and regulatory milestones. No milestone payments have been made through December 31, 2019. We also agreed to pay Stanford tiered royalties on a specified percentage of net sales made by us, our affiliates and our sublicensees of licensed products at rates ranging within low single-digit percentages, subject to certain reductions and offsets. Our license, on a licensed product-by-licensed product and country-by-country basis, shall become royalty-free and fully paid-up upon the later of the date on which the last valid claim included in the exclusively or non-exclusively licensed patents expires and certain number of years after the first commercial sale of the licensed product in such country.

We may terminate the Stanford Agreement, on a licensed product-by-licensed product basis, at any time for any reason by providing at least 60 days' written notice to Stanford. Stanford may terminate the Stanford Agreement if we are in breach of any provision of the Stanford Agreement and fail to remedy such breach within 60 days after written notice of such breach by Stanford. In addition, Stanford has the right to terminate the Stanford Agreement, on a licensed product-by-licensed product basis, if we are not diligently developing and commercializing such licensed product under certain conditions or if we fail to achieve specified development milestones for such licensed product by certain dates, subject to our extension rights.

Other Third-Party Agreements

We have entered into license agreements with third parties related to the development and commercialization of our product candidates, including ALX148, and SIRP_a antibodies which we are exploring in our research program. In consideration of the foregoing, we have agreed to customary payments terms in these agreements, including certain milestone payments upon the achievement of clinical and commercial milestones and low single-digit royalties. See the section titled "Management's Discussion and Analysis of Financial Condition and Results of Operations—Contractual Obligations and Commitments—License and Collaboration Agreements."

Commercialization

We intend to retain significant development and commercial rights to our product candidates and, if marketing approval is obtained, to commercialize our product candidates on our own, or potentially with a partner, in the United States and other regions. We currently have no sales, marketing or commercial product distribution capabilities and have no experience as a company commercializing products. We intend to build the necessary infrastructure and capabilities over time for the United States, and potentially other regions, following further advancement of our product candidates. Clinical data, the size of the addressable patient population, the size of the commercial infrastructure and manufacturing needs may all influence or alter our commercialization plans.

Manufacturing and Supply

We do not own or operate and do not intend to establish our own manufacturing facilities. We rely on, and will continue to rely on, CMOs for both drug substance and drug product. Both ALX148 bulk drug substance and finished drug product are produced in accordance with cGMPs.

Our existing supply of ALX148 drug product is sufficient to complete our clinical trials through the first half of 2021. We plan to manufacture additional supplies with our existing CMOs to produce ALX148 drug product sufficient to complete the ongoing and planned clinical trials described in this document. We first entered into an engagement with KBI Biopharma, Inc. in 2015 for analytical method development, formulation development, bulk drug manufacturing, release and stability testing. We first entered into a drug product manufacturing agreement with Lyophilization Services of New England, Inc. in 2016 and have subsequently used them for all ALX148 drug product used in clinical trials to date.

Competition

The development and commercialization of new product candidates is highly competitive. We face competition with respect to ALX148 and will face competition with respect to any product candidates that we may seek to develop or

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commercialize in the future, from major pharmaceutical, specialty pharmaceutical and biotechnology companies among others. We compete in the segments of the pharmaceutical, biotechnology and other related markets that develop immune-oncology therapies for the treatment of cancer. There are other companies working to develop immuno-oncology therapies for the treatment of cancer including divisions of large pharmaceutical and biotechnology companies of various sizes. The large pharmaceutical and biotechnology companies that have commercialized and/or are developing immuno-oncology treatments for cancer include AstraZeneca, Bristol Myers Squibb, Gilead Sciences, Merck, Novartis, Pfizer and Roche/Genentech.

Some of these competitive products and therapies are based on scientific approaches that are the same as or similar to our approach, including with respect to the targeting of CD47 pathway and others are based on entirely different approaches. We are aware that Arch Therapeutics, Bristol Myers Squibb, Gilead Sciences (through its recent acquisition of Forty Seven), I-Mab, Novimmune, OSE Immunotherapeutics, Seattle Genetics, Surface Oncology and Trillium Therapeutics, among others, are developing drugs targeting the CD47 pathway that may have utility for the treatment of indications that we are targeting. Potential competitors also include academic institutions, government agencies and other public and private research organizations that conduct research, seek patent protection and establish collaborative arrangements for research, development, manufacturing and commercialization.

Many of the companies against which we are competing or against which we may compete in the future have significantly greater financial resources and expertise in research and development, manufacturing, preclinical testing, conducting clinical trials, obtaining regulatory approvals and marketing approved drugs than we do. Mergers and acquisitions in the pharmaceutical and biotechnology industries may result in even more resources being concentrated among a smaller number of our competitors. 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, in establishing clinical trial sites and enrolling subjects for our clinical trials and in acquiring technologies complementary to, or necessary for, our programs.

We could see a reduction or elimination of our commercial opportunity if our competitors develop and commercialize products that are safer, more effective, have fewer or less severe side effects, are more convenient or are less expensive than any products that we or our collaborators may develop. Our competitors also may obtain FDA or foreign regulatory approval for their products more rapidly than we may obtain approval for ours, which could result in our competitors establishing a strong market position before we are able to enter the market. The key competitive factors affecting the success of all our product candidates, if approved, are likely to be their efficacy, safety, convenience and price, if required, the level of biosimilar or generic competition and the availability of reimbursement from government and other third-party payors.

Government Regulation

In the United States, the FDA, regulates biologic products under the Food, Drug, and Cosmetic Act, or FDCA, and Public Health Service Act, or PHSA. Biologic products and substances 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.

The FDA and other regulatory authorities at federal, state and local levels, as well as in foreign countries, extensively regulate, among other things, the research, development, testing, manufacture, quality control, import, export, safety, effectiveness, labeling, packaging, storage, distribution, record keeping, approval, advertising, promotion, marketing, post-approval monitoring and post approval reporting of biologics such as those we are developing. We, along with third-party contractors, will be required to navigate the various preclinical, clinical and commercial

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approval requirements of the governing regulatory agencies of the countries in which we wish to conduct studies or seek approval or licensure of our product candidates.

U.S. Biologics Regulation

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

- Completion of extensive preclinical laboratory tests and animal studies performed in accordance with the FDA's current Good Laboratory Practices, or GLP, regulation.
- Submission to the FDA of an investigational new drug, or IND, application, which must become effective before clinical trials may begin and must be updated annually or when significant changes are made.
- Approval by an independent institutional review board, or IRB, or ethics committee at each clinical site before the trial is commenced.
- Performance of adequate and well-controlled human clinical trials in accordance with the applicable IND regulations, good clinical practice, or GCP, requirements to establish the safety, purity and potency (*i.e.*, safety and effectiveness) of the proposed biologic product candidate for its intended purpose.
- Preparation of and submission to the FDA of a BLA after completion of all pivotal clinical trials.
- A determination by the FDA within 60 days of its receipt of a BLA to file the application for review.
- Satisfactory completion of any FDA audit of preclinical studies and/or clinical trial sites that generated the data in support of the BLA.
- Satisfactory completion of an FDA pre-approval inspection of the manufacturing facility or facilities at which the proposed product is produced to assess compliance with current good manufacturing practices, or cGMPs, and to assure that the facilities, methods and controls are adequate to preserve the biological product's continued safety, purity and potency, and of selected clinical investigation sites to assess compliance with GCPs.
- Satisfactory completion of an FDA Advisory Committee review, if applicable.
- FDA review and approval of a BLA to permit commercial marketing of the product for particular indications for use in the United States.
- Compliance with any post-approval requirements, including the potential requirement to implement a REMS and the potential requirement to conduct post-approval studies.

Preclinical and Clinical Development

The data required to support a BLA are generated in two distinct developmental stages: preclinical and clinical. The preclinical and clinical testing and approval process require 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.

The preclinical developmental stage generally involves laboratory evaluations of product chemistry, formulation and stability, as well as studies to evaluate toxicity in animals, including pharmacology, PK, toxicokinetic and metabolism studies, that support subsequent clinical testing in humans. 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. 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.

Prior to beginning the first clinical trial with a product candidate, we must submit an IND to the FDA. An IND is a request for authorization from the FDA to administer an investigational new biopharmaceutical product to humans. The central focus of an IND submission is on the general investigational plan and the protocol(s) for clinical trials. An IND must become effective before human clinical trials may begin. The IND automatically becomes effective 30 days after receipt by the FDA, unless before that time the FDA raises any concerns or questions about the proposed clinical trial(s) and places the trial(s) on clinical hold. In such a case, the IND may be placed on clinical hold and the IND sponsor and the FDA must resolve any outstanding concerns or questions before the clinical trial can begin. Submission of an IND therefore may or may not result in FDA authorization to begin a clinical trial.

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Clinical trials involve the administration of the investigational product to human subjects under the supervision of qualified investigators in accordance with GCPs, 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, an independent IRB for each site proposing to conduct the clinical trial must review and approve the plan for any clinical trial and its informed consent form before the clinical trial begins at that site and must monitor the trial until completed. Regulatory authorities, the IRB, or the sponsor may suspend a clinical trial at any time on various grounds, including a finding that the subjects are being exposed to an unacceptable health risk or that the trial is unlikely to meet its stated objectives. Some trials also include oversight by an independent group of qualified experts organized by the clinical trial sponsor, known as a data safety monitoring board, which provides authorization for whether or not a trial may move forward at designated check points based on access to certain data from the trial and may halt the clinical trial if it determines that there is an unacceptable safety risk for subjects or other grounds, such as no demonstration of efficacy. There are also requirements governing the reporting of ongoing preclinical studies and clinical trials and 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 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.

For purposes of BLA approval, human clinical trials are typically conducted in three sequential phases that may overlap.

- Phase 1. For biologics being studied in oncology indications, the investigational product is initially introduced into patients with the target disease or condition. These trials are designed to test the safety, dosage tolerance, absorption, metabolism and distribution of the investigational product in humans, to identify possible side effects associated with increasing doses, and, if possible, to gain early evidence on effectiveness.
- Phase 2. The investigational product is administered to a limited patient population with a specified disease or condition to evaluate the preliminary efficacy, optimal dosages and dosing schedule and to identify possible adverse side effects and safety risks and additional information on PK and PD. Multiple Phase 2 clinical trials may be conducted to obtain information prior to beginning larger and more expensive Phase 3 clinical trials.
- Phase 3. The investigational product is administered to an expanded patient population to further evaluate dosage, to provide statistically significant evidence of clinical efficacy and to further test for safety, purity and potency for an intended use, and generally at multiple geographically dispersed clinical trial sites. These clinical trials are intended to establish the overall risk/benefit ratio of the investigational product and to provide an adequate basis for product approval. These trials may include comparisons with placebo and/or other comparator treatments.

In some cases, the FDA may require, or companies may voluntarily pursue, additional clinical trials after a product is approved to gain more information about the product. These so-called Phase 4 trials may be made a condition to approval of the BLA. Concurrent with clinical trials, companies may complete additional animal studies and develop additional information about the biological characteristics of the product candidate and must 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 candidate and, among other things, must develop methods for testing the identity, strength, quality and purity of the final product, or for biologics, the safety, purity and potency. Additionally, appropriate packaging must be selected and tested and stability studies must be conducted to demonstrate that the product candidate does not undergo unacceptable deterioration over its shelf life.

BLA Submission and Review

Assuming successful completion of all required testing in accordance with all applicable regulatory requirements, the results of product development, nonclinical studies and clinical trials are submitted to the FDA as part of a BLA requesting approval to market the product for one or more indications. The BLA must include all relevant data available from pertinent preclinical studies and clinical trials, including negative or ambiguous results as well as positive findings, together with detailed information relating to the product's chemistry, manufacturing, controls and proposed labeling, among other things. The submission of a BLA requires payment of a substantial application user fee to the FDA, unless a waiver or exemption applies.

Once a BLA has been submitted, the FDA's goal is to review standard applications within ten months after it accepts the application for filing, or, if the application qualifies for priority review, six months after the FDA accepts the application for filing. In both standard and priority reviews, the review process is often significantly extended by FDA requests for additional information or clarification. The FDA reviews a BLA to determine, among other things, whether a product is safe, pure and potent and the facility in which it is manufactured, processed, packed or held meets standards designed to assure the product's continued safety, purity and potency. The FDA may convene an advisory committee to provide clinical insight on application review questions. Before approving a BLA, the FDA will typically inspect the facility or facilities where the product is manufactured. The FDA will not approve an application 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. Additionally, before approving a BLA, the FDA will typically inspect one or more clinical sites to assure compliance with GCPs. If the FDA determines that the application, manufacturing process or manufacturing facilities are not acceptable, it will outline the deficiencies in the submission and often will request additional testing or information. Notwithstanding the submission of any requested additional information, the FDA ultimately may decide that the application does not satisfy the regulatory criteria for approval.

After the FDA evaluates a BLA and conducts inspections of manufacturing facilities where the investigational product and/or its biopharmaceutical substance will be produced, the FDA may issue an approval letter or a Complete Response letter. An approval letter authorizes commercial marketing of the product with specific prescribing information for specific indications. A Complete Response letter will describe all of the deficiencies that the FDA has identified in the BLA, except that where the FDA determines that the data supporting the application are inadequate to support approval, the FDA may issue the Complete Response letter without first conducting required inspections, testing submitted product lots and/or reviewing proposed labeling. In issuing the Complete Response letter, the FDA may recommend actions that the applicant might take to place the BLA in condition for approval, including requests for additional information or clarification. The FDA may delay or refuse approval of a BLA if applicable regulatory criteria are not satisfied, require additional testing or information and/or require post-marketing testing and surveillance to monitor safety or efficacy of a product.

If regulatory approval of a product is granted, such approval will be granted for particular indications and may entail limitations on the indicated uses for which such product may be marketed. For example, the FDA may approve the BLA with a Risk Evaluation and Mitigation Strategy, or REMS, to ensure the benefits of the product outweigh its risks. A REMS is a safety strategy to manage a known or potential serious risk associated with a product and to enable patients to have continued access to such medicines by managing their safe use, and 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. The FDA also may condition approval on, among other things, changes to proposed labeling or the development of adequate controls and specifications. Once approved, the FDA may withdraw the product approval if compliance with pre- and post-marketing requirements is not maintained or if problems occur after the product reaches the marketplace. The FDA may require one or more Phase 4 post-market trials and surveillance to further assess and monitor the product's safety and effectiveness after commercialization and may limit further marketing of the product based on the results of these post-marketing studies.

Expedited Development and Review Programs

The FDA offers a number of expedited development and review programs for qualifying product candidates. The fast track program is intended to expedite or facilitate the process for reviewing new products that meet certain criteria. Specifically, new products are eligible for Fast Track designation if they are intended to treat patients with a serious

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or life-threatening disease or condition and demonstrate the potential to address unmet medical needs for the disease or condition. Fast Track designation applies to the combination of the product and the specific indication for which it is being studied. The sponsor of a fast track product has opportunities for frequent interactions with the review team during product development and, once a BLA is submitted, the product may be eligible for priority review. A fast track product may also be eligible for rolling review, where the FDA may consider for review sections of the BLA on a rolling basis before the complete application is submitted, if the sponsor provides a schedule for the submission of the sections of the BLA, the FDA agrees to accept sections of the BLA and determines that the schedule is acceptable, and the sponsor pays any required user fees upon submission of the first section of the BLA.

A product intended to treat patients with a serious or life-threatening disease or condition may also be eligible for breakthrough therapy designation to expedite its development and review. A product can receive breakthrough therapy designation if preliminary clinical evidence indicates that the product, alone or in combination with one or more other drugs or biologics, may demonstrate substantial improvement over existing therapies on one or more clinically significant endpoints, such as substantial treatment effects observed early in clinical development. The designation includes all of the fast track program features, as well as more intensive FDA interaction and guidance beginning as early as Phase 1 and an organizational commitment to expedite the development and review of the product, including involvement of senior managers.

Any marketing application for a biologic submitted to the FDA for approval, including a product with a Fast Track designation and/or breakthrough therapy designation, may be eligible for other types of FDA programs intended to expedite the FDA review and approval process, such as priority review and accelerated approval. A product is eligible for priority review if it has the potential to provide a significant improvement in the treatment, diagnosis or prevention of a serious disease or condition. For original BLAs, priority review designation means the FDA's goal is to take action on the marketing application within six months of the 60-day filing date (as compared to ten months under standard review).

Additionally, products studied for their safety and effectiveness in treating patients with serious or life-threatening diseases or conditions may receive accelerated approval upon a determination that the product has 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, that is reasonably likely to predict an effect on irreversible morbidity or mortality or other clinical benefit, taking into account the severity, rarity, or prevalence of the condition and the availability or lack of alternative treatments. As a condition of accelerated approval, the FDA will generally require the sponsor to perform adequate and well-controlled post-marketing clinical trials to verify and describe the anticipated effect on irreversible morbidity or mortality or other clinical benefit. In addition, the FDA currently requires as a condition for accelerated approval preapproval of promotional materials, which could adversely impact the timing of the commercial launch of the product.

Fast track designation, breakthrough therapy designation and priority review do not change the standards for approval but may expedite the development or approval process. Even if a product qualifies for one or more of these programs, the FDA may later decide that the product no longer meets the conditions for qualification or decide that the time period for FDA review or approval will not be shortened.

Orphan Drug Designation

Under the Orphan Drug Act, the FDA may grant orphan designation to a drug or biologic intended to treat patients with a rare disease or condition, which is 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 for which there is no reasonable expectation that the cost of developing and making available in the United States a drug or biologic for this type of disease or condition will be recovered from sales in the United States for that drug or biologic. Orphan drug designation must be requested before submitting a BLA. After the FDA grants orphan drug designation, the generic identity of the therapeutic agent and its potential orphan use are disclosed publicly by the FDA. The orphan drug designation does not convey any advantage in, or shorten the duration of, the regulatory review or approval process.

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 exclusive approval (or exclusivity), which means that the FDA may not approve any other applications, including a full BLA, to market the same biologic for the same

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indication for seven years, except in limited circumstances, such as a showing of clinical superiority to the product with orphan drug exclusivity or if the FDA finds that the holder of the orphan drug exclusivity has not shown that it can assure the availability of sufficient quantities of the orphan drug to meet the needs of patients with the disease or condition for which the drug was designated. Orphan drug exclusivity does not prevent the FDA from approving a different drug or biologic for the same disease or condition, or the same drug or biologic for a different disease or condition. Among the other benefits of orphan drug designation are tax credits for certain research and a waiver of the BLA application fee.

A designated orphan drug may not receive orphan drug exclusivity if it is approved for a use that is broader than the indication for which it received orphan designation. In addition, exclusive marketing rights in the United States may be lost if the FDA later determines that the request for designation was materially defective or if the manufacturer is unable to assure sufficient quantities of the product to meet the needs of patients with the rare disease or condition.

Post-Approval Requirements

Any products manufactured or distributed by us pursuant to FDA approvals are subject to pervasive and continuing regulation by the FDA, including, among other things, requirements relating to facility registration, biopharmaceutical product listing, record-keeping, reporting of adverse experiences, periodic reporting, product sampling and distribution and advertising and promotion of the product. After approval, most changes to the approved product, such as adding new indications or other labeling claims, are subject to prior FDA review and approval. There also are continuing user fee requirements, under which the FDA assesses an annual program fee for each product identified in an approved BLA. Biologic manufacturers and their subcontractors are required to register their establishments with the FDA and certain state agencies and are subject to periodic unannounced inspections by the FDA and certain state agencies for compliance with cGMPs, which impose certain procedural and documentation requirements upon us and our third-party manufacturers. Changes to the manufacturing process are strictly regulated, and, depending on the significance of the change, may require prior FDA approval before being implemented. FDA regulations also require investigation and correction of any deviations from cGMPs and impose reporting requirements upon us and any third-party manufacturers that we may decide to use. Accordingly, manufacturers must continue to expend time, money and effort in the area of production and quality control to maintain compliance with cGMPs and other aspects of regulatory compliance. 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 BLA or a supplement submission, which may require the development of additional preclinical studies, clinical trials, data and/or assays, such as comparability protocols.

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 trials 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 a product, complete withdrawal of the product from the market or product recalls.
- Fines, warning letters or holds on post-approval clinical trials.
- Refusal of the FDA to approve pending applications or supplements to approved applications, or suspension or revocation of existing product approvals.
- Product seizure or detention, or refusal of the FDA to permit the import or export of products.
- Consent decrees, corporate integrity agreements, debarment or exclusion from federal healthcare programs.
- Mandated modification of promotional materials and labeling and the issuance of corrective information.
- The issuance of safety alerts, Dear Healthcare Provider letters, press releases and other communications containing warnings or other safety information about the product.
- Injunctions or the imposition of civil or criminal penalties.

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The FDA closely regulates the marketing, labeling, advertising and promotion of biologics. A company can make only those claims relating to safety and efficacy, purity and potency that are approved by the FDA 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.

Failure to comply with these requirements can result in, among other things, adverse publicity, warning letters, corrective advertising and potential civil and criminal penalties. Physicians may prescribe legally available products for uses that are not described in the product's labeling and that differ from those tested by us and approved by the FDA. Physicians may believe that such off-label uses are the best treatment for many patients in varied circumstances. The FDA does not regulate the behavior of physicians in their choice of treatments. The FDA does, however, restrict manufacturer's communications on the subject of off-label use of their products.

Biosimilars and Reference Product Exclusivity

The Patient Protection and Affordable Care Act, or ACA, includes a subtitle called the Biologics Price Competition and Innovation Act of 2009, or BPCIA, which created an abbreviated approval pathway for biological products that are biosimilar to or interchangeable with an FDA approved reference biological product.

Biosimilarity, which requires that there be no clinically meaningful differences between the biological product and the reference product in terms of safety, purity and potency, can be shown through analytical studies, animal studies and a clinical trial or trials. Interchangeability requires that a product is biosimilar to the reference product and the product must demonstrate that it can be expected to produce the same clinical results as the reference product in any given patient and, for products that are administered multiple times to an individual, the biologic and the reference biologic may be alternated or switched after one has been previously administered without increasing safety risks or risks of diminished efficacy relative to exclusive use of the reference biologic.

Under the BPCIA, an application for a biosimilar product may not be submitted to the FDA until four years following the date that the reference product was first licensed by the FDA. In addition, the approval of a biosimilar product may not be made effective by the FDA until 12 years from the date on which the reference product was first licensed. During this 12-year period of exclusivity, another company may still market a competing version of the reference product if the FDA approves a full BLA for the competing product containing that applicant's own preclinical data and data from adequate and well-controlled clinical trials to demonstrate the safety, purity and potency of its product. The BPCIA also created certain exclusivity periods for biosimilars approved as interchangeable products. At this juncture, it is unclear whether products deemed "interchangeable" by the FDA will, in fact, be readily substituted by pharmacies, which are governed by state pharmacy law. Additionally, prescribing physicians are free to specify "Do Not Substitute" in prescriptions, which would prohibit pharmacists from substituting a branded biologic product for a biosimilar product.

The BPCIA is complex and continues to be interpreted and implemented by the FDA. In addition, government proposals have sought to reduce the 12-year reference product exclusivity period. Other aspects of the BPCIA, some of which may impact the BPCIA exclusivity provisions, have also been the subject of recent litigation. As a result, the ultimate impact, implementation and impact of the BPCIA are subject to uncertainty.

Other Healthcare Laws and Compliance Requirements

Biopharmaceutical companies are subject to additional healthcare regulation and enforcement by the federal government and by authorities in the states and foreign jurisdictions in which they conduct their business. Research, manufacturing, sales, promotion and other activities following product approval are subject to regulation by numerous regulatory authorities in the United States in addition to the FDA, including CMS, 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, false claims laws, transparency laws, government price reporting and health information privacy and security laws. These laws include the following:

- 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. Moreover, the Patient Protection and Affordable Care Act, as amended by the Health Care and Education Reconciliation Act of 2010, or collectively, 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 civil False Claims Act. In addition, the intent standard under the federal Anti-Kickback Statute was amended by the ACA to eliminate the need to prove specific intent and actual knowledge to establish an Anti-Kickback Statute violation.

- The federal civil and criminal false claims, including the FCA that can be enforced by private citizens through civil whistleblower or qui tam actions, prohibit individuals or entities from, 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 civil monetary penalties laws impose penalties against any person or entity that, among other things, is determined to have presented or caused to be presented a claim to a federal healthcare program that the person knows or should know is for an item or service that was not provided as claimed or is false or fraudulent, or offering or transferring remuneration to a federal healthcare beneficiary that a person knows or should know is likely to influence the beneficiary's decision to order or receive items or services reimbursable by the government from a particular provider or supplier.
- The Federal Health Insurance Portability and Accountability Act of 1996, or HIPAA, prohibits, 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 their implementing regulations, also imposes obligations, including mandatory contractual terms, on certain covered healthcare providers, health plans, and healthcare clearinghouses as well as their respective business associates that perform services for them that involve the use, or disclosure of, individually identifiable health information, with respect to safeguarding the privacy, security and transmission of individually identifiable health information.
- Federal consumer protection and unfair competition laws, which broadly regulate marketplace activities and activities that potentially harm consumers.
- The FDCA, which prohibits, among other things, the adulteration or misbranding of drugs, biologics and medical devices.
- The federal Physician Payments Sunshine Act requires applicable manufacturers of covered drugs, medical 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, as defined by such law, and teaching hospitals as well as information regarding ownership and investment interests held by physicians and their immediate family members. Additionally, President Trump signed into law in 2018 the "Substance Use-Disorder Prevention that Promoted Opioid Recovery and Treatment for Patients and Communities Act" which, under the provision entitled "Fighting the Opioid Epidemic with Sunshine," in part, extends the reporting and transparency requirements for physicians under the Physician Payments Sunshine Act to physician assistants, nurse practitioners and other mid-level practitioners, with reporting requirements going into effect in 2022 for payments made in 2021.
- The distribution of pharmaceutical products is subject to additional requirements and regulations, including extensive record-keeping, licensing, price reporting, storage and security requirements intended to prevent the unauthorized sale of pharmaceutical products. Pricing and rebate programs must also 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. For example, 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.

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- The Foreign Corrupt Practices Act, or FCPA, prohibits any U.S. individual or business from paying, offering, or authorizing payment or offering of anything of value, directly or indirectly, to any foreign official, political party or candidate for the purpose of influencing any act or decision of the foreign entity in order to assist the individual or business in obtaining or retaining business. The FCPA also obligates companies whose securities are listed in the United States to comply with accounting provisions requiring us to maintain books and records that accurately and fairly reflect all transactions of the corporation, including international subsidiaries, if any, and to devise and maintain an adequate system of internal accounting controls for international operations.
- Analogous state and foreign laws and regulations, such as state anti-kickback, anti-referral and false claims laws, which may apply to sales or marketing arrangements and claims involving healthcare items or services reimbursed by non-governmental third-party payors, including private insurers, state laws that require biotechnology or pharmaceutical companies to comply with the biotechnology or pharmaceutical industry's voluntary compliance guidelines and the relevant compliance guidance promulgated by the federal government and may require drug manufacturers to report certain information related to payments and other transfers of value to physicians and other healthcare providers or marketing expenditures, state laws that require biotechnology companies to report information on the pricing of certain drug products, state and local laws that require the registration of pharmaceutical sales representatives, and state and foreign laws that 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; and state laws related to insurance fraud in the case of claims involving private insurers.

Because of the breadth of these laws and the narrowness of available statutory and regulatory exemptions or safe harbors, it is possible that some of our activities, such as stock-option compensation paid to physicians, could be subject to challenge under one or more of such laws. The growth of our business and sales organization and our expansion outside of the United States may increase the potential of violating these laws or our internal policies and procedures. Any action brought against us for violations of these laws or regulations, even successfully defended, could cause us to incur significant legal expenses and divert our management's attention from the operation of our business. Also, we may be subject to private "qui tam" actions brought by individual whistleblowers on behalf of the federal or state governments. If our operations are found to be in violation of any of the federal, state and foreign laws described above or any other current or future fraud and abuse or other healthcare laws and regulations that apply to us, we may be subject to penalties, including significant civil, criminal and administrative penalties, including damages, fines, disgorgement, imprisonment, exclusion from participation in government funded healthcare programs, such as Medicare and Medicaid, integrity oversight and reporting obligations, contractual damages, reputational harm, diminished profits and future earnings, 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, and we could be required to curtail or cease our operations. Any of the foregoing consequences could seriously harm our business and our financial results.

Coverage and Reimbursement

Significant uncertainty exists as to the coverage and reimbursement status of any product candidates for which we may obtain regulatory approval. In the United States and markets in other countries, sales of any products for which we receive regulatory approval for commercial sale will depend, in part, on the availability of coverage and adequate reimbursement from third-party payors. Third-party payors include government programs such as Medicare or Medicaid, managed care plans, private health insurers and other organizations. These third-party payors may deny coverage or reimbursement for a product or therapy in whole or in part if they determine that the product or therapy was not medically appropriate or necessary. Third-party payors may attempt to control costs by limiting coverage to specific drug products on an approved list, or formulary, which might not include all of the FDA-approved drug products for a particular indication, and by limiting the amount of reimbursement for particular procedures or drug treatments. Additionally, coverage and reimbursement for drug products can differ significantly from payor to payor. The Medicare and Medicaid programs are often used as models by private payors and other governmental payors to develop their coverage and reimbursement policies for drugs and biologics. However, one third-party payor's decision to cover a particular drug product does not ensure that other payors will also provide coverage for the product or will provide coverage at an adequate reimbursement rate.

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The cost of pharmaceuticals continues to generate substantial governmental and third-party payor interest. We expect that the pharmaceutical industry will experience pricing pressures due to the trend toward managed healthcare, the increasing influence of managed care organizations and additional legislative proposals. Third-party payors are increasingly challenging the price and examining the medical necessity and cost effectiveness of medical products and services, in addition to their safety and efficacy. We may need to conduct expensive pharmacoeconomic studies in order to demonstrate the medical necessity and cost-effectiveness of our products to obtain third-party payor coverage, in addition to the costs required to obtain the FDA approvals. Our product candidates may not be considered medically necessary or cost-effective. A payor's decision to provide coverage for a drug product does not imply that an adequate reimbursement rate will be approved. Adequate third-party reimbursement may not be available to enable us to maintain price levels sufficient to realize an appropriate return on our investment in product development.

Some third-party payors also require pre-approval of coverage for new or innovative drug therapies before they will reimburse healthcare providers who use such therapies. While we cannot predict whether any proposed cost-containment measures will be adopted or otherwise implemented in the future, these requirements or any announcement or adoption of such proposals could have a material adverse effect on our ability to obtain adequate prices for our product candidates and to operate profitably. In international markets, reimbursement and healthcare payment systems vary significantly by country, and many countries have instituted price ceilings on specific products and therapies. There can be no assurance that our products will be considered medically reasonable and necessary for a specific indication, that our products will be considered cost-effective by third-party payors, that coverage or an adequate level of reimbursement will be available or that third-party payors' reimbursement policies will not adversely affect our ability to sell our products profitably.

Other Healthcare Laws

U.S. Healthcare Reform

The United States and some foreign jurisdictions are considering or have enacted a number of reform proposals to change the healthcare system. There is significant interest in promoting changes in healthcare systems with the stated goals of containing healthcare costs, improving quality or expanding access. In the United States, the pharmaceutical industry has been a particular focus of these efforts and has been significantly affected by federal and state legislative initiatives, including those designed to limit the pricing, coverage and reimbursement of pharmaceutical and biopharmaceutical products, especially under government-funded health care programs, and increased governmental control of drug pricing.

The ACA, which was enacted in March 2010, substantially changed the way healthcare is financed by both governmental and private insurers in the United States, and significantly affected the pharmaceutical industry. The ACA contains a number of provisions of particular import to the pharmaceutical and biotechnology industries, including, but not limited to, those governing enrollment in federal healthcare programs, a new methodology by which rebates owed by manufacturers under the Medicaid Drug Rebate Program are calculated for drugs that are inhaled, infused, instilled, implanted or injected, a new licensure framework for follow on biologic products, and annual fees based on pharmaceutical companies' share of sales to federal health care programs. There remain judicial and Congressional challenges to certain aspects of the ACA, as well as efforts by the Trump administration to repeal or replace certain aspects of the ACA. Since January 2017, President Trump has signed Executive Orders and other directives designed to delay the implementation of certain provisions of the ACA or otherwise circumvent some of the requirements for health insurance mandated by the ACA. Concurrently, Congress has considered legislation that would repeal or repeal and replace all or part of the ACA. While Congress has not passed comprehensive repeal legislation, several bills affecting the implementation of certain taxes under the ACA have passed. 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.

On December 22, 2017, President Trump signed into law new federal tax legislation commonly referred to as the Tax Cuts and Jobs Act, or Tax Act, which includes a provision repealing, effective January 1, 2019, the tax-based shared responsibility payment imposed by the ACA on certain individuals who fail to maintain qualifying health coverage for all or part of a year that is commonly referred to as the "individual mandate." In addition, the 2020

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federal spending package permanently eliminates, effective January 1, 2020, the ACA mandated “Cadillac” tax on high-cost employer-sponsored health coverage and medical device tax and, effective January 1, 2021, also eliminates the health insurer tax. The Bipartisan Budget Act of 2018, or BBA, among other things, amended the ACA, effective January 1, 2019, to close the coverage gap in most Medicare Part D drug plans. In December 2018, CMS published a new final rule permitting further collections and payments to and from certain ACA-qualified health plans and health insurance issuers under the ACA risk adjustment program in response to the outcome of federal district court litigation regarding the method CMS uses to determine this risk adjustment. However, on April 27, 2020, the U.S. Supreme Court reversed a Federal Circuit decision that previously upheld Congress’ denial of \$12 billion in “risk corridor” funding. On December 14, 2018, a Texas U.S. District Court Judge ruled that the ACA is unconstitutional in its entirety because the “individual mandate” was repealed by Congress as part of the Tax Act. Additionally, on December 18, 2019, the U.S. Court of Appeals for the Fifth Circuit upheld the District Court ruling that the individual mandate was unconstitutional and remanded the case back to the District Court to determine whether the remaining provisions of the ACA are invalid as well. On March 2, 2020, the U.S. Supreme Court granted the petitions for writs of certiorari to review this case and will hear oral arguments, which are expected to occur later this year. It is unclear how such litigation and other efforts to repeal and replace the ACA will impact the ACA.

Other legislative changes have been proposed and adopted in the United States 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 2030 unless additional congressional action is taken. The CARES Act, which was signed into law on March 27, 2020, designed to provide financial support and resources to individuals and businesses affected by COVID-19 pandemic, suspended the 2% Medicare sequester from May 1, 2020, through December 31, 2020, and extended the sequester by one year, through 2030, in order to offset the added expense of the 2020 cancellation. Additionally, it is possible that additional governmental action is taken to address the COVID-19 pandemic, resulting in a material adverse effect on our business. For example, on April 18, 2020, CMS announced that qualified health plan issuers under the ACA may suspend activities related to the collection and reporting of quality data that would have otherwise been reported between May and June 2020 given the challenges healthcare providers are facing responding to the COVID-19 virus.

Moreover, there has recently been heightened governmental scrutiny over the manner in which manufacturers set prices for their marketed products, which has resulted in several Congressional inquiries and proposed and enacted federal and state legislation designed to, among other things, bring more transparency to product pricing, review the relationship between pricing and manufacturer patient programs, and reform government program reimbursement methodologies for drug products. For example, at the federal level, the Trump administration’s budget proposals for fiscal year 2021 includes a \$135 billion allowance to support legislative proposals seeking to reduce drug prices, increase competition, lower out-of-pocket drug costs for patients and increase patient access to lower-cost generic and biosimilar drugs. On March 10, 2020, the Trump administration sent “principles” for drug pricing to Congress, calling for legislation that would, among other things, cap Medicare Part D beneficiary out-of-pocket pharmacy expenses, provide an option to cap Medicare Part D beneficiary monthly out-of-pocket expenses, and place limits on pharmaceutical price increases. Additionally, the Trump Administration previously released a “Blueprint” to lower drug prices and reduce out of pocket costs of drugs that contained proposals to increase manufacturer competition, increase the negotiating power of certain federal healthcare programs, incentivize manufacturers to lower the list price of their products and reduce the out of pocket costs of drug products paid by consumers. The U.S. Department of Health and Human Services has solicited feedback on certain of these measures and has implemented others under its existing authority. For example, in May 2019, the U.S. Centers for Medicare & Medicaid Services issued a final rule to allow Medicare Advantage plans the option to use step therapy for Part B drugs beginning January 1, 2020, codifying a policy change that was effective January 1, 2019. While some of these and other measures may require additional authorization to become effective, Congress and the Trump administration have each indicated that it will continue to seek new legislative and/or administrative measures to control drug costs. At the state level, legislatures have increasingly passed legislation and implemented regulations designed to control pharmaceutical product pricing, including price or patient reimbursement constraints, discounts, restrictions on certain product access and marketing cost disclosure and transparency measures, and, in some cases, designed to encourage importation from other countries and bulk purchasing. These and other new laws and regulations may result in additional reductions in Medicare and other healthcare funding, which could have a material adverse effect on customers for our biopharmaceutical products, if approved, and accordingly, our financial operations.

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Additionally, the Right to Try Act, which was enacted on May 30, 2018, provides a federal framework for certain patients with life-threatening diseases to access certain investigational new drug products that have completed a Phase 1 clinical trial and that are undergoing investigation for FDA approval. Under certain circumstances, eligible patients can seek treatment without enrolling in clinical trials and without obtaining FDA permission under the FDA expanded access program. There is no obligation for a drug manufacturer to make its drug products available to eligible patients as a result of the Right to Try Act.

Employees

As of April 1, 2020, we had 23 full-time employees, 10 of whom hold Ph.D. or M.D. degrees and 15 of whom were engaged in research and development activities. None of our employees are represented by a labor union and we believe we maintain good relations with our employees.

Facilities

We currently lease 11,424 square feet of laboratory and office space in Burlingame, California, under a lease that expires in 2023. We believe that this space is sufficient to meet our needs for the foreseeable future and that any additional space we may require will be available on commercially reasonable terms.

Legal Proceedings

We are not currently a party to any material legal proceedings. From time to time, we may become involved in legal proceedings arising in the ordinary course of our business. Regardless of outcome, litigation can have an adverse impact on us due to defense and settlement costs, diversion of management resources, negative publicity, reputational harm and other factors.

MANAGEMENT

Executive Officers and Directors

The following table sets forth the names, ages and positions of our executive officers and directors as of April 1, 2020:

<u>NAME</u>	<u>AGE</u>	<u>POSITION</u>
Executive Officers:		
Jaume Pons, Ph.D.	54	President, Chief Executive Officer and Director
Nathan Caffo	51	Chief Business Officer
Peter García	58	Chief Financial Officer
Steffen Pietzke	48	Vice President, Finance and Chief Accounting Officer
Sophia Randolph, M.D., Ph.D.	52	Chief Medical Officer
Hong Wan, Ph.D.	47	Chief Scientific Officer
Non-Employee Directors:		
Corey Goodman, Ph.D.	68	Executive Chairman of the Board
Rekha Hemrajani	50	Director
Jason Lettmann	42	Director
Jack Nielsen	56	Director
Graham Walmsley, M.D., Ph.D.	33	Director

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

Executive Officers

Jaume Pons, Ph.D. has served as our President, Chief Executive Officer and a member of our board of directors since April 2015. He has also served as a Scientific Advisor at Lightstone Ventures, a venture capital fund, since January 2019 and as a Venture Partner at venBio Partners, a venture capital firm, since January 2017. Prior to joining us, Dr. Pons was with Pfizer, Inc., a biopharmaceutical company, where he served as Senior Vice President and a member of the Pfizer World Research and Development Team and Chief Technology Officer for Pfizer Biotherapeutics from September 2009 to February 2015. From October 2007 to February 2015, he served as Chief Scientific Officer at Rinat Neuroscience Corporation, a subsidiary of Pfizer. Dr. Pons holds a B.S. in Biochemistry and an M.S. in Biotechnology from Autònoma University of Barcelona and a Ph.D. in Molecular and Cell Biology from the Institute on Fundamental Biology, Barcelona (Autonomous University of Barcelona).

We believe Dr. Pons is qualified to serve on our board of directors because of the perspective and experience he brings as our Chief Executive Officer, his experience in leadership positions in the biotechnology industry, his educational background and his strong scientific knowledge.

Nathan Caffo has served as our Chief Business Officer since September 2018. Prior to joining us, Mr. Caffo was with Presage Biosciences, an oncology company, from April 2009 to August 2018, where he served in various executive roles, including as President, from December 2011 to August 2018, and from September 2017 until August 2018, he also served as Presage's Chief Executive Officer. Mr. Caffo holds a B.S. in Microbiology from Pennsylvania State University.

Peter Garcia has served as our Chief Financial Officer since January 2020. Prior to joining us, he served as Vice President and Chief Financial Officer from May 2013 until August 2019 and as Acting Chief Accounting Officer from May 2013 until July 2013 at PDL BioPharma, Inc., an acquirer of royalties and pharmaceutical assets. From October 2011 to May 2013, Mr. Garcia served as Chief Financial Officer at BioTime, Inc., a clinical-stage biotechnology company now known as Lineage Cell Therapeutics. He previously served as Chief Financial Officer of six biotechnology and high technology companies, including Marina Biotech, Nanosys, Nuvelo, Novacept, IntraBiotics Pharmaceuticals and Dendreon. Mr. Garcia holds a B.A. in Economics and Sociology from Stanford University and an M.B.A. from the University of California, Los Angeles.

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Steffen Pietzke has served as our Vice President, Finance and Chief Accounting Officer since March 2020. Prior to joining us, he served as Senior Vice President, Finance and Chief Accounting Officer at Tricida, Inc., a biotechnology company, from April 2018 to March 2020. From June 2015 to April 2018, Mr. Pietzke served as Vice President, Finance and Chief Accounting Officer at PDL BioPharma. From July 2013 to June 2015, he served as a Senior Manager with Ernst & Young LLP, a professional services firm. From September 2000 to June 2013, Mr. Pietzke was with PricewaterhouseCoopers LLP, a professional services firm, where he served most recently as a Senior Manager. He holds a Bachelor of Business Science in Accounting from the University of Applied Sciences in Offenburg, Germany and is a certified public accountant.

Sophia Randolph, M.D., Ph.D. has served as our Chief Medical Officer since June 2016. Prior to joining us, she was with Pfizer Oncology Early and Late Development Groups from June 2008 to April 2016, where she served most recently as Executive Director, Oncology from June 2015 to April 2016. From June 2007 to May 2008, Dr. Randolph served as Director, Clinical Sciences, Oncology at Merck, a pharmaceutical company. She holds an A.B. in Biochemistry from Harvard University and an M.D. and a Ph.D. in Cellular and Molecular Biology from the University of Michigan. Dr. Randolph completed her oncology fellowship training at Seattle Cancer Care Alliance/Fred Hutchinson Cancer Research Center.

Hong Wan, Ph.D. has served as our Chief Scientific Officer since June 2017 and previously served as our Vice President, Early Development and Translational Medicine from April 2015 to May 2017. Prior to joining us, she was with Pfizer from September 2005 to March 2015 where she served most recently as Senior Director, Biotechnology Clinical Development from September 2012 to March 2015. Dr. Wan holds an A.B. in Biochemical Sciences from Harvard University and a Ph.D. in Molecular and Cell Biology from the University of California, Berkeley.

Non-Employee Directors

Corey Goodman, Ph.D. is our co-founder and has served as a member of our board of directors and as Executive Chairman since March 2015. He co-founded and has served as a Managing Partner of venBio Partners since March 2010. Dr. Goodman founded Labrys, a biopharmaceutical company acquired by Teva, where he served as chairman and as a member of the board of directors from December 2012 to June 2014. He founded Pfizer's Biotherapeutics and Bioinnovation Center where he served as President and a member of Pfizer's Executive Leadership Team from October 2007 until May 2009. He co-founded Renovis, a biopharmaceutical company acquired by Evotec, where he served as President, Chief Executive Officer and a director from September 2001 to October 2007. He is a former tenured biology professor at both Stanford University and the University of California, Berkeley, the co-founder of U.C. Berkeley's Wills Neuroscience Institute, Investigator with the Howard Hughes Medical Institute and currently is an adjunct professor at U.C. Berkeley. Dr. Goodman is a member of the U.S. National Academy of Sciences, the American Academy of Arts & Sciences and the American Philosophical Society. He currently serves as chairman and as a member of the board of directors of several privately held biotechnology companies. Dr. Goodman holds a B.S. in Biology from Stanford University and a Ph.D. in Neurobiology from U.C. Berkeley and was a postdoctoral fellow at the University of California, San Diego.

We believe Dr. Goodman is qualified to serve on our board of directors due to his experience founding and managing biotechnology companies in both the private and public markets.

Rekha Hemrajani has served as a member of our board of directors since April 2020. She served as President and Chief Executive Officer of Aravive, Inc., a clinical-stage biotechnology company, from January 2020 to April 2020. From March 2019 to September 2019, Ms. Hemrajani served as the Chief Operating Officer and Chief Financial Officer of Arcus Biosciences, a biotechnology company. From March 2016 to March 2019, she served as Chief Operating Officer of FLX Bio, Inc. (now RAPT Therapeutics, Inc.), a biotechnology company. From February 2015 to March 2016, Ms. Hemrajani served as Chief Financial Officer and Senior Vice President of Business and Financial Operations at 3-V Biosciences, Inc. (now Sagimet Biosciences, Inc.), a biotechnology company. From November 2013 to January 2015, Ms. Hemrajani advised privately held companies on strategic corporate development and financing activities at Ravinia Consulting, a consulting firm she founded. Ms. Hemrajani currently serves as a director at Adverum Biotechnologies, Inc., a clinical-stage gene therapy company, and previously served as a director at Aravive. She holds a B.S. in Economics and Computer Science from the University of Michigan and an M.B.A. from the Kellogg Graduate School of Management at Northwestern University.

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We believe Ms. Hemrajani is qualified to serve on our board of directors due to her executive and financial experience at multiple companies in the biopharmaceutical and biotechnology industries.

Jason Lettmann has served as a member of our board of directors since April 2020 and previously served as a member of our board of directors from March 2015 to May 2017. Mr. Lettmann has served as a General Partner of Lightstone Ventures since March 2012 and as a Partner at Morgenthaler Ventures, a venture capital and private equity firm, since June 2009. He previously served as Chief Executive Officer of Promedior Inc., a biotechnology company acquired by Roche, from January 2019 to February 2020 and as a Vice President at Split Rock Partners, a venture capital firm, from June 2006 to June 2009. Mr. Lettmann currently serves as a member of the board of directors of several privately-held companies and previously served as a director of Ra Pharmaceuticals, a clinical-stage pharmaceutical company acquired by UCB. Mr. Lettmann holds a B.A. in Psychology from the University of Iowa and an M.B.A. from the University of Michigan's Ross School of Business.

We believe Mr. Lettmann is qualified to serve on our board of directors because of his industry experience, his experience serving on the boards of directors for multiple life sciences companies and his extensive experience with venture capital investments.

Jack Nielsen has served as a member of our board of directors since February 2020. Mr. Nielsen has served as a Managing Director at Vivo Capital LLC, a healthcare focused investment firm, since August 2017, and previously served as a consultant from March 2017 to July 2017. From 2001 to February 2017, Mr. Nielsen was with the Novo A/S (Novozymes) organization and its venture activities in several roles, most recently as a Senior Partner based in Copenhagen, Denmark. From May 2006 to August 2012, Mr. Nielsen was a Partner at Novo Ventures (US) in San Francisco, where he established the office that provides certain consultancy services to Novo A/S. He currently serves as a member of the board of directors of Reata Pharmaceuticals, a pharmaceutical company, and previously served as a director of Akebia Therapeutics, Apollo Endosurgery, Crinetics Pharmaceuticals and Merus, N.V. Mr. Nielsen holds an M.Sc. in Chemical Engineering from the Technical University of Denmark and a Masters in Management of Technology from Center for Technology, Economics and Management, Technical University of Denmark.

We believe Mr. Nielsen is qualified to serve on our board of directors because of his experience working in the biotechnology industry, his experience as a venture capital investor and his board service for several companies in the biotechnology sector.

Graham Walmsley, M.D., Ph.D. has served as a member of our board of directors since February 2020. Dr. Walmsley is a Founding Member and has served as a Managing Partner of Logos Global Management, LP, a biotechnology-focused hedge fund, since August 2019. From July 2016 to August 2019, he served as a Principal at Versant Ventures, a healthcare focused venture capital firm. Dr. Walmsley served as Head of Business Development at Pipeline Therapeutics Inc., a biotechnology company, from April 2018 to December 2018 and as Head of Business Development at Jecure Therapeutics, Inc., a biotechnology company, from June 2017 until its acquisition by Genentech, a subsidiary of Roche, in November 2018. He currently serves as a member of the board of directors of Akero Therapeutics, a clinical-stage biotechnology company. Dr. Walmsley holds a B.A. in Molecular and Cell Biology from the University of California, Berkeley and an M.D. and a Ph.D. in Stem Cell Biology and Regenerative Medicine from Stanford University School of Medicine.

We believe Dr. Walmsley is qualified to serve on our board of directors because of his significant experience in the healthcare and biotechnology industry, his educational background and his experience as a director for companies in the biotechnology sector.

Board Composition

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

Our amended and restated certificate of incorporation will provide that our board of directors will be divided into three classes with staggered three-year terms. Only one class of directors will be elected at each annual meeting of

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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 2021;
- the Class II directors will be _____, and their terms will expire at the annual meeting of stockholders to be held in 2022; and
- the Class III directors will be _____, and their terms will expire at the annual meeting of stockholders to be held in 2023.

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 amended and restated certificate of incorporation. Any additional directorships resulting from an increase in the number of directors will be distributed among the three classes so that, as nearly as possible, each class will consist of one-third of our directors.

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

Director Independence

Upon the completion of this offering, we anticipate that our common stock will be listed on the Nasdaq Global Select Market. Under the rules of Nasdaq, independent directors must comprise a majority of a listed company's board of directors within one year of the completion of this offering. In addition, the rules of Nasdaq require that, subject to specified exceptions, each member of a listed company's audit, compensation and corporate governance and nominating committees be independent. Audit committee members and compensation committee members must also satisfy the independence criteria set forth in Rule 10A-3 and Rule 10C-1, respectively, under the Exchange Act. Under the rules of Nasdaq, a director will only qualify as an "independent director" if, in the opinion of that company's board of directors, that person does not have a relationship that would interfere with the exercise of independent judgment in carrying out the responsibilities of a director.

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

To be considered independent for purposes of Rule 10C-1 and under the rules of Nasdaq, the board of directors must affirmatively determine that each member of the compensation committee is independent, including a consideration of all factors specifically relevant to determining whether the director has a relationship to the company which is material to that director's ability to be independent from management in connection with the duties of a compensation committee member, including, but not limited to: (1) the source of compensation of such director, including any consulting, advisory or other compensatory fee paid by the company to such director and (2) 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 _____ directors, do not have a relationship that would interfere with the exercise of independent judgment in carrying out the responsibilities of a director and that each of these directors is "independent" as that term is defined under the rules of Nasdaq.

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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 Dr. Goodman. As a general policy, our board of directors believes that separation of the positions of Executive Chairman 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. Pons serves as our Chief Executive Officer while Dr. Goodman serves as the Executive Chairman of our board of directors but is not an officer. We currently expect and intend the positions of Executive Chairman 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 SOX, and possesses financial sophistication, as defined under the rules of Nasdaq. Our audit committee oversees our corporate accounting and financial reporting process and assists our board of directors in monitoring our financial systems. Our audit committee will also:

- select and hire the independent registered public accounting firm to audit our consolidated 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 consolidated financial statements and discuss with management and the independent registered public accounting firm our annual audited and quarterly consolidated 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

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- 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 Nasdaq.

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 of directors 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 Nasdaq.

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 Nasdaq.

Director Compensation

As of April 1, 2020, none of our directors have received any cash or equity compensation for serving on our board of directors. This includes our current directors and Dr. Robert Adelman and Ms. Caroline Gaynor, each of whom served on our board of directors during the fiscal year ended December 31, 2019.

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.

Dr. Pons was our only employee director during 2019. See the section titled "Executive Compensation" for additional information about Dr. Pons' 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

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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 <http://alxoncology.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 the year ended December 31, 2019, which consist of our principal executive officer and the next two most highly compensated executive officers, are:

- Jaume Pons, Ph.D., our President and Chief Executive Officer;
- Sophia Randolph, M.D., Ph.D., our Chief Medical Officer; and
- Hong Wan, Ph.D., our 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, 2019.

NAME AND PRINCIPAL POSITION	YEAR	SALARY (\$)	OPTION AWARDS (\$) ⁽¹⁾	NON-EQUITY INCENTIVE PLAN COMPENSATION (\$) ⁽²⁾	TOTAL (\$)
Jaume Pons, Ph.D. <i>President and Chief Executive Officer</i>	2019	422,300	134,002	147,900	704,202
Sophia Randolph, M.D., Ph.D. <i>Chief Medical Officer</i>	2019	351,100	40,834	105,400	497,334
Hong Wan, Ph.D. <i>Chief Scientific Officer</i>	2019	313,100	40,372	94,000	447,472

(1) 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 consolidated 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.

(2) The amounts disclosed represent discretionary bonuses based upon achievement of certain Company and individual performance metrics for the year ended December 31, 2019, which were paid in March 2020.

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, 2019:

NAME	GRANT DATE ⁽¹⁾	OPTION AWARDS				STOCK AWARDS	
		NUMBER OF SECURITIES UNDERLYING UNEXERCISED OPTIONS EXERCISABLE (#)	NUMBER OF SECURITIES UNDERLYING UNEXERCISED OPTIONS UNEXERCISABLE (#)	OPTION EXERCISE PRICE (\$) ⁽²⁾	OPTION EXPIRATION DATE	NUMBER OF SHARES OR UNITS OF STOCK THAT HAVE NOT VESTED (#)	MARKET VALUE OF SHARES OR UNITS OF STOCK THAT HAVE NOT VESTED (\$) ⁽³⁾
Jaume Pons, Ph.D.	03/30/2017	1,150,200 ⁽⁴⁾	575,100	0.15	03/30/2027	—	—
	09/12/2019	695,700 ⁽⁵⁾	—	0.29	09/12/2029	—	—
Sophia Randolph, M.D., Ph.D.	11/10/2016	—	—	—	—	109,374 ⁽⁶⁾	31,718
	03/30/2017	299,333 ⁽⁴⁾	149,667	0.15	03/30/2027	—	—
Hong Wan, Ph.D.	09/12/2019	212,000 ⁽⁵⁾	—	0.29	09/12/2029	—	—
	03/30/2017	297,600 ⁽⁴⁾	148,800	0.15	03/30/2027	—	—
	09/12/2019	209,600 ⁽⁵⁾	—	0.29	09/12/2029	—	—

(1) The outstanding options to purchase shares of our common stock, or ALX Options, were originally granted as options to purchase ordinary shares of ALX Oncology Limited, or ALX Ireland Options, pursuant to its share award scheme and U.S. sub-scheme. In

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connection with the reorganization effective as of April 1, 2020, the ALX Ireland Options have been substituted and replaced with ALX Options under our 2020 Plan. While the grant date of the ALX Option is April 1, 2020, each ALX Option has the same vesting terms, exercise price and expiration date as the corresponding ALX Ireland Option.

- (2) This column represents the fair market value of an ordinary share of ALX Oncology Limited on the date of grant, as determined by the board of directors of ALX Oncology Limited.
- (3) This column represents the fair market value of an ordinary share of ALX Oncology Limited of \$0.29 as of December 31, 2019 (the determination of the fair market value by our board of directors as of the most proximate date) multiplied by the amount shown in the column for the number of shares or units that have not vested.
- (4) The shares underlying this option vest in 48 equal monthly installments beginning on May 1, 2017, subject to continued service to the Company.
- (5) The option is subject to an early exercise provision and is immediately exercisable. The shares underlying this option vest in 48 equal monthly installments beginning on June 16, 2019, subject to continued service to the Company.
- (6) The shares were acquired pursuant to an early exercise provision and remain subject to our repurchase right in accordance with the vesting schedule of this option. The remaining shares underlying this option vest in six equal monthly installments beginning on January 1, 2020, subject to continued service to the Company.

Employment Arrangements with Our Named Executive Officers

Dr. Jaume Pons

Prior to the completion of this offering, we intend to enter into a confirmatory employment letter with Dr. Jaume Pons, our President and Chief Executive Officer. The confirmatory employment letter will have no specific term and will provide that Dr. Pons is an at-will employee. Dr. Pons current annual base salary is \$ and he is eligible for an annual target cash incentive payment equal to % of his annual base salary.

Dr. Sophia Randolph

Prior to the completion of this offering, we intend to enter into a confirmatory employment letter with Dr. Sophia Randolph, our Chief Medical Officer. The confirmatory employment letter will have no specific term and will provide that Dr. Randolph is an at-will employee. Dr. Randolph's current annual base salary is \$ and she is eligible for an annual target cash incentive payment equal to % of her annual base salary.

Dr. Hong Wan

Prior to the completion of this offering, we intend to enter into a confirmatory employment letter with Dr. Hong Wan, our Chief Scientific Officer. The confirmatory employment letter will have no specific term and will provide that Dr. Wan is an at-will employee. Dr. Wan's current annual base salary is \$ and she is eligible for an annual target cash incentive payment equal to % of her annual base salary.

Executive Incentive Compensation Plan

Prior to the completion of this offering, our board of directors intends to adopt our Executive Incentive Compensation Plan, or the 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.

Employee Benefit and Stock Plans

Amended and Restated 2020 Equity Incentive Plan

Prior to the completion of this offering, our board of directors intends to adopt, and we expect our stockholders will approve, an amendment and restatement of our 2020 Plan, or the Amended and Restated 2020 Plan. Our 2020 Plan previously was adopted by our board of directors and approved by our stockholders in April 2020. We expect that the Amended and Restated 2020 Plan will be effective on the business day immediately prior to the effective date of our registration statement related to this offering. Our Amended and Restated 2020 Plan will provide for the grant of incentive stock options, within the meaning of Section 422 of the Internal Revenue Code of 1986, as amended, or the 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 any of our subsidiary corporations' employees and consultants.

Authorized Shares. A total of _____ shares of our common stock will be reserved for issuance pursuant to our Amended and Restated 2020 Plan. The number of shares available for issuance under our Amended and Restated 2020 Plan will also include an annual increase on the first day of each fiscal year beginning on January 1, 2021, and ending on (and inclusive of) January 1, 2030, 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 no later than the last day of our immediately preceding fiscal year.

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 Amended and Restated 2020 Plan. With respect to stock appreciation rights, only the net shares actually issued will cease to be available under the Amended and Restated 2020 Plan and all remaining shares under stock appreciation rights will remain available for future grant or sale under the Amended and Restated 2020 Plan. Shares that have actually been issued under the Amended and Restated 2020 Plan under any award will not be returned to the Amended and Restated 2020 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 Amended and Restated 2020 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 Amended and Restated 2020 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 Amended and Restated 2020 Plan.

Plan Administration. Our board of directors or one or more committees appointed by our board of directors will have authority to administer our Amended and Restated 2020 Plan. We expect that the compensation committee of our board of directors will initially administer our Amended and Restated 2020 Plan. In addition, if we determine it is desirable to qualify transactions under our Amended and Restated 2020 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 Amended and Restated 2020 Plan, the administrator has the power to administer our Amended and Restated 2020 Plan and make all determinations deemed necessary or advisable for administering the Amended and Restated 2020 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 Amended and Restated 2020 Plan,

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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 Amended and Restated 2020 Plan and awards granted under it, prescribe, amend and rescind rules relating to our Amended and Restated 2020 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 granted under the Amended and Restated 2020 Plan to a financial institution or other person or entity selected by the administrator, and to institute an exchange program by which outstanding awards granted under the Amended and Restated 2020 Plan 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 granted under the Amended and Restated 2020 Plan is increased or reduced. The administrator's decisions, interpretations and other actions are final and binding on all participants and will be given the maximum deference permitted by applicable law.

Stock Options. Stock options may be granted under our Amended and Restated 2020 Plan. The exercise price of options granted under our Amended and Restated 2020 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 of our subsidiaries') outstanding stock, the term of an incentive stock option granted to such participant must not exceed five years and the per-share exercise price must equal at least 110% of the fair market value of a share of our common stock on the grant date. The administrator may grant incentive stock options under the Amended and Restated 2020 Plan for a period of ten years from the earlier of the date the Amended and Restated 2020 Plan becomes effective or the date that our stockholders approve the Amended and Restated 2020 Plan. 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, cashless exercise, net exercise, 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 six months. In all other cases, in the absence of a specified time in an award agreement, the option will remain exercisable for 90 days 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 Amended and Restated 2020 Plan, the administrator determines the terms of options.

Stock Appreciation Rights. Stock appreciation rights may be granted under our Amended and Restated 2020 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 six months. In all other cases, in the absence of a specified time in an award agreement, the stock appreciation rights will remain exercisable for 90 days 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 Amended and Restated 2020 Plan, the administrator determines the 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 Amended and Restated 2020 Plan. Restricted stock awards are grants of shares of our common stock that may 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 Amended and Restated 2020 Plan, will

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determine the terms and conditions of such awards. The administrator may impose whatever vesting conditions (if any) 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, 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 Amended and Restated 2020 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 Amended and Restated 2020 Plan, the administrator determines the terms and conditions of restricted stock units, including any 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 Amended and Restated 2020 Plan. Performance units and performance shares are awards that will result in a payment to a participant 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 Amended and Restated 2020 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 Amended and Restated 2020 Plan. In order to provide a maximum limit on the awards that can be made to our outside directors, our Amended and Restated 2020 Plan will provide 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 U.S. 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 Amended and Restated 2020 Plan in the future.

Non-Transferability of Awards. Unless the administrator provides otherwise, our Amended and Restated 2020 Plan generally does not allow for the transfer of awards other than by will or the laws of descent and distribution, 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, such as a dividend or other distribution, recapitalization, stock split, reverse stock split, reorganization, merger, consolidation, split-up, spin-off, combination, reclassification, repurchase or exchange of our shares or other securities or other change in our corporate structure affecting our shares (other than ordinary dividends or other ordinary distributions), to prevent diminution or enlargement of the benefits or potential benefits available under our Amended and Restated 2020 Plan, the administrator will adjust the number and class of shares that may be delivered under our Amended and Restated

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2020 Plan and/or the number, class and price of shares covered by each outstanding award and any numerical share limits set forth in our Amended and Restated 2020 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 Amended and Restated 2020 Plan provides that in the event of a merger or change in control, as defined under our Amended and Restated 2020 Plan, each outstanding award will be treated as the administrator determines, without a participant's consent. The administrator may provide that awards granted under the Amended and Restated 2020 Plan will be assumed or substituted by substantially equivalent awards, be terminated immediately before the merger or change in control, become vested and exercisable or payable and be terminated in connection with the merger or change in control, be terminated in exchange for cash, other property or other consideration or any combination of the above. The administrator is not required to treat all awards, all awards held by a participant, all portions of awards, 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 (or a portion of such award), then such award (or its applicable portion) will fully vest, all restrictions on such award (or its applicable portion) will lapse, all performance goals or other vesting criteria applicable to such award (or its applicable portion) will be deemed achieved at 100% of target levels and such award (or its applicable portion) will become fully exercisable, if applicable, for a specified period prior to the transaction, unless specifically provided otherwise under the applicable award agreement or other written agreement with the participant. The award (or its applicable portion) 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 (other than upon his or her voluntary resignation that does not include a resignation at the request of the acquirer) on or following the merger or change in control, all such awards will fully vest, all restrictions on such awards will lapse, all performance goals or other vesting criteria applicable to such awards will be deemed achieved at 100% of target levels and such awards will become fully exercisable, if applicable, unless specifically provided otherwise under the applicable award agreement or other written agreement with the outside director.

Clawback. Awards are subject to any clawback policy of ours, which we may establish and/or amend from time to time to comply with applicable laws. The administrator also may specify in an award agreement that the participant's rights, payments and benefits with respect to an award will be subject to reduction, cancellation, forfeiture or recoupment upon the occurrence of certain specified events. Our board of directors may require a participant to forfeit, return or reimburse us all or a portion of the award and any amounts paid under the award in order to comply with any clawback policy of ours or applicable laws.

Amendment; Termination. The administrator has the authority to amend, suspend or terminate our Amended and Restated 2020 Plan, provided such action does not materially impair the rights of any participant unless mutually agreed otherwise. Our Amended and Restated 2020 Plan will remain in effect until terminated in accordance with its terms.

401(k) Plan

We maintain a 401(k) retirement savings plan, or 401(k) plan, for the benefit of our employees, including our named executive officers, who satisfy certain eligibility requirements. Our 401(k) plan provides eligible employees with an opportunity to save for retirement on a tax-advantaged basis. Under our 401(k) plan, eligible employees may elect to defer a portion of their compensation, within the limits prescribed by the Code and the applicable limits under the 401(k) plan (generally, up to 90% of the employee's eligible compensation), on a pre-tax or after-tax (Roth) basis, through contributions to the 401(k) plan. All of a participant's contributions into the 401(k) plan are 100% vested

when contributed. The 401(k) plan permits us to make matching contributions and profit-sharing contributions to eligible participants. 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.

Rule 10b5-1 Plan Sales

Our directors and executive officers may adopt written plans, known as Rule 10b5-1 plans, in which they will contract with a broker to buy or sell shares of our common stock on a periodic basis. Under a Rule 10b5-1 plan, a broker executes trades pursuant to parameters established by the director or executive officer when entering into the plan, without further direction from them. The director or executive officer may amend a Rule 10b5-1 plan in some circumstances and may terminate a plan at any time. Our directors and executive officers also may buy or sell additional shares outside of a Rule 10b5-1 plan when they are not in possession of material nonpublic information subject to compliance with the terms of our insider trading policy. Without the prior written consent of the representatives of the underwriters, prior to the day following the 180th day after the date of this offering, the sale of any shares under such plan would be subject to the lock-up agreement that the director or executive officer has entered into with the underwriters.

CERTAIN RELATIONSHIPS AND RELATED-PARTY TRANSACTIONS

The following is a description of certain relationships and transactions since January 2017 involving our directors, executive officers or beneficial holders of more than 5% of our capital stock. Compensation arrangements with our directors and officers are described in “Management—Director Compensation,” “Executive Compensation” and “Management.”

Prior to April 1, 2020, all of our beneficial holders were shareholders of our predecessor, ALX Oncology Limited. On April 1, 2020, we were incorporated in Delaware and completed a reorganization whereby ALX Oncology Limited became our wholly-owned subsidiary and all of the shareholders, warrant holders and option holders of ALX Oncology Limited became our stockholders, warrant holders and option holders, holding the same number of corresponding shares, warrants and/or options in us as they did in ALX Oncology Limited immediately prior to the reorganization.

The related-party transaction disclosures included below reflect transactions between ALX Oncology Limited and related parties from January 1, 2017 to March 31, 2020, the period prior to our incorporation and the effectiveness of the reorganization. For all other times, it includes transactions between us and related parties.

Reorganization Transaction

As described above, on April 1, 2020, we consummated a reorganization whereby we issued and sold to the existing shareholders of ALX Oncology Limited an aggregate of 20,840,532 shares of our common stock at purchase prices per share ranging from \$0.001 to \$0.29, an aggregate of 61,180,500 shares of our Series A convertible preferred stock at a purchase price per share of \$1.00, an aggregate of 6,690,729 shares of our Series B convertible preferred stock at a purchase price per share of \$1.4432 and an aggregate of 72,754,989 shares of our Series C convertible preferred stock at a purchase price per share of \$1.4432, in exchange for promissory notes with an aggregate principal amount of \$176.3 million. We also acquired 525,000,000 ordinary shares of ALX Oncology Limited in exchange for the promissory notes that were acquired in connection with such issuance and sale of our capital stock.

Purchasers of our shares of common stock, Series A convertible preferred stock, Series B convertible preferred stock and Series C convertible preferred stock include certain of our directors and executive officers and venture capital funds that beneficially own more than 5% of our outstanding capital stock and/or are represented on our board of directors. The following table presents the number of shares purchased and the total purchase price paid by these persons.

INVESTOR	SHARES OF COMMON STOCK	TOTAL PURCHASE PRICE
Sophia Randolph, M.D., Ph.D.(1)	875,000	\$ 131,250

(1) Dr. Randolph currently serves as our Chief Medical Officer.

INVESTOR	SHARES OF SERIES A CONVERTIBLE PREFERRED STOCK	TOTAL PURCHASE PRICE
Entities affiliated with venBio Global Strategic Fund, LP(1)	36,184,150	\$ 36,184,150
Entities affiliated with Lightstone Ventures, LP(2)	16,976,504	\$ 16,976,504
Goodman Barinaga Trust(3)	514,446	\$ 514,446
Jason Lettmann(4)	514,446	\$ 514,446

(1) Entities affiliated with venBio Global Strategic Fund, LP whose shares are aggregated for the purposes of reporting ownership information include venBio Global Strategic Fund LP and venBio Global Strategic Fund II L.P. Dr. Corey Goodman, our Executive Chairman, is a Managing Partner of venBio Partners. Dr. Jaume Pons, our Chief Executive Officer and a member of our board of directors, is a venture partner of venBio Partners.

(2) Entities affiliated with Lightstone Ventures, LP whose shares are aggregated for the purposes of reporting ownership information include Lightstone Ventures, LP, Lightstone Ventures (A), LP, Lightstone Ventures II, LP and Lightstone Ventures II (A), LP. Jason Lettmann, a member of our board of directors, is a General Partner of Lightstone Ventures. Dr. Jaume Pons, our Chief Executive Officer and a member of our board of directors, is a scientific advisor of Lightstone Ventures.

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- (3) Dr. Goodman, our Executive Chairman, is a trustee of the Goodman Barinaga Trust.
- (4) Mr. Lettmann, a member of our board of directors, is a General Partner of Lightstone Ventures.

INVESTOR	SHARES OF SERIES B CONVERTIBLE	TOTAL PURCHASE
	PREFERRED STOCK	PRICE
Entities affiliated with venBio Global Strategic Fund, LP(1)	3,227,201	\$ 4,657,496
Entities affiliated with Lightstone Ventures, LP(2)	1,514,104	\$ 2,185,155
Goodman Barinaga Trust(3)	103,935	\$ 149,999

- (1) Entities affiliated with venBio Global Strategic Fund, LP whose shares are aggregated for the purposes of reporting ownership information include venBio Global Strategic Fund LP and venBio Global Strategic Fund II L.P. Dr. Corey Goodman, our Executive Chairman, is a Managing Partner of venBio Partners. Dr. Jaume Pons, our Chief Executive Officer and a member of our board of directors, is a venture partner of venBio Partners.
- (2) Entities affiliated with Lightstone Ventures, LP whose shares are aggregated for the purposes of reporting ownership information include Lightstone Ventures, LP, Lightstone Ventures (A), LP, Lightstone Ventures II, LP and Lightstone Ventures II (A), LP. Jason Lettmann, a member of our board of directors, is a General Partner of Lightstone Ventures. Dr. Jaume Pons, our Chief Executive Officer and a member of our board of directors, is a scientific advisor of Lightstone Ventures.
- (3) Dr. Goodman, our Executive Chairman, is a trustee of the Goodman Barinaga Trust.

INVESTOR	SHARES OF SERIES C CONVERTIBLE	TOTAL PURCHASE
	PREFERRED STOCK	PRICE
Emaldi Corporation(1)	346,452	\$ 500,000
Entities affiliated with venBio Global Strategic Fund, LP(2)	6,929,047	\$ 10,000,001
Entities affiliated with Lightstone Ventures, LP(3)	5,654,798	\$ 8,161,004
Logos Opportunities Fund I, LP(4)	13,858,093	\$ 20,000,000
Vivo Capital Fund IX, LP(5)	20,787,140	\$ 30,000,000

- (1) Dr. Corey Goodman, our Executive Chairman, is a director of Emaldi Corporation.
- (2) Entities affiliated with venBio Global Strategic Fund, LP whose shares are aggregated for the purposes of reporting ownership information include venBio Global Strategic Fund LP and venBio Global Strategic Fund II L.P. Dr. Corey Goodman, our Executive Chairman, is a Managing Partner of venBio Partners. Dr. Jaume Pons, our Chief Executive Officer and a member of our board of directors, is a venture partner of venBio Partners.
- (3) Entities affiliated with Lightstone Ventures, LP whose shares are aggregated for the purposes of reporting ownership information include Lightstone Ventures, LP, Lightstone Ventures (A), LP, Lightstone Ventures II, LP and Lightstone Ventures II (A), LP. Jason Lettmann, a member of our board of directors, is a General Partner of Lightstone Ventures. Dr. Jaume Pons, our Chief Executive Officer and a member of our board of directors, is a scientific advisor of Lightstone Ventures.
- (4) Dr. Graham Walmsley, a member of our board of directors, is a Founding Member and Managing Partner of Logos Capital.
- (5) Jack Nielsen, a member of our board of directors, is a Managing Director of Vivo Capital.

Convertible Preferred Share Financings

Series C Convertible Preferred Shares Transaction

In February 2020, we issued and sold an aggregate of 72,754,989 shares of our Series C convertible preferred shares at a purchase price of \$1.4432 per share for an aggregate purchase price of approximately \$105.0 million.

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Purchasers of our Series C convertible preferred shares include venture capital funds that beneficially owned more than 5% of our outstanding share capital and/or are represented on our board of directors. The following table presents the number of shares and the total purchase price paid by these persons.

INVESTOR	SERIES C CONVERTIBLE PREFERRED SHARES	TOTAL PURCHASE PRICE
Emaldi Corporation(1)	346,452	\$ 500,000
Entities affiliated with venBio Global Strategic Fund, LP(2)	6,929,047	\$ 10,000,001
Entities affiliated with Lightstone Ventures, LP(3)	5,654,798	\$ 8,161,004
Logos Opportunities Fund I, LP(4)	13,858,093	\$ 20,000,000
Vivo Capital Fund IX, LP(5)	20,787,140	\$ 30,000,000

(1) Dr. Corey Goodman, our Executive Chairman, is a director of Emaldi Corporation.

(2) Entities affiliated with venBio Global Strategic Fund, LP whose shares are aggregated for the purposes of reporting ownership information include venBio Global Strategic Fund LP and venBio Global Strategic Fund II L.P. Dr. Corey Goodman, our Executive Chairman, is a Managing Partner of venBio Partners. Dr. Jaume Pons, our Chief Executive Officer and a member of our board of directors, is a venture partner of venBio Partners.

(3) Entities affiliated with Lightstone Ventures, LP whose shares are aggregated for the purposes of reporting ownership information include Lightstone Ventures, LP, Lightstone Ventures (A), LP, Lightstone Ventures II, LP and Lightstone Ventures II (A), LP. Jason Lettmann, a member of our board of directors, is a General Partner of Lightstone Ventures. Dr. Jaume Pons, our Chief Executive Officer and a member of our board of directors, is a scientific advisor of Lightstone Ventures.

(4) Dr. Graham Walmsley, a member of our board of directors, is a Founding Member and Managing Partner of Logos Capital.

(5) Jack Nielsen, a member of our board of directors, is a Managing Director of Vivo Capital.

Series B Convertible Preferred Shares Transaction

In May 2019, we issued and sold an aggregate of 6,690,729 shares of our Series B convertible preferred shares at a purchase price of \$1.4432 per share for an aggregate purchase price of approximately \$9.7 million.

Purchasers of our Series B convertible preferred shares include venture capital funds that beneficially owned more than 5% of our outstanding share capital and/or are represented on our board of directors. The following table presents the number of shares and the total purchase price paid by these persons.

INVESTOR	SERIES B CONVERTIBLE PREFERRED SHARES	TOTAL PURCHASE PRICE
Entities affiliated with venBio Global Strategic Fund, LP(1)	3,227,201	\$ 4,657,496
Entities affiliated with Lightstone Ventures, LP(2)	1,514,104	\$ 2,185,155

(1) Entities affiliated with venBio Global Strategic Fund, LP whose shares are aggregated for the purposes of reporting ownership information include venBio Global Strategic Fund LP and venBio Global Strategic Fund II L.P. Dr. Corey Goodman, our Executive Chairman, is a Managing Partner of venBio Partners. Dr. Jaume Pons, our Chief Executive Officer and a member of our board of directors, is a venture partner of venBio Partners. Dr. Robert Adelman previously served as a member of our board of directors and is a Managing Partner of venBio Partners.

(2) Entities affiliated with Lightstone Ventures, LP whose shares are aggregated for the purposes of reporting ownership information include Lightstone Ventures, LP, Lightstone Ventures (A), LP, Lightstone Ventures II, LP and Lightstone Ventures II (A), LP. Caroline Gaynor, a former member of our board of directors and after our reorganization continues to serve on the board of directors of ALX Oncology Limited, one of our subsidiaries, is a Vice President of Lightstone Ventures. Jason Lettmann, a member of our board of directors, is a General Partner of Lightstone Ventures. Dr. Jaume Pons, our Chief Executive Officer and a member of our board of directors, is a scientific advisor of Lightstone Ventures.

Convertible Promissory Notes Transaction

In March 2017, we entered into a convertible promissory note agreement with certain of our directors and venture capital funds that beneficially owned more than 5% of our outstanding share capital and/or are represented on our board of directors, pursuant to which we issued convertible promissory notes in an aggregate principal amount of approximately \$25.0 million. The convertible promissory notes bore interest at a rate of 2% per annum, had a maturity date of December 31, 2018 and were convertible into our Series A convertible preferred shares at a

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conversion price of \$1.00 per share. In September 2017, all of the convertible promissory notes were converted into our Series A convertible preferred shares.

Purchasers of our Series A convertible preferred shares include venture capital funds that beneficially own more than 5% of our outstanding share capital and/or are represented on its board of directors and are listed in the table below.

INVESTOR	AGGREGATE PRINCIPAL AMOUNT
venBio Global Strategic Fund, II LP(1)	\$ 15,652,073
Entities affiliated with Lightstone Ventures, LP(2)	\$ 6,750,000
Corey Goodman, Ph.D.(1)	\$ 222,568
Robert Adelman, M.D.(1)	\$ 222,568
Jason Lettmann(3)	\$ 222,568

- (1) Dr. Corey Goodman, our Executive Chairman, is a Managing Partner of venBio Partners. Dr. Jaume Pons, our Chief Executive Officer and a member of our board of directors, is a venture partner of venBio Partners. Dr. Robert Adelman previously served as a member of our board of directors and is a Managing Partner of venBio Partners.
- (2) Entities affiliated with Lightstone Ventures, LP whose shares are aggregated for the purposes of reporting ownership information include Lightstone Ventures, LP, Lightstone Ventures (A), LP, Lightstone Ventures II, LP and Lightstone Ventures II (A), LP. Caroline Gaynor, a former member of our board of directors and after our reorganization continues to serve on the board of directors of ALX Oncology Limited, one of our subsidiaries, is a Vice President of Lightstone Ventures. Jason Lettmann, a member of our board of directors, is a General Partner of Lightstone Ventures. Dr. Jaume Pons, our Chief Executive Officer and a member of our board of directors, is a scientific advisor of Lightstone Ventures.
- (3) Mr. Lettmann, a member of our board of directors, is a General Partner of Lightstone Ventures.

Investors' Rights Agreement

We are party to an investors' rights agreement, as amended, with certain holders of our capital stock, including venBio, Lightstone Ventures, Vivo Capital and Logos Capital. 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.

venBio Consulting Agreement

In January 2017, Dr. Jaume Pons, our Chief Executive Officer and the Chief Executive Officer of ALX Oncology Limited, entered into a consulting agreement with venBio, one of our stockholders and an affiliate of one of our directors, Dr. Corey Goodman, to provide assistance with deal generation, evaluate potential investments and serve on boards of venBio's portfolio companies. In accordance with this agreement as compensation for services provided, venBio paid Dr. Pons approximately \$125,000 per year in 2017, 2018 and 2019. The consulting agreement remains in effect until terminated by either party with or without prior notice.

Tollnine Agreements

In May 2018, Dr. Jaume Pons, our Chief Executive Officer, and Dr. Hong Wan, our Chief Scientific Officer, each entered into a consulting agreement with Tollnine. Dr. Pons was engaged to provide management services, while Dr. Wan was engaged to provide scientific advisory services. In accordance with these agreements as compensation for their services, Tollnine issued Drs. Pons and Wan shares of its common stock. The consulting agreements will terminate automatically upon the later of completion of all projects under the consulting agreement or two years. In addition, Tollnine may terminate the agreements at any time without prior notice, and Drs. Pons and Wan may terminate their respective agreements upon 30 days' prior written notice if no services remain outstanding under the agreements.

Dr. Pons served as the Chief Executive Officer of Tollnine until April 2020, and Dr. Wan currently serves as the Chief Executive Officer of Tollnine.

In June 2018, we entered into the Tollnine Agreement to provide research and development services to Tollnine. The Tollnine Agreement, which was amended in May 2019, provides that Alexo Therapeutics Inc., our indirectly wholly-

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owned subsidiary, will provide certain research and development services to Tollnine for a service fee based on the costs incurred by the Company plus a mark-up. For the years ended December 31, 2018 and December 31, 2019, ALX Oncology Limited recognized related-party revenues of \$2.1 million and \$4.8 million, respectively, and had outstanding related-party receivables from Tollnine of \$0.9 million and \$0.5 million.

In addition, two of our current investors, venBio and Lightstone Ventures, who were also investors of ALX Oncology Limited prior to April 1, 2020, are also investors in Tollnine.

Indemnification Agreements

Our amended and restated certificate of incorporation, which will be in effect upon the completion of this offering, will contain provisions limiting the liability of the members of our board of directors, and our amended and restated bylaws, which will be in effect upon the completion of this offering, will provide that we will indemnify each of our officers and the members of our board of directors to the fullest extent permitted under Delaware law. Our amended and restated certificate of incorporation and amended and restated bylaws will also provide our board of directors with discretion to indemnify our employees and other agents when it determines to be appropriate. In addition, we have entered into or will enter into an indemnification agreement with each of our executive officers and the members of our board of directors requiring us to indemnify them. See the section titled “Executive Compensation—Limitation on Liability and Indemnification of Directors and Officers.”

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 April 1, 2020 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 161,466,750 shares of our common stock outstanding as of April 1, 2020, which includes _____ shares of common stock that are subject to a right of repurchase and 140,626,218 shares of our common stock resulting from the automatic conversion of all outstanding shares of our convertible preferred stock into our common stock upon the completion of this offering, as if this conversion had occurred as of April 1, 2020. 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 April 1, 2020, 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 ALX Oncology Holdings Inc., 866 Malcolm Road, Suite 100, Burlingame, California 94010.

NAME OF BENEFICIAL OWNER	NUMBER OF SHARES BENEFICIALLY OWNED		PERCENTAGE OF SHARES BENEFICIALLY OWNED	
	BEFORE THE OFFERING	AFTER THE OFFERING	BEFORE THE OFFERING	AFTER THE OFFERING
5% or Greater Stockholders:				
Entities affiliated with venBio Partners(1)	49,380,398		30.6%	%
Entities affiliated with Lightstone Ventures(2)	24,145,406		15.0	
Vivo Capital Fund IX, L.P.(3)	20,787,140		12.9	
Logos Opportunities Fund I, L.P.(4)	13,858,093		8.6	
Named Executive Officers:				
Jaume Pons, Ph.D.(5)	9,191,235		5.5	
Sophia Randolph, M.D., Ph.D.(6)	2,401,104		1.5	
Hong Wan, Ph.D.(7)	2,510,744		1.5	
Non-Employee Directors:				
Corey Goodman, Ph.D.(8)	50,345,231		31.2	
Rekha Hemrajani(9)	—		*	
Jason Lettmann(10)	24,729,142		15.3	
Jack Nielsen	—		*	
Graham Walmsley, M.D., Ph.D.(11)	13,858,093		8.6	
All executive officers and directors as a group (10 persons)(12)	107,399,839		61.6	

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

- (1) Consists of (i) 25,940,398 shares held of record by venBio Global Strategic Fund II, L.P.; (ii) 20,401,000 shares held of record by venBio Global Strategic Fund, L.P.; and (iii) 3,039,000 shares held of record by venBio SPV, LLC. venBio Global Strategic GP II, L.P. (GS GP II LP) is the general partner of GSF II LP and venBio Global Strategic GP II, Ltd. (GS GP II Ltd) is the general partner of GS GP II LP. venBio Global Strategic GP, L.P. (GS GP LP) is the general partner of GSF LP and venBio Global Strategic GP, Ltd. (GS GP Ltd) is the general partner of GS GP LP. As the Directors of venBio Global GS GP II Ltd and GS GP Ltd and the Managing Directors of venBio SPV, LLC (SPV LLC), Robert Adelman and Corey Goodman, one of our directors, share voting and dispositive power with respect to the shares held of record by GSF II LP, GSF LP and SPV LLC. An additional 514,446 shares are held of record by Dr. Adelman. The address for these entities is c/o venBio Partners, LLC, 1700 Owens Street, Suite 595, San Francisco, California 94158.
- (2) Consists of (i) 12,049,278 shares held of record by Lightstone Ventures, LP (LV LP); (ii) 9,864,223 shares held of record by Lightstone Ventures II, LP (LV II LP); (iii) 1,642,746 shares held of record by Lightstone Ventures (A), LP (LV(A) LP); and (iv) 589,159 shares held of record by Lightstone Ventures II (A), LP (LV II(A) LP). LSV Associates, LLC (LSV Associates) is the General Partner of LV LP and LV(A) LP. As the individual general partners of LSV Associates, Michael A. Carusi, Jean M. George and Henry A. Plain Jr. share voting and dispositive power with respect to the shares held of record by LV LP and LV(A) LP. LSV Associates II, LLC (LSV Associates II) is the General Partner of LV II LP and LV II(A) LP. As the individual general partners of LSV Associates II, Michael A. Carusi, Jean M. George, Henry A. Plain Jr. and Jason W. Lettmann share voting and dispositive power with respect to the shares held of record by LV II LP and LV II(A) LP. The address for these entities is c/o LSV Capital Management, LLC, 2884 Sand Hill Road, Suite 121, Menlo Park, California 94025.
- (3) Consists of 20,787,140 shares held of record by Vivo Capital Fund IX, L.P. (VIVO IX LP). Vivo Capital IX, LLC (VIVO IX LLC) is the General Partner of VIVO IX LP. As the managing members of VIVO IX LLC, Frank Kung, Albert Cha, Edgar Engleman, Shan Fu and Chen Yu share voting and dispositive power with respect to the shares held of record by VIVO IX LP. The address for these entities is c/o Vivo Capital, 192 Lytton Avenue, Palo Alto, California 94301.
- (4) Consists of 13,858,093 shares held of record by Logos Opportunities Fund I, L.P. (Logos LP). Logos Opportunities GP, LLC (Logos GP) is the general partner of Logos Opportunities Fund I, L.P. (Logos LP). Arsani William and Graham Walmsley are the managing members of Logos GP and share voting and dispositive power with respect to the shares held of record by Logos Opportunities Fund I, LP. The address for these entities is c/o Logos Capital, 1 Letterman Drive, Building D, Suite D3-700, San Francisco, California 94129.
- (5) Consists of (i) 3,529,617 shares held of record by Dr. Pons and (ii) 5,661,618 shares issuable upon option exercise within 60 days of April 1, 2020, of which 1,655,343 are fully vested.
- (6) Consists of (i) 875,000 shares held of record by Dr. Randolph and (ii) 1,526,104 shares issuable upon option exercise within 60 days of April 1, 2020, of which 439,437 are fully vested.
- (7) Consists of (i) 142,044 shares held of record by the Kwauk and Wan Family Trust for which Dr. Wan serves as trustee; (ii) 860,000 shares held of record by Dr. Wan and (iii) 1,508,700 shares issuable upon option exercise within 60 days of April 1, 2020, of which 436,291 are fully vested.
- (8) Consists of (i) the shares disclosed in footnote (1) above which are held of record by entities affiliated with venBio Partners; (ii) 618,381 shares held of record by the Goodman Baringa Trust for which Dr. Goodman serves as trustee and (iii) 346,452 shares held of record by the Emaldi Corporation for which Dr. Goodman serves as a director.
- (9) Ms. Hemrajani joined our board of directors on April 30, 2020.
- (10) Consists of (i) the shares disclosed in footnote (2) above which are held of record by entities affiliated with Lightstone Ventures and (ii) 583,736 shares held of record by Mr. Lettmann.
- (11) Consists of the shares disclosed in footnote (4) above which are held of record by Logos LP.
- (12) Consists of (i) 94,408,417 shares beneficially owned by our executive officers and directors and (ii) 12,991,422 shares issuable upon option exercise within 60 days of April 1, 2020, of which 2,923,207 are fully vested.

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 140,626,218 shares of our common stock.

Based on 20,840,532 shares of common stock outstanding as of April 1, 2020 (including _____ shares of common stock that are subject to a right of repurchase), and after giving effect to the automatic conversion of all of our outstanding convertible preferred stock into an aggregate of 140,626,218 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 April 1, 2020, we had 69 stockholders of record. As of April 1, 2020, there were 21,063,923 shares of common stock subject to outstanding options.

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.

Options

As of April 1, 2020, we had outstanding options to purchase an aggregate of 21,063,923 shares of our common stock, with a weighted-average exercise price of \$0.47 per share, under our 2020 Plan. After April 1, 2020, we issued options to purchase an aggregate of _____ shares of our common stock, with a weighted-average exercise price of \$ _____ per share, under our 2020 Plan.

Warrants

As of April 1, 2020, we had outstanding warrants to purchase an aggregate of 403,348 shares of our Series B convertible preferred stock at \$1.4432 per share, pursuant to the Loan Agreement.

Registration Rights

We are party to an amended and restated investors' rights agreement that provides that certain holders of our convertible preferred stock have certain registration rights as set forth below. The registration of shares of our common stock by the exercise of registration rights described below would enable the holders to sell these shares without restriction under the Securities Act when the applicable registration statement is declared effective. Generally, in an underwritten offering, the managing underwriter, if any, has the right, subject to specified conditions, to limit the number of shares such holders may include.

Demand Registration Rights

After this offering, the holders of an aggregate of 143,882,738 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 and before the three-year anniversary of the date of the investors' rights agreement, the holders of at least 50% of the shares in the aggregate may request that we file a registration statement to register all or a portion of their shares. Such request for registration must cover at least 40% of the shares or shares with an anticipated aggregate public offering price, net of underwriting discounts and expenses, of at least \$15.0 million.

S-3 Registration Rights

After this offering, the holders of an aggregate of 143,882,738 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 at least 10% of these shares can make a request that we register their shares on Form S-3 if such request covers shares with an anticipated aggregate public offering price, net of underwriting discounts and expenses, of at least \$1.0 million.

Piggyback Registration Rights

In connection with this offering, the holders of an aggregate of 143,882,738 shares of our common stock were entitled to, and the necessary percentage of holders waived, their rights to notice of this offering and to include their shares of registrable securities in this offering. After this offering, in the event that we propose to register any of our securities under the Securities Act, either for our own account or for the account of other security holders, the holders of these shares will be entitled to certain piggyback registration rights allowing the holder to include their shares in such registration, subject to certain marketing and other limitations. As a result, whenever we propose to file a registration statement under the Securities Act, the holders of these shares are entitled to notice of the

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registration and have the right to include their shares in the registration, subject to limitations that the underwriters may impose on the number of shares included in the offering.

Indemnification

Our amended and restated investors' rights agreement contains customary cross-indemnification provisions, under which we are obligated to indemnify holders of registrable securities in the event of material misstatements or omissions in the registration statement attributable to us, and they are obligated to indemnify us for material misstatements or omissions attributable to them.

Expenses of Registration

We will pay the registration expenses, other than underwriting discounts and commissions, of the shares registered by the demand, Form S-3 and piggyback registrations described above.

Termination of Registration Rights

The demand, Form S-3 and piggyback registration described above will expire upon the earliest of (1) the fifth anniversary after the closing of this offering, (2) a deemed liquidation event (as defined in our amended and restated certificate of incorporation, in effect prior to the completion of this offering) and (3) such time after the completion of this offering that such stockholder can sell all of its shares entitled to registration rights under Rule 144 of 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 2021 annual meeting, the term of the initial Class II directors shall terminate on the date of the 2022 annual meeting, and the term of the initial Class III directors shall terminate on the date of the 2023 annual meeting. At each annual meeting of stockholders beginning in 2021, 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 DGCL. Our amended and restated bylaws may be adopted, amended, altered or repealed by stockholders only upon approval of at least majority of the voting power of all the then outstanding shares of the common stock, except for any amendment of the above provisions, which would require the approval of a two-thirds majority of our then outstanding common stock. Additionally, our amended and restated certificate of incorporation will provide that our bylaws may be amended, altered or repealed by the board of directors.

Authorized but Unissued Shares

Our authorized but unissued shares of common stock and preferred stock will be available for future issuances without stockholder approval, except as required by the listing standards of Nasdaq, and could be utilized for a variety of corporate purposes, including future offerings to raise additional capital, acquisitions and employee benefit plans. The existence of authorized but unissued and unreserved common stock and preferred stock could render more difficult or discourage an attempt to obtain control of the company by means of a proxy contest, tender offer, merger or otherwise.

Exclusive Jurisdiction

Our amended and restated bylaws that will become effective upon the completion of this offering 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 amended and restated bylaws, or any action asserting a claim against us that is governed by the internal affairs doctrine. This provision would not apply to suits brought to enforce a duty or liability created by the Exchange Act or any other claim for which the U.S. federal courts have exclusive jurisdiction. Our amended and restated bylaws further provide that the federal district courts of the United States will be the exclusive forum for resolving any complaint asserting a cause of action arising under the Securities Act. Any person or entity purchasing or otherwise acquiring any interest in our securities shall be deemed to have notice of and consented to these provisions. Although we believe these provisions benefit us by providing increased consistency in the application of law for the specified types of actions and proceedings, the provisions may have the effect of discouraging lawsuits against us or our directors and officers. For additional information, please also see the section titled "Risk Factors—Our amended and restated bylaws that will become effective upon the completion of this offering provide that the Court of Chancery of the State of Delaware and the federal district courts of the United States 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."

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 the Nasdaq Global Select Market under the symbol "ALXO."

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 Nasdaq, we cannot assure investors that there will be an active public market for our common stock following this offering. We cannot predict what effect, if any, sales of our shares in the public market or the availability of shares for sale will have on the market price of our common stock. Future sales of substantial amounts of common stock in the public market, including shares issued upon exercise of outstanding options, or the perception that such sales may occur, however, could adversely affect the market price of our common stock and also could adversely affect our future ability to raise capital through the sale of our common stock or other equity-related securities of ours at times and prices we believe appropriate.

Upon completion of this offering, based on our shares outstanding as of _____, 2020 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 Jefferies LLC, Credit Suisse Securities (USA) LLC and Piper Sandler & Co. 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.

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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 (calculated as of _____, 2020); 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 143,882,738 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.

Stock Plans

After the completion of this offering, we intend to file with the Securities and Exchange Commission 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. Such registration statement is expected to be filed and become effective as soon as practicable after the completion of this offering. 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 TAX CONSIDERATIONS FOR NON-U.S. HOLDERS OF OUR COMMON STOCK

The following is a summary of material U.S. federal income tax considerations 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 Code, Treasury Regulations promulgated thereunder and 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 considerations different from those set forth below. We have not sought, and do not intend to seek, any ruling from the Internal Revenue Service, or the 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, or the effect, if any, of the Medicare contribution tax on net investment income. 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;
- 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;
- entities or arrangements classified as partnerships for U.S. federal income tax purposes or other pass through entities such as subchapter S corporations (or investors in such entities or arrangements);
- 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 who 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 (or other entity or arrangement classified as a partnership for U.S. federal income tax purposes) holds our common stock, the tax treatment of a partner in the partnership generally will depend on the status of the partner and upon the activities of the partnership. A partner in a partnership that will hold our common stock should consult his, her or its own tax advisor regarding the tax considerations of the purchase, ownership and disposition of our common stock through a partnership.

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 considerations 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 neither a partnership nor:

- 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 as described below under “—Gain on Disposition of Common Stock.”

Subject to the discussions below regarding effectively connected income, backup withholding and Foreign Account Tax Compliance Act, or 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 or the applicable paying agent 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. We may withhold up to 30% of the gross amount of the entire distribution even if the amount constituting a dividend, as described above, is less than the gross amount to the extent provided for in the Treasury Regulations. A non-U.S. holder of shares of our common stock 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, that 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 discussions below regarding 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, generally are taxed at the same rates applicable to U.S. persons, net of certain deductions and credits. 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 the application of any applicable tax treaties that may provide for different rules.

Gain on Disposition of Common Stock

Subject to the discussions 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 U.S. real property interest by reason of our status as a “U.S. real property holding corporation,” or a 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 interests relative to the fair market value of our U.S. and worldwide real property interests plus our other assets used or held for use in a trade or business, 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 generally will be required to pay tax on the gain derived from the sale (net of certain deductions and credits) under regular U.S. federal income tax rates applicable to U.S. persons, 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.

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 backup withholding at the applicable statutory rate (currently, 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.

Additional Withholding Requirements under the Foreign Account Tax Compliance Act

Sections 1471 through 1474 of the Code and the Treasury Regulations and other official IRS guidance issued thereunder, or collectively FATCA, generally impose a U.S. federal withholding tax of 30% on dividends on, and the

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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 non-U.S. 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. However, the U.S. Treasury Department has issued proposed regulations that, if finalized in their present form, would eliminate FATCA withholding on gross proceeds of the sale or other disposition of our common stock (but not on payments of dividends). The preamble of such proposed regulations state that they may be relied upon by taxpayers until final regulations are issued or until such proposed regulations are rescinded. The withholding tax will apply regardless of whether the payment otherwise would be exempt from withholding tax, including under the 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 the non-U.S. holder’s country of residence 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 income 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 considerations of purchasing, owning and disposing of our common stock, including the consequences of any proposed change in applicable laws.

UNDERWRITING

Subject to the terms and conditions set forth in the underwriting agreement, dated _____, 2020, between us and Jefferies LLC, Credit Suisse Securities (USA) LLC, Piper Sandler & Co. and Cantor Fitzgerald & Co., as the representatives of the underwriters named below and the joint book-running managers of this offering, we have agreed to sell to the underwriters, and each of the underwriters has agreed, severally and not jointly, to purchase from us, the respective number of shares of common stock shown opposite its name below:

<u>UNDERWRITER</u>	<u>NUMBER OF SHARES</u>
Jefferies LLC	
Credit Suisse Securities (USA) LLC	
Piper Sandler & Co.	
Cantor Fitzgerald & Co.	
LifeSci Capital LLC.	
Total	

The underwriting agreement provides that the obligations of the several underwriters are subject to certain conditions precedent such as the receipt by the underwriters of officers' certificates and legal opinions and approval of certain legal matters by their counsel. The underwriting agreement provides that the underwriters will purchase all of the shares of common stock if any of them are purchased. If an underwriter defaults, the underwriting agreement provides that the purchase commitments of the non-defaulting underwriters may be increased or the underwriting agreement may be terminated. We have agreed to indemnify the underwriters and certain of their controlling persons against certain liabilities, including liabilities under the Securities Act, and to contribute to payments that the underwriters may be required to make in respect of those liabilities.

The underwriters have advised us that, following the completion of this offering, they currently intend to make a market in the common stock as permitted by applicable laws and regulations. However, the underwriters are not obligated to do so, and the underwriters may discontinue any market-making activities at any time without notice in their sole discretion. Accordingly, no assurance can be given as to the liquidity of the trading market for the common stock, that you will be able to sell any of the common stock held by you at a particular time or that the prices that you receive when you sell will be favorable.

The underwriters are offering the shares of common stock subject to their acceptance of the shares of common stock from us and subject to prior sale. The underwriters reserve the right to withdraw, cancel or modify offers to the public and to reject orders in whole or in part.

Commission and Expenses

The underwriters have advised us that they propose to offer the shares of common stock to the public at the initial public offering price set forth on the cover page of this prospectus and to certain dealers, which may include the underwriters, at that price less a concession not in excess of \$ _____ per share of common stock. The underwriters may allow, and certain dealers may reallow, a discount from the concession not in excess of \$ _____ per share of common stock to certain brokers and dealers. After the offering, the initial public offering price, concession and reallowance to dealers may be reduced by the representatives. No such reduction will change the amount of proceeds to be received by us as set forth on the cover page of this prospectus.

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The following table shows the public offering price, the underwriting discounts and commissions that we are to pay the underwriters and the proceeds, before expenses, to us in connection with this offering. Such amounts are shown assuming both no exercise and full exercise of the underwriters' option to purchase additional shares.

	PER SHARE		TOTAL	
	WITHOUT OPTION TO PURCHASE ADDITIONAL SHARES	WITH OPTION TO PURCHASE ADDITIONAL SHARES	WITHOUT OPTION TO PURCHASE ADDITIONAL SHARES	WITH OPTION TO PURCHASE ADDITIONAL SHARES
Public offering price	\$	\$	\$	\$
Underwriting discounts and commissions paid by us	\$	\$	\$	\$
Proceeds to us, before expenses	\$	\$	\$	\$

We estimate expenses payable by us in connection with this offering, other than the underwriting discounts and commissions referred to above, will be approximately \$. We have also agreed to reimburse the underwriters for up to \$ for their Financial Industry Regulatory Authority, Inc., or FINRA, counsel fee. In accordance with FINRA Rule 5110, this reimbursed fee is deemed underwriting compensation for this offering.

Determination of Offering Price

Prior to this offering, there has not been a public market for our common stock. Consequently, the initial public offering price for our common stock will be determined by negotiations between us and the representatives. Among the factors to be considered in these negotiations will be prevailing market conditions, our financial information, market valuations of other companies that we and the underwriters believe to be comparable to us, estimates of our business potential, the present state of our development and other factors deemed relevant.

We offer no assurances that the initial public offering price will correspond to the price at which the common stock will trade in the public market subsequent to the offering or that an active trading market for the common stock will develop and continue after the offering.

Listing

We intend to apply to list our common stock on the Nasdaq Global Select Market under the symbol "ALXO."

Option to Purchase Additional Shares

We have granted to the underwriters an option, exercisable for 30 days from the date of this prospectus, to purchase, from time to time, in whole or in part, up to an aggregate of shares from us at the public offering price set forth on the cover page of this prospectus, less underwriting discounts and commissions. If the underwriters exercise this option, each underwriter will be obligated, subject to specified conditions, to purchase a number of additional shares proportionate to that underwriter's initial purchase commitment as indicated in the table above. This option may be exercised only if the underwriters sell more shares than the total number set forth on the cover page of this prospectus.

No Sales of Similar Securities

We, our officers, directors and holders of substantially all our outstanding capital stock have agreed, subject to specified exceptions, not to directly or indirectly:

- sell, offer to sell, contract to sell or lend any of our securities,
- effect any short sale, or establish or increase any "put equivalent position" (as defined in Rule 16a-1(h) under the Exchange Act) or liquidate or decrease any "call equivalent position" (as defined in Rule 16a-1(b) under the Exchange Act) of any of our securities,
- pledge, hypothecate or grant any security interest in any of our securities,

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- in any other way transfer or dispose of our securities,
- enter into any swap, hedge or similar arrangement or agreement that transfers, in whole or in part, the economic risk of ownership of any of our securities, regardless of whether any such transaction is to be settled in securities, in cash or otherwise,
- announce the offering of any of our securities,
- submit or file any registration statement under the Securities Act in respect of any of our securities,
- effect a reverse stock split, recapitalization, share consolidation, reclassification or similar transaction affecting our outstanding common stock or
- publicly announce an intention to do any of the foregoing for a period of 180 days after the date of this prospectus without the prior written consent of Jefferies LLC, Credit Suisse Securities (USA) LLC and Piper Sandler & Co.

This restriction terminates after the close of trading of the common stock on and including the 180th day after the date of this prospectus.

Jefferies LLC, Credit Suisse Securities (USA) LLC and Piper Sandler & Co. may, in their sole discretion and at any time or from time to time before the termination of the 180-day period, release all or any portion of the securities subject to lock-up agreements. There are no existing agreements between the underwriters and any of our shareholders who will execute a lock-up agreement, providing consent to the sale of shares prior to the expiration of the lock-up period.

Stabilization

The underwriters have advised us that they, pursuant to Regulation M under the Exchange Act, certain persons participating in the offering may engage in short sale transactions, stabilizing transactions, syndicate covering transactions or the imposition of penalty bids in connection with this offering. These activities may have the effect of stabilizing or maintaining the market price of the common stock at a level above that which might otherwise prevail in the open market. Establishing short sales positions may involve either "covered" short sales or "naked" short sales.

"Covered" short sales are sales made in an amount not greater than the underwriters' option to purchase additional shares of our common stock in this offering. The underwriters may close out any covered short position by either exercising their option to purchase additional shares of our common stock or purchasing shares of our common stock in the open market. In determining the source of shares to close out 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 shares through the option to purchase additional shares.

"Naked" short sales are sales in excess of the option to purchase additional shares of our common stock. The underwriters must close out any 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 shares of our common stock in the open market after pricing that could adversely affect investors who purchase in this offering.

A stabilizing bid is a bid for the purchase of shares of common stock on behalf of the underwriters for the purpose of fixing or maintaining the price of the common stock. A syndicate covering transaction is the bid for or the purchase of shares of common stock on behalf of the underwriters to reduce a short position incurred by the underwriters in connection with the offering. Similar to other purchase transactions, the underwriter's purchases to cover the syndicate short sales may have the effect of raising or maintaining the market price of our common stock or preventing or retarding a decline in the market price of our common stock. As a result, the price of our common stock may be higher than the price that might otherwise exist in the open market. A penalty bid is an arrangement permitting the underwriters to reclaim the selling concession otherwise accruing to a syndicate member in connection with the offering if the common stock originally sold by such syndicate member are purchased in a syndicate covering transaction and therefore have not been effectively placed by such syndicate member.

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Neither we, nor any of the underwriters make any representation or prediction as to the direction or magnitude of any effect that the transactions described above may have on the price of our common stock. The underwriters are not obligated to engage in these activities and, if commenced, any of the activities may be discontinued at any time.

The underwriters may also engage in passive market making transactions in our common stock on the Nasdaq Global Select Market in accordance with Rule 103 of Regulation M during a period before the commencement of offers or sales of shares of our common stock in this offering and extending through the completion of distribution. A passive market maker must display its bid at a price not in excess of the highest independent bid of that security. However, if all independent bids are lowered below the passive market maker's bid, that bid must then be lowered when specified purchase limits are exceeded.

Electronic Distribution

A prospectus in electronic format may be made available by e-mail or on the websites or through online services maintained by one or more of the underwriters or their affiliates. In those cases, prospective investors may view offering terms online and may be allowed to place orders online. The underwriters may agree with us to allocate a specific number of shares of common stock for sale to online brokerage account holders. Any such allocation for online distributions will be made by the underwriters on the same basis as other allocations. Other than the prospectus in electronic format, the information on the underwriters' websites and any information contained in any other website maintained by any of the underwriters is not part of this prospectus, has not been approved and/or endorsed by us or the underwriters and should not be relied upon by investors.

Other Activities and Relationships

The underwriters and certain of their affiliates are full service financial institutions engaged in various activities, which may include securities trading, commercial and investment banking, financial advisory, investment management, investment research, principal investment, hedging, financing and brokerage activities. The underwriters and certain of their affiliates have, from time to time, performed, and may in the future perform, various commercial and investment banking and financial advisory services for us and our affiliates, for which they received or will receive customary fees and expenses.

In the ordinary course of their various business activities, the underwriters and certain of their affiliates may make or hold a broad array of investments and actively trade debt and equity securities (or related derivative securities) and financial instruments (including bank loans) for their own account and for the accounts of their customers, and such investment and securities activities may involve securities and/or instruments issued by us and our affiliates. If the underwriters or their respective affiliates have a lending relationship with us, they routinely hedge their credit exposure to us consistent with their customary risk management policies. The underwriters and their respective affiliates may hedge such exposure by entering into transactions which consist of either the purchase of credit default swaps or the creation of short positions in our securities or the securities of our affiliates, including potentially the common stock offered hereby. Any such short positions could adversely affect future trading prices of the common stock offered hereby. The underwriters and certain of 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 securities or instruments and may at any time hold, or recommend to clients that they acquire, long and/or short positions in such securities and instruments.

Disclaimers About Non-U.S. Jurisdictions

European Economic Area and the United Kingdom

In relation to each Member State of the European Economic Area and the United Kingdom (each a “Relevant State”), no shares have been offered or will be offered pursuant to the offering to the public in that Relevant State prior to the publication of a prospectus in relation to the shares which has been approved by the competent authority in that Relevant State or, where appropriate, approved in another Relevant State and notified to the competent authority in that Relevant State, all in accordance with the Prospectus Regulation, except that offers of shares may be made to the public in that Relevant State at any time under the following exemptions under the Prospectus Regulation:

- to any legal entity which is a qualified investor as defined under the Prospectus Regulation;
- to fewer than 150 natural or legal persons (other than qualified investors as defined under the Prospectus Regulation), subject to obtaining the prior consent of the underwriters; or
- in any other circumstances falling within Article 1(4) of the Prospectus Regulation,

provided that no such offer of shares shall require us or any underwriter to publish a prospectus pursuant to Article 3 of the Prospectus Regulation or supplement a prospectus pursuant to Article 23 of the Prospectus Regulation and each person who initially acquires any shares or to whom any offer is made will be deemed to have represented, acknowledged and agreed to and with each of the underwriters and us that it is a “qualified investor” within the meaning of Article 2(e) of the Prospectus Regulation. In the case of any shares being offered to a financial intermediary as that term is used in the Prospectus Regulation, each such financial intermediary will be deemed to have represented, acknowledged and agreed that the shares acquired by it in the offer have not been acquired on a non-discretionary basis on behalf of, nor have they been acquired with a view to their offer or resale to, persons in circumstances which may give rise to an offer of any shares to the public other than their offer or resale in a Relevant State to qualified investors as so defined or in circumstances in which the prior consent of the underwriters have been obtained to each such proposed offer or resale.

For the purposes of this provision, the expression an “offer to the public” in relation to shares in any Relevant State means the communication in any form and by any means of sufficient information on the terms of the offer and any shares to be offered so as to enable an investor to decide to purchase or subscribe for any shares, and the expression “Prospectus Regulation” means Regulation (EU) 2017/1129.

United Kingdom

In addition, in the United Kingdom, this document is being distributed only to, and is directed only at, and any offer subsequently made may only be directed at persons who are “qualified investors” (as defined in the Prospectus Regulation) (i) who have professional experience in matters relating to investments falling within Article 19(5) of the Financial Services and Markets Act 2000 (Financial Promotion) Order 2005, as amended, or the Order, and/or (ii) who are high net worth companies (or persons to whom it may otherwise be lawfully communicated) falling within Article 49(2)(a) to (d) of the Order (all such persons together being referred to as “relevant persons”) or otherwise in circumstances which have not resulted and will not result in an offer to the public of the shares in the United Kingdom within the meaning of the Financial Services and Markets Act 2000.

Any person in the United Kingdom that is not a relevant person should not act or rely on the information included in this document or use it as basis for taking any action. In the United Kingdom, any investment or investment activity that this document relates to may be made or taken exclusively by relevant persons.

Canada

(A) Resale Restrictions

The distribution of shares of common stock in Canada is being made only in the provinces of Ontario, Quebec, Alberta and British Columbia on a private placement basis exempt from the requirement that we prepare and file a prospectus with the securities regulatory authorities in each province where trades of these securities are made. Any resale of the shares of our common stock in Canada must be made under applicable securities laws which may vary depending on the relevant jurisdiction, and which may require resales to be made under available statutory exemptions or under a discretionary exemption granted by the applicable Canadian securities regulatory authority. Purchasers are advised to seek legal advice prior to any resale of the shares of common stock.

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(B) Representations of Canadian Purchasers

By purchasing shares of our common stock in Canada and accepting delivery of a purchase confirmation, a purchaser is representing to us and the dealer from whom the purchase confirmation is received that:

- the purchaser is entitled under applicable provincial securities laws to purchase the shares of our common stock without the benefit of a prospectus qualified under those securities laws as it is an “accredited investor” as defined under National Instrument 45-106 – Prospectus Exemptions,
- the purchaser is a “permitted client” as defined in National Instrument 31-103—Registration Requirements, Exemptions and Ongoing Registrant Obligations,
- where required by law, the purchaser is purchasing as principal and not as agent and
- the purchaser has reviewed the text above under Resale Restrictions.

(C) Conflicts of Interest

Canadian purchasers are hereby notified that each of shares of our the underwriters are relying on the exemption set out in section 3A.3 or 3A.4, if applicable, of National Instrument 33-105 – Underwriting Conflicts from having to provide certain conflict of interest disclosure in this document.

(D) Statutory Rights of Action

Securities legislation in certain provinces or territories of Canada may provide a purchaser with remedies for rescission or damages if the prospectus (including any amendment thereto) such as this document 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 of these securities in Canada should refer to any applicable provisions of the securities legislation of the purchaser’s province or territory for particulars of these rights or consult with a legal advisor.

(E) Enforcement of Legal Rights

All of our directors and officers as well as the experts named herein may be located outside of Canada and, as a result, it may not be possible for Canadian purchasers to effect service of process within Canada upon us or those persons. All or a substantial portion of our assets and the assets of those persons may be located outside of Canada and, as a result, it may not be possible to satisfy a judgment against us or those persons in Canada or to enforce a judgment obtained in Canadian courts against us or those persons outside of Canada.

(F) Taxation and Eligibility for Investment

Canadian purchasers of shares of common stock should consult their own legal and tax advisors with respect to the tax consequences of an investment in the shares of our common stock in their particular circumstances and about the eligibility of the shares of our common stock for investment by the purchaser under relevant Canadian legislation.

Australia

This prospectus is not a disclosure document for the purposes of Australia’s Corporations Act 2001 (Cth) of Australia, or Corporations Act, has not been lodged with the Australian Securities & Investments Commission and is only directed to the categories of exempt persons set out below. Accordingly, if you receive this prospectus in Australia:

You confirm and warrant that you are either:

- a “sophisticated investor” under section 708(8)(a) or (b) of the Corporations Act;
- a “sophisticated investor” under section 708(8)(c) or (d) of the Corporations Act and that you have provided an accountant’s certificate to the Company which complies with the requirements of section 708(8)(c)(i) or (ii) of the Corporations Act and related regulations before the offer has been made;
- a person associated with the Company under Section 708(12) of the Corporations Act; or
- a “professional investor” within the meaning of section 708(11)(a) or (b) of the Corporations Act.

To the extent that you are unable to confirm or warrant that you are an exempt sophisticated investor, associated person or professional investor under the Corporations Act any offer made to you under this prospectus is void and incapable of acceptance.

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You warrant and agree that you will not offer any of the securities issued to you pursuant to this prospectus for resale in Australia within 12 months of those securities being issued unless any such resale offer is exempt from the requirement to issue a disclosure document under section 708 of the Corporations Act.

Hong Kong

No shares of our common stock have been offered or sold, and no shares of our common stock may be offered or sold, in Hong Kong, by means of any document, other than to persons whose ordinary business is to buy or sell shares or debentures, whether as principal or agent; or to “professional investors” as defined in the Securities and Futures Ordinance (Cap. 571) of Hong Kong, or the SFO, and any rules made under that Ordinance; or in other circumstances which do not result in the document being a “prospectus” as defined in the Companies Ordinance (Cap. 32) of Hong Kong, or the CO, or which do not constitute an offer or invitation to the public for the purpose of the CO or the SFO. No document, invitation or advertisement relating to the shares of our common stock has been issued or 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 of Hong Kong (except if permitted under the securities laws of Hong Kong) other than with respect to shares of our common stock which are or are intended to be disposed of only to persons outside Hong Kong or only to “professional investors” as defined in the SFO and any rules made under that Ordinance.

This prospectus has not been registered with the Registrar of Companies in Hong Kong. Accordingly, this prospectus may not be issued, circulated or distributed in Hong Kong, and the shares of our common stock may not be offered for subscription to members of the public in Hong Kong. Each person acquiring the shares of our common stock will be required, and is deemed by the acquisition of the shares of our common stock, to confirm that he is aware of the restriction on offers of the shares of our common stock described in this prospectus and the relevant offering documents and that he is not acquiring, and has not been offered any shares of our common stock in circumstances that contravene any such restrictions.

Israel

This document does not constitute a prospectus under the Israeli Securities Law, 5728-1968, or the Securities Law, and has not been filed with or approved by the Israel Securities Authority. In Israel, this prospectus is being distributed only to, and is directed only at, and any offer of shares is directed only at, (i) a limited number of persons in accordance with the Israeli Securities Law and (ii) investors listed in the first addendum, or the Addendum, to the Israeli Securities Law, consisting primarily of joint investment in trust funds, provident funds, insurance companies, banks, portfolio managers, investment advisors, members of the Tel Aviv Stock Exchange, underwriters, venture capital funds, entities with equity in excess of NIS 50 million and “qualified individuals,” each as defined in the Addendum (as it may be amended from time to time), collectively referred to as qualified investors (in each case, purchasing for their own account or, where permitted under the Addendum, for the accounts of their clients who are investors listed in the Addendum). Qualified investors are required to submit written confirmation that they fall within the scope of the Addendum, are aware of the meaning of same and agree to it.

Japan

The offering has not been and will not be registered under the Financial Instruments and Exchange Law of Japan (Law No. 25 of 1948 of Japan, as amended), or FIEL, and the underwriters will not offer or sell any securities, directly or indirectly, in Japan or to, or for the benefit of, any resident of Japan (which term as used herein means any person resident in Japan, including any corporation or other entity organized under the laws of Japan), or to others for re-offering 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, and otherwise in compliance with, the FIEL and any other applicable laws, regulations and ministerial guidelines of Japan.

Singapore

This prospectus has not been and will not be lodged or 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 the common stock may not be circulated or distributed, nor may the 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 under Section 274 of the Securities and Futures Act, Chapter 289 of Singapore, or the SFA, (ii) to a relevant person pursuant to Section 275(1), or any person pursuant to Section 275(1A), and in accordance with the conditions specified in

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Section 275, of the SFA, or (iii) otherwise pursuant to, and in accordance with the conditions of, any other applicable provision of the SFA.

Where the shares of our 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; or
- a trust (where the trustee is not an accredited investor) whose sole purpose is to hold investments and each beneficiary of the trust is an individual who is an accredited investor,

securities (as defined in Section 239(1) of the SFA) of that corporation or the beneficiaries' rights and interest (howsoever described) in that trust shall not be transferred within six months after that corporation or that trust has acquired the shares of our common stock pursuant to an offer made under Section 275 of the SFA except:

- to an institutional investor or to a relevant person defined in Section 275(2) of the SFA, or to any person arising from an offer referred to in Section 275(1A) or Section 276(4)(i)(B) of the SFA;
- where no consideration is or will be given for the transfer;
- where the transfer is by operation of law;
- as specified in Section 276(7) of the SFA; or
- as specified in Regulation 32 of the Securities and Futures (Offers of Investments) (Shares and Debentures) Regulations 2005 of Singapore.

Switzerland

The shares may not be publicly offered in Switzerland and will not be listed on the SIX Swiss Exchange, or the SIX, or on any other stock exchange or regulated trading facility in Switzerland. This prospectus has been prepared without regard to the disclosure standards for issuance prospectuses under art. 652a or art. 1156 of the Swiss Code of Obligations or the disclosure standards for listing prospectuses under art. 27 ff. of the SIX Listing Rules or the listing rules of any other stock exchange or regulated trading facility in Switzerland. Neither this prospectus nor any other offering or marketing material relating to the securities or the offering may be publicly distributed or otherwise made publicly available in Switzerland.

Neither this prospectus nor any other offering or marketing material relating to the offering, us or the securities have been or will be filed with or approved by any Swiss regulatory authority. In particular, this prospectus will not be filed with, and the offer of securities will not be supervised by, the Swiss Financial Market Supervisory Authority FINMA, and the offer of securities has not been and will not be authorized under the Swiss Federal Act on Collective Investment Schemes, or the CISA. The investor protection afforded to acquirers of interests in collective investment schemes under the CISA does not extend to acquirers of securities.

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. Cooley LLP, San Francisco, California, is representing the underwriters in connection with this offering.

EXPERTS

The consolidated financial statements of ALX Oncology Limited as of December 31, 2018 and 2019, and each of the years in the two-year period ended December 31, 2019, have been included herein and in the registration statement in reliance upon the report of KPMG LLP, independent registered public accounting firm, appearing elsewhere herein, and upon the authority of said firm as experts in accounting and auditing.

WHERE YOU CAN FIND MORE INFORMATION

We have filed with the SEC a registration statement on Form S-1 under the Securities Act with respect to the shares of common stock offered by this prospectus. This prospectus, which constitutes a part of the registration statement, does not include all of the information contained in the registration statement, some of which is contained in exhibits to the registration statement as permitted by the rules and regulations of the SEC. You should refer to the registration statement and its exhibits for additional information. Whenever we make references in this prospectus to any of our contracts, agreements or other documents, such references are not necessarily complete and you should refer to the exhibits attached to the registration statement for copies of the actual contract, agreement or other document.

You can read our SEC filings, including the registration statement and its exhibits, over the Internet at the SEC's website at www.sec.gov.

When we complete this offering, we will be subject to the information reporting requirements of the Exchange Act, and we will file annual, quarterly and special reports, proxy statements and other information with the SEC. These reports, proxy statements and other information will be available at the website of the SEC referred to above. We also maintain a website at which you may access these materials free of charge as soon as reasonably practicable after they are electronically filed with, or furnished to, the SEC. The information contained on our website is not a part of this prospectus.

ALX ONCOLOGY LIMITED
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REPORT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

To the Shareholders and Board of Directors
ALX Oncology Limited

Opinion on the Consolidated Financial Statements

We have audited the accompanying consolidated balance sheets of ALX Oncology Limited and subsidiaries (the Company) as of December 31, 2018 and 2019, the related consolidated statements of operations and comprehensive loss, convertible preferred shares and shareholders' deficit, and cash flows for each of the years in the two-year period ended December 31, 2019, and the related notes (collectively, the consolidated financial statements). In our opinion, the consolidated financial statements present fairly, in all material respects, the financial position of the Company as of December 31, 2018 and 2019, and the results of its operations and its cash flows for each of the years in the two-year period ended December 31, 2019, in conformity with U.S. generally accepted accounting principles.

Basis for Opinion

These consolidated financial statements are the responsibility of the Company's management. Our responsibility is to express an opinion on these consolidated 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 consolidated 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 consolidated 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 consolidated 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 consolidated financial statements. We believe that our audits provide a reasonable basis for our opinion.

/s/ KPMG LLP

We have served as the Company's auditor since 2016.

San Francisco, California
May 5, 2020

ALX ONCOLOGY LIMITED
Consolidated Balance Sheets
(in thousands, except share and per share data)

	DECEMBER 31,		PRO FORMA SHAREHOLDERS' DEFICIT AS OF DECEMBER 31, 2019 (Unaudited)
	2018	2019	
Assets			
Current assets:			
Cash	\$ 8,262	\$ 9,017	\$
Receivables due from related-party	932	536	
Prepaid expenses and other current assets	1,014	256	
Total current assets	10,208	9,809	
Property and equipment, net	956	860	
Other assets	—	7	
Total assets	<u>\$ 11,164</u>	<u>\$ 10,676</u>	<u>\$</u>
Liabilities, convertible preferred shares and shareholders' deficit			
Current liabilities:			
Accounts payable	\$ 697	\$ 3,748	\$
Accrued expenses and other current liabilities	1,176	1,236	
Total current liabilities	1,873	4,984	
Term loan	—	5,421	
Other long-term liabilities	—	412	
Deferred rent	136	135	
Total liabilities	2,009	10,952	
Commitments and contingencies (Note 8)			
Series A convertible preferred shares, \$0.001 par value; 62,000,000 shares authorized; 61,180,500 shares issued and outstanding at December 31, 2018 and 2019, respectively; aggregate liquidation preference of \$69,863 and \$73,571 as of December 31, 2018 and 2019, respectively; 0 shares authorized, issued and outstanding, pro forma (unaudited)	60,933	60,933	
Series B convertible preferred shares, \$0.001 par value; 14,117,822 shares authorized; 0 and 6,690,729 shares issued and outstanding at December 31, 2018 and 2019, respectively; aggregate liquidation preference of \$0 and \$10,014 as of December 31, 2018 and 2019, respectively; 0 shares authorized, issued and outstanding, pro forma (unaudited)	—	9,430	
Shareholders' deficit:			
Ordinary shares, \$0.001 par value; 10,000,000,000 shares authorized; 20,806,306 and 20,840,532 shares issued and outstanding at December 31, 2018 and 2019, respectively; 10,000,000,000 shares authorized, 101,350,419 shares issued and outstanding, pro forma (unaudited)	21	21	101
Additional paid-in capital	1,740	2,122	72,405
Accumulated deficit	(53,539)	(72,782)	(72,782)
Total shareholders' deficit	(51,778)	(70,639)	(276)
Total liabilities, convertible preferred shares and shareholders' deficit	<u>\$ 11,164</u>	<u>\$ 10,676</u>	

See accompanying notes to consolidated financial statements

ALX ONCOLOGY LIMITED
Consolidated Statements of Operations and Comprehensive Loss
(in thousands, except share and per share amounts)

	<u>YEAR ENDED DECEMBER 31,</u>	
	<u>2018</u>	<u>2019</u>
Related-party revenue	\$ 2,067	\$ 4,796
Operating expenses:		
Research and development	11,270	16,306
General and administrative	2,601	3,313
Cost of services for related-party revenue	1,880	4,360
Total operating expenses	<u>15,751</u>	<u>23,979</u>
Loss from operations	<u>(13,684)</u>	<u>(19,183)</u>
Interest expense	—	(21)
Other income (expense), net	(2)	(5)
Loss before income taxes	(13,686)	(19,209)
Income tax provision	(45)	(34)
Net loss and comprehensive loss	(13,731)	(19,243)
Cumulative dividends allocated to preferred shareholders	(3,671)	(4,028)
Net loss attributable to ordinary shareholders	<u>\$ (17,402)</u>	<u>\$ (23,271)</u>
Net loss per share attributable to ordinary shareholders, basic and diluted	<u>\$ (0.96)</u>	<u>\$ (1.15)</u>
Weighted-average ordinary shares used to compute net loss per share attributable to ordinary shareholders, basic and diluted	<u>18,102,402</u>	<u>20,245,115</u>
Pro forma net loss attributable to ordinary shareholders per share, basic and diluted (unaudited)		<u>\$ (0.20)</u>
Weighted-average ordinary shares used to compute pro forma net loss per share attributable to ordinary shareholders, basic and diluted (unaudited)		<u>94,274,058</u>

See accompanying notes to consolidated financial statements

ALX ONCOLOGY LIMITED
Consolidated Statements of Convertible Preferred Shares and Shareholders' Deficit
(in thousands, except share amounts)

	CONVERTIBLE PREFERRED SHARES		ORDINARY SHARES		ADDITIONAL PAID-IN CAPITAL	ACCUMULATED DEFICIT	TOTAL SHAREHOLDERS' DEFICIT
	SHARES	AMOUNT	SHARES	AMOUNT			
Balance as of December 31, 2017	61,180,500	\$ 60,933	21,093,705	\$ 21	\$ 1,372	\$ (39,808)	\$ (38,415)
Exercise of share options	—	—	45,505	—	7	—	7
Repurchase of ordinary shares	—	—	(287,500)	—	—	—	—
Vesting of early exercised share options	—	—	—	—	92	—	92
Repurchase of unvested early exercised share options	—	—	(45,404)	—	—	—	—
Share-based compensation	—	—	—	—	269	—	269
Net loss	—	—	—	—	—	(13,731)	(13,731)
Balance as of December 31, 2018	61,180,500	60,933	20,806,306	21	1,740	(53,539)	(51,778)
Issuance of Series B convertible preferred shares, net of issuance costs of \$226	6,690,729	9,430	—	—	—	—	—
Exercise of share options	—	—	34,226	—	10	—	10
Vesting of early exercised share options	—	—	—	—	75	—	75
Share-based compensation	—	—	—	—	297	—	297
Net loss	—	—	—	—	—	(19,243)	(19,243)
Balance as of December 31, 2019	67,871,229	\$ 70,363	20,840,532	\$ 21	\$ 2,122	\$ (72,782)	\$ (70,639)

See accompanying notes to consolidated financial statements

ALX ONCOLOGY LIMITED
Consolidated Statements of Cash Flows
(in thousands)

	YEAR ENDED DECEMBER 31,	
	2018	2019
Operating activities		
Net loss	\$(13,731)	\$(19,243)
Adjustments to reconcile net loss to net cash used in operating activities:		
Depreciation and amortization expense	431	429
Share-based compensation expense	269	297
Amortization of term loan discount and issuance costs	—	11
Changes in operating assets and liabilities		
Receivables due from related-party	(932)	396
Prepaid expenses and other current assets	897	744
Other assets	—	7
Accounts payable	(269)	2,976
Accrued expenses and other current liabilities	9	134
Deferred rent	136	—
Net cash used in operating activities	<u>\$(13,190)</u>	<u>\$(14,249)</u>
Investing activities		
Purchase of property and equipment	(653)	(353)
Net cash used in investing activities	<u>(653)</u>	<u>(353)</u>
Financing activities		
Proceeds from related parties for issuance of Series B convertible preferred shares, net of issuance costs of \$164	—	6,829
Proceeds from issuance of Series B convertible preferred shares, net of issuance costs of \$62		2,601
Proceeds from issuance of ordinary shares under equity incentive plan	7	10
Cash paid for repurchase of ordinary shares	(6)	—
Proceeds from issuance of term loan, net of issuance costs of \$83	—	5,917
Net cash provided by financing activities	<u>1</u>	<u>15,357</u>
Net (decrease) increase in cash	<u>(13,842)</u>	<u>755</u>
Cash at beginning of year	22,104	8,262
Cash at end of year	<u>\$ 8,262</u>	<u>9,017</u>
Supplemental disclosure of non-cash investing and financing activities		
Fair value of compound derivative liability and warrant liability related to term loan	<u>\$ —</u>	<u>\$ 412</u>
Vesting of early exercised share options	<u>\$ 92</u>	<u>\$ 75</u>
Acquisition of property and equipment in accounts payable	<u>\$ 20</u>	<u>\$ —</u>
Debt issuance costs in accounts payable	<u>\$ —</u>	<u>\$ 95</u>

See accompanying notes to consolidated financial statements

(1) ORGANIZATION AND SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES

Organization

Alexo Therapeutics Limited, or the Company, was initially incorporated in Ireland on March 13, 2015 and changed its name to ALX Oncology Limited on October 11, 2018. The Company is a clinical-stage immuno-oncology company focused on helping patients fight cancer by developing therapies that block the CD47 checkpoint pathway and bridge the innate and adaptive immune system.

The Company owns a direct subsidiary, ALX Oncology Inc., incorporated in the United States, as well as a direct subsidiary incorporated in Malta, Alexo International Holdings Ltd. The Company also has two indirect subsidiaries, Alexo Therapeutics International, incorporated in the Cayman Islands, which is a wholly-owned subsidiary of Alexo International Holdings Ltd. and Sirpant Therapeutics, incorporated in the Cayman Islands, which is a wholly-owned subsidiary of Alexo Therapeutics International, collectively, the Subsidiaries.

The Company completed an internal reorganization transaction in April 2020, pursuant to which ALX Oncology Limited became a wholly-owned subsidiary of ALX Oncology Holdings Inc., a newly formed Delaware corporation. As part of the transaction, all of the equity, option and warrant holders of ALX Oncology Limited became equity, option and warrant holders of ALX Oncology Holdings Inc., holding the same number of corresponding shares, options and/or warrants in ALX Oncology Holdings Inc., as they did in the Company immediately prior to the reorganization (Note 13).

Basis of Preparation

These consolidated financial statements have been prepared in accordance with accounting principles generally accepted in the United States of America, or U.S. GAAP.

Principles of Consolidation

All intercompany balances and transactions have been eliminated in consolidation.

Unaudited Pro Forma Information

Immediately prior to the completion of this offering, all outstanding convertible preferred shares will automatically convert into ordinary shares. Unaudited pro forma balance sheet information as of December 31, 2019 assumes the conversion of all outstanding convertible preferred shares and cumulative undeclared dividends on the convertible preferred shares into 80,509,887 ordinary shares. The ordinary shares issuable and the proceeds expected to be received in the initial public offering are excluded from such pro forma financial information. Unaudited pro forma basic and diluted net loss per share has been computed to give effect to the conversion of all outstanding convertible preferred shares and cumulative dividends on the convertible preferred shares into ordinary shares. The unaudited pro forma net loss per share does not include the shares expected to be sold and related proceeds to be received from the initial public offering.

Need for Additional Capital

Since commencing operations, none of the Company's product candidates have received marketing approval from the U.S. Food and Drug Administration, or FDA, or any other federal, state, local or foreign governmental or regulatory authority and therefore the Company has not generated any revenue from drug product sales. The Company had an accumulated deficit of \$72.8 million as of December 31, 2019 and management does not expect to experience positive cash flows in the foreseeable future. Based on management's current plans, management believes cash of \$9.0 million as of December 31, 2019, along with the \$105.0 million of gross proceeds from the issuance of Series C convertible preferred shares in February 2020 (Note 13), are sufficient to fund operations through at least one year from the date of the issuance of these consolidated financial statements.

Management expects to incur additional losses in the future to conduct product candidate research and development and to conduct pre-commercialization activities and recognizes the need to raise additional capital to fully implement its business plan. The Company intends to raise such capital through the sale of additional equity, debt financings or strategic alliances with third parties. However, there can be no assurance that the Company will be successful in acquiring additional funding at levels sufficient to fund its operations or on terms acceptable to the Company. If the Company is unsuccessful in its efforts to raise additional financing, the Company could be required to significantly reduce operating expenses and delay, reduce the scope of or

eliminate some of its development programs or its future commercialization efforts, out-license intellectual property rights to its product candidates and sell unsecured assets, or a combination of the above, any of which may have a material adverse effect on the Company's business, results of operations, financial condition and/or its ability to fund its scheduled obligations on a timely basis or at all.

Use of Estimates

The preparation of consolidated financial statements in conformity with U.S. GAAP requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities and disclosure of contingent assets and liabilities at the date of the consolidated financial statements and the reported amounts of revenues and expenses during the reporting periods. On an ongoing basis, management evaluates its estimates, including those related to the estimated useful lives of long-lived assets, clinical trial accruals, fair value of assets and liabilities, Series B convertible preferred shares warrant liability, term loan compound derivative liability, term loan, valuation of ordinary shares, income taxes and share-based compensation. Management bases its estimates on historical experience and on various other market-specific and relevant assumptions that management believes to be reasonable under the circumstances. Actual results could differ from those estimates.

Cash

The Company holds its cash in checking and interest-bearing accounts.

Concentration of Credit Risk and Other Risks and Uncertainties

Financial instruments that potentially subject the Company to a concentration of credit risk consist primarily of cash. The Company maintains deposits in federally insured financial institutions in excess of federally insured limits. The Company is exposed to credit risk in the event of default by the financial institutions holding its cash. The Company has not experienced any losses on its deposits of cash.

The Company's future results of operations involve a number of other risks and uncertainties. Factors that could affect the Company's future operating results and cause actual results to vary materially from expectations include, but are not limited to, uncertainty of results of clinical trials and reaching milestones, uncertainty of regulatory approval of the Company's potential product candidates, uncertainty of market acceptance of the Company's product candidates, competition from substitute products and larger companies, securing and protecting proprietary technology, strategic relationships and dependence on key individuals or sole-source suppliers.

The Company's product candidates require approvals from the FDA and comparable foreign regulatory agencies prior to commercial sales in their respective jurisdictions. There can be no assurance that any product candidates will receive the necessary approvals. If the Company was denied approval, approval was delayed or the Company was unable to maintain approval for any product candidate, it could have a materially adverse impact on the Company.

Property and Equipment

Property and equipment are stated at cost less accumulated depreciation. Depreciation of property and equipment is provided using the straight-line method over the estimated useful lives of the assets (Note 3). Upon sale or retirement of assets, the cost and related accumulated depreciation or amortization are removed from the consolidated balance sheet and the resulting gain or loss is reflected in the consolidated statement of operations and comprehensive loss. Maintenance and repairs are charged to the consolidated statement of operations and comprehensive loss as incurred.

The useful lives of the property and equipment are as follows:

Research and development equipment	5 years
Furniture and office equipment	5 years
Computer equipment	3 years
Software	3 years
Leasehold improvements	Shorter of 7 years or remaining of lease term

Impairment of Long-Lived Assets

The Company reviews property and equipment for 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 amount to the future undiscounted net cash flows which the asset or asset group are expected to generate. If such assets are considered to be impaired, the impairment to be recognized is measured as the amount by which the carrying amount of the assets exceeds its fair value. Fair value is determined using various valuation techniques including discounted cash flow models, quoted market values and third-party independent appraisals, as considered necessary. There were no impairment charges recognized in the years ended December 31, 2018 and December 31, 2019.

Fair Value of Financial Instruments

The Company applies fair value accounting for all financial assets and liabilities and nonfinancial assets and liabilities that are required to be recognized or disclosed at fair value in the consolidated financial statements. The Company defines fair value as the price that would be received from selling an asset or paid to transfer a liability in an orderly transaction between market participants at the measurement date. Where observable prices or inputs are not available valuation models are applied. These valuation techniques involve some level of management estimation and judgment, the degree of which is dependent on the price transparency for the instruments or market and the instruments' complexity.

The Company's financial instruments consist of cash, accounts receivable, accounts payable, the term loan compound derivative liability and the Series B convertible preferred shares warrant liability. The term loan compound derivative liability and the Series B convertible preferred shares warrant liability are re-measured at the end of every period and carried at fair value (Note 2). The recorded value of the Company's accounts receivable and accounts payable approximates its current fair value due to the relatively short-term nature of these items.

Term Loan

The Company accounts for the Loan and Security Agreement, dated as of December 20, 2019, with Silicon Valley Bank, and WestRiver Innovation Lending Fund VIII, LP, collectively as lenders, and Silicon Valley Bank, as administrative agent and collateral agent, as a liability measured at net proceeds less debt discount and is accreted to the face value of the term loan over its expected term using the effective interest method. The Company considers whether there are any embedded features in its debt instruments that require bifurcation and separate accounting as derivative financial instruments pursuant to Accounting Standards Codification, or ASC, Topic 815, *Derivatives and Hedging*.

Convertible Preferred Shares

The Company records convertible preferred shares net of issuance costs on the dates of issuance, which represents the carrying value. In the event of a change of control of the Company, proceeds will be distributed in accordance with the liquidation preferences set forth in its Constitution unless the holders of convertible preferred shares have converted their convertible preferred shares into ordinary shares. Convertible preferred shares are classified outside of shareholders' deficit on the accompanying consolidated balance sheets as events triggering the liquidation preferences are not solely within the Company's control. The Company has elected not to adjust the carrying values of the convertible preferred shares to the liquidation preferences of such shares because of the uncertainty of whether or when such an event would occur.

Series B Convertible Preferred Shares Warrant Liability

The Company has issued freestanding warrants to purchase its Series B convertible preferred shares. Freestanding warrants for the Company's convertible preferred shares that are classified outside of permanent equity are recorded at fair value, and are subject to re-measurement at each balance sheet date until the earlier of the exercise of the warrants or the completion of a liquidation event. Upon exercise, the Series B convertible preferred shares warrant liability would be reclassified to additional paid-in capital, with any change in fair value recognized as a component of other income (expense), net.

Revenue Recognition

To date, the Company has derived revenue from providing research and development services on a time and materials basis to a related-party. The Company recognizes such revenues over time as services are delivered, and invoices the customer as the work is incurred in arrears.

Effective January 1, 2018, the Company adopted ASC Topic 606, *Revenue from Contracts with Customers* (Topic 606) on a full retrospective basis. This standard applies to all contracts with customers, except for contracts that are within the scope of other standards, such as leases, insurance, collaboration arrangements and financial instruments. In accordance with Topic 606, the Company recognizes revenue when its customer obtains control of promised goods or services, in an amount that reflects the consideration which the Company expects to receive in exchange for those goods or services.

To determine revenue recognition for arrangements that the Company determines are within the scope of Topic 606, the Company performs the following five steps: (i) identify the contract(s) with a customer; (ii) identify the performance obligations in the contract; (iii) determine the transaction price; (iv) allocate the transaction price to the performance obligations in the contract; and (v) recognize revenue when (or as) the Company satisfies a performance obligation.

As part of the Company's consideration as to whether the Company has entered into a contract with a customer, it considers whether it is probable that it will collect the consideration it is entitled to in exchange for the goods and services it transfers to the customer. At contract inception, the Company assesses the goods or services promised within each contract that falls under the scope of Topic 606, determines those that are performance obligations, and assesses whether each promised good or service is distinct. The Company then recognizes as revenue the amount of the transaction price that is allocated based on their standalone selling price to the respective performance obligation when (or as) the performance obligation is satisfied.

Cost of Services for Related-Party Revenue

The Company incurs costs associated with related-party services including direct labor and associated employee benefits, laboratory supplies, and other expenses. These costs are recorded in cost of services for related-party revenue as a component of total operating expenses in the accompanying consolidated statements of operations and comprehensive loss.

Research and Development Costs

Research and development costs are expensed as incurred and consist primarily of salaries and benefits, share-based compensation expense, lab supplies and facility costs, as well as fees paid to nonemployees and entities that conduct certain research and development activities on behalf of the Company and expenses incurred in connection with license agreements (Note 9). Nonrefundable advance payments for goods or services to be received in the future for use in research and development activities are capitalized and recorded in prepaid expenses and other current assets, and then expensed as the related goods are delivered or the services are performed.

Clinical and Manufacturing Accruals

The Company records accruals for estimated costs of research, preclinical studies and clinical trials, and manufacturing development, which are a significant component of research and development expenses. A substantial portion of the Company's ongoing research and development activities are conducted by third-party service providers, including contract research organizations, or CROs, and contract manufacturing organizations, or CMOs. The Company's contracts with CROs generally include pass-through fees such as regulatory expenses, investigator fees, travel costs and other miscellaneous costs, including shipping and printing fees. The financial terms of these contracts are subject to negotiations, which vary from contract to contract and may result in payment flows that do not match the periods over which materials or services are provided to the Company under such contracts. The Company accrues the costs incurred under agreements with these third parties based on estimates of actual work completed in accordance with the respective agreements. The Company determines the estimated costs through discussions with internal personnel and external service providers as to the progress or stage of completion of the services and the agreed-upon fees to be paid for such services.

The Company makes significant judgments and estimates in determining the accrual balance at the end of each reporting period. As actual costs become known, the Company adjusts its accruals. Although the Company does not expect its estimates to be materially different from amounts actually incurred, the Company's understanding of the status and timing of services performed relative to the actual status and timing of services performed may vary and could result in the Company reporting amounts that are too high or too low in any particular period. To assist in its estimates the Company relies upon the receipt of timely and accurate reporting from information provided as part of its clinical and non-clinical studies and other third-party vendors. Through December 31, 2019, there have been no material differences from the Company's accrued estimated expenses to the actual clinical trial expenses. However, variations in the assumptions used to estimate accruals, including, but not limited to, the number of patients enrolled, the rate of patient enrollment, and the actual services performed, and related costs may vary from the Company's estimates, resulting in adjustments to clinical trial expense in future periods. Changes in these estimates that result in material changes to the Company's accruals could materially affect its financial position and results of operations.

Share-Based Compensation Expense

The Company accounts for share-based compensation by measuring and recognizing compensation expense for all share-based payments made to employees, directors and non-employees based on estimated grant-date fair values. The Company uses the straight-line method to allocate compensation expense to reporting periods over each optionee's requisite service period, which is generally the vesting period, and estimates the fair value of share-based awards to employees and directors using the Black-Scholes option-pricing model. The Black-Scholes model requires the input of subjective assumptions, including expected volatility, expected dividend yield, expected term, risk-free rate of return and the estimated fair value of the underlying ordinary shares on the date of grant. The Company accounts for the effect of forfeitures as they occur.

Segment Reporting

The Company manages its operations as a single operating segment for the purposes of assessing performance and making operating decisions. All of the Company's assets are maintained in the United States and Ireland.

Foreign Currency Transactions

The functional currency of the Company's operation and each of its subsidiaries is U.S. dollars. All assets and liabilities denominated in a foreign currency are translated into U.S. dollars at the exchange rate prevailing on the balance sheet date. Expenses are translated at the average exchange rates prevailing during the applicable period. Foreign currency transaction gains and losses are included in the consolidated statement of operations and comprehensive loss and recorded in other income (expense), net, and was immaterial for the years ended December 31, 2018 and December 31, 2019, respectively.

Income Taxes

The Company accounts for income taxes under the asset and liability method, which requires the recognition of deferred tax assets and liabilities for the expected future tax consequences of events that have been included in the consolidated financial statements. Under this method, deferred tax assets and liabilities are determined on the basis of the differences between the consolidated financial statement carrying amounts and tax bases of assets and liabilities using enacted tax rates in effect for the period in which the temporary differences are expected to reverse. The effect of a change in tax rates on deferred tax assets and liabilities is recognized in the consolidated statements of operations and comprehensive loss in the period that includes the enactment date.

The Company recognizes deferred tax assets to the extent that it believes these assets are more likely than not to be realized. In making such a determination, the Company considers all available positive and negative evidence, including future reversals of existing taxable temporary differences, projected future taxable income, tax-planning strategies and results of recent operations. If the Company determines that it would be able to realize its deferred tax assets in the future in excess of their net recorded amount, it would make an adjustment to the deferred tax asset valuation allowance, which would reduce the provision for income taxes.

The Company recognizes benefits of uncertain tax positions if it is more likely than not that such positions will be sustained upon examination based solely on their technical merits, as the largest amount of benefit that is

more likely than not to be realized upon the ultimate settlement. The Company's policy is to recognize interest and penalties related to the underpayment of income taxes as a component of income tax expense or benefit.

Net Loss Per Share Attributable to Ordinary Shareholders

Basic net loss per share is calculated by dividing the net loss attributable to ordinary shareholders by the weighted-average number of ordinary shares outstanding during the period, without consideration for ordinary share equivalents. Net loss attributable to ordinary shareholders is calculated by adjusting net loss of the Company for cumulative preferred share dividends. Diluted net loss per share is the same as basic net loss per share, since the effects of potentially dilutive securities are antidilutive given the net loss for each period presented.

The Company applies the two-class method to compute basic and diluted net loss per share when it has issued shares that meet the definition of participating securities. The two-class method determines net loss per share for each class of ordinary and participating securities according to dividends declared or accumulated and participation rights in undistributed earnings. The two-class method requires net loss available to ordinary shareholders for the period to be allocated between ordinary and participating securities based upon their respective rights to share in the earnings as if all net loss for the period had been distributed. The Company's convertible preferred shares participate in any dividends declared by the Company and are therefore considered to be participating securities. The participating securities are not required to participate in the losses of the Company, and therefore during periods of loss there is no allocation required under the two-class method.

Unaudited Pro Forma Net Loss Per Share Attributable to Ordinary Shareholders

In contemplation of an initial public offering, or IPO, the Company has presented unaudited pro forma basic and diluted net loss per share attributable to ordinary shareholders for the year ended December 31, 2019. Unaudited pro forma basic net loss per share attributable to ordinary shareholders as of December 31, 2019 is computed to give effect to adjustments to the denominator in the pro forma basic and diluted net loss per share calculation to reflect the conversion of all of the Company's outstanding convertible preferred shares and cumulative dividends into 74,028,943 ordinary shares, as if the conversion had occurred as of the beginning of the period or the original date of issuance, if later.

Unaudited pro forma diluted net loss attributable to ordinary shareholders is the same as unaudited pro forma basic net loss per share attributable to ordinary shareholders for the period as the impact of any potentially dilutive securities was anti-dilutive, which has been computed to give effect to the adjustment noted above. The pro forma net loss per share attributable to ordinary shareholders does not include proceeds to be received from nor does it include shares expected to be sold in the assumed IPO.

Recent Accounting Pronouncements

From time to time, new accounting pronouncements are issued by the Financial Accounting Standards Board, or FASB, or other standard setting bodies and adopted by the Company as of the specified effective date. Unless otherwise discussed, the impact of recently issued standards that are not yet effective will not have a material impact on the Company's financial position or results of operations upon adoption.

In February 2016, the FASB issued ASU No. 2016-02 (Topic 842), *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 No. 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. In November 2019, the FASB issued ASU No. 2019-10, which extends the effective date of ASU No. 2016-02 for non-public business entities, including smaller reporting companies, to fiscal years beginning after December 15, 2020. The new standard is effective for the Company beginning January 1, 2021. Early adoption is permitted. The Company is currently evaluating the effects of the adoption of this guidance on its consolidated financial statements and related disclosures.

In June 2016, the FASB issued ASU No. 2016-13, *Financial Instruments-Credit Losses* (Topic 326), which requires entities to measure all expected credit losses for financial assets held at the reporting date based on historical experience, current conditions, and reasonable and supportable forecasts. This replaces the existing

incurred loss model and is applicable to the measurement of credit losses on financial assets measured at amortized cost. In February 2020, the FASB issued ASU No. 2020-02 and delayed the effective date of Topic 326 until fiscal year beginning after December 15, 2022. The new standard is effective for the Company beginning January 1, 2023. Early adoption is permitted. The Company is currently evaluating the effects of the adoption of this guidance on its consolidated financial statements and related disclosures.

In December 2019, the FASB issued ASU No. 2019-12, *Income Taxes* (Topic 740): Simplifying the Accounting for Income Taxes, which is intended to simplify various aspects related to accounting for income taxes. The pronouncement is effective for fiscal years, and for interim periods within those fiscal years, beginning after December 15, 2021. ASU 2019-12 is effective for the Company beginning January 1, 2022. Early adoption is permitted. The Company is currently in the process of evaluating the effects of the adoption of this guidance on the Company's financial statements and does not expect it to have a material impact on its consolidated financial statements.

New Accounting Pronouncements Recently Adopted

In November 2016, the FASB issued ASU No. 2016-18, *Statement of Cash Flows* (Topic 230): Restricted Cash, which requires that restricted cash and cash equivalents be included as components of total cash and cash equivalents as presented on the statement of cash flows. ASU 2016-18 was effective for fiscal years beginning after December 15, 2018, and a retrospective transition method is required. The Company adopted this guidance on January 1, 2019. The adoption of this guidance did not have a material impact on the Company's consolidated financial statements.

In July 2017, the FASB issued ASU No. 2017-11, *Earnings Per Share* (Topic 260); *Distinguishing Liabilities from Equity* (Topic 480): Accounting for Certain Financial Instruments with Down Round Features. ASU No. 2017-11 provides guidance that eliminates the requirement to consider "down round" features when determining whether certain financial instruments or embedded features are indexed to an entity's stock and need to be classified as liabilities. ASU 2017-11 provides for entities to recognize the effect of a down round feature only when it is triggered and then as a dividend and a reduction to income available to common stockholders in basic earnings per share. The Company adopted this guidance on January 1, 2019. The adoption of this guidance did not have a material impact on the Company's consolidated financial statements.

(2) FAIR VALUE OF FINANCIAL INSTRUMENTS

The fair value of the Company's financial assets and liabilities are determined in accordance with the fair value hierarchy established in ASC Topic 820, *Fair Value Measurements and Disclosures*. ASC Topic 820 defines fair value as the exchange price that would be received for an asset or paid to transfer a liability (an exit price) in the principal or most advantageous market for the asset or liability in an orderly transaction between market participants on the measurement date. The fair value hierarchy of ASC Topic 820 requires an entity to maximize the use of observable inputs when measuring fair value and classifies those inputs into three levels:

Level 1— Observable inputs, such as quoted prices in active markets

Level 2— Inputs, other than the quoted prices in active markets, which 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 instrument's anticipated life

Level 3— Unobservable inputs in which there is little or no market data, which require the reporting entity to develop its own assumptions

The Company measures its Series B convertible preferred shares warrant liability and term loan compound derivative liability at fair value on a recurring basis and these are classified as Level 3 liabilities. The fair value of the Series B preferred shares warrant liability was determined using an option-pricing model. The Company calculated the fair value of the term loan compound derivative liability by computing the difference between the fair value of the term loan with the compound derivative using the "with and without" method under the income

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approach, and the fair value of the term loan without the compound derivative. The valuation methodology and underlying assumptions are discussed further in Note 4.

The following table sets forth the Company's financial liabilities that are measured at fair value on a recurring basis by level within the fair value hierarchy (in thousands):

	AS OF DECEMBER 31, 2019			
	LEVEL 1	LEVEL 2	LEVEL 3	FAIR VALUE
Financial liabilities				
<u>Long-term liabilities</u>				
Compound derivative liability	\$ —	—	51	\$ 51
Warrant liability	\$ —	—	361	\$ 361

The following tables are a reconciliation of all financial liabilities measured at fair value using Level 3 unobservable inputs (in thousands):

	WARRANT LIABILITY	COMPOUND DERIVATIVE LIABILITY
Balance as of December 31, 2018	\$ —	\$ —
Additions	361	51
Change in fair value	—	—
Balance as of December 31, 2019	<u>\$ 361</u>	<u>\$ 51</u>

The Company did not have any outstanding financial liabilities to be re-measured on a recurring basis as of December 31, 2018. There were no transfers of assets or liabilities between the fair value measurement levels during the years ended December 31, 2018 and December 31, 2019.

Term Loan

The estimated fair value of the Term Loan was \$5.7 million as of December 31, 2019 which approximates the carrying value and is classified as Level 3. The Company utilized a market yield analysis and income approach to estimate a value for the Term Loan. The key valuation assumptions used consist of the discount rate of 14.5% and the probability of the occurrence of a change in control event of 10.0%.

(3) BALANCE SHEET COMPONENTS**Property and Equipment, Net**

The following table presents the components of property and equipment, net as of December 31, 2018 and December 31, 2019 (in thousands):

	DECEMBER 31,	
	2018	2019
Computer hardware and software	\$ 117	\$ 146
Machinery and equipment	1,374	1,698
Furniture and fixtures	36	36
Leasehold improvements	429	429
Construction in progress	20	—
	<u>1,976</u>	<u>2,309</u>
Less: accumulated depreciation and amortization	<u>(1,020)</u>	<u>(1,449)</u>
Total property and equipment, net	<u>\$ 956</u>	<u>\$ 860</u>

Depreciation and amortization expense was approximately \$0.4 million for both years ended December 31, 2018 and December 31, 2019.

Accrued Expenses and Other Current Liabilities

The following table presents the components of accrued expenses and other current liabilities as of December 31, 2018 and December 31, 2019 (in thousands):

	DECEMBER 31,	
	2018	2019
Payroll and related liabilities	\$ 62	\$ 60
Accrued bonus	745	864
Accrued legal costs	98	122
Early exercise liability	105	27
Other	<u>166</u>	<u>163</u>
Total accrued expenses and other current liabilities	<u>\$1,176</u>	<u>\$1,236</u>

(4) TERM LOAN

The Company and its wholly-owned subsidiaries Alexo Therapeutics International and Sirpant Therapeutics, as borrowers, entered into a Loan and Security Agreement, or the Loan Agreement, dated as of December 20, 2019, with Silicon Valley Bank, or SVB, and WestRiver Innovation Lending Fund VIII, LP, or WestRiver, collectively as lenders, and SVB, as administrative agent and collateral agent. The Loan Agreement provides for term loans in an aggregate principal amount of up to \$10.0 million funded in two tranches, subject to the satisfaction of a certain milestone. The first tranche, in the amount of \$6.0 million, was funded on the closing date of the Loan Agreement in December 2019. A second tranche of \$4.0 million was available on or before March 31, 2020, upon the Company's achievement of an equity financing resulting in net cash proceeds in an amount of at least \$30.0 million to the Company. The Company elected not to draw down on the second tranche, which is no longer available.

The loans under the Loan Agreement bear interest at a floating per annum interest rate equal to the greater of 7.0% or 2.0% plus the prime rate as reported in The Wall Street Journal. The Wall Street Journal prime rate was

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4.75% as of December 31, 2019. Therefore, the rate applicable to the Company as of December 31, 2019 was 7.0%.

The Company is required to make interest-only payments for the first 12 months after the closing of the Loan Agreement, followed by consecutive equal monthly payments of principal and interest commencing on January 1, 2021 and continuing through the maturity date of September 1, 2022. The Loan Agreement also provides for a final payment equal to 6.0% multiplied by the aggregate principal amount of the term loans funded, which is due on the maturity date, upon the acceleration of the term loans, or upon prepayment of the term loans. If the Company elects to prepay the term loans, there is also a prepayment fee of between 1.0% and 3.0% of the principal amount being prepaid depending on the timing and circumstances of prepayment.

In conjunction with the Loan Agreement, the Company has issued warrants to purchase 403,348 Series B convertible preferred shares to SVB and WestRiver with an exercise price of \$1.4432 per share. The estimated fair value of the warrants at the date of issuance was approximately \$0.4 million. The fair value of the Series B convertible preferred shares warrant liability was determined using the Black-Scholes option-pricing model. As of December 20, 2019, the various assumptions used in the option-pricing model were time to liquidity of 2.0 to 10.0 years, volatility of 85.5%, risk-free rate of 1.7% and equity value of \$345.0 million. It was recorded at its fair value at inception and is being re-measured at each financial reporting period with any changes in fair value being recognized as a component of other income (expense), net in the accompanying consolidated statement of operations and comprehensive loss. As of December 31, 2019, the fair value of the Series B convertible preferred shares warrant liability was approximately \$0.4 million and was recorded in other long-term liabilities on the consolidated balance sheet.

The loans under the Loan Agreement are secured by substantially all of the Company's assets, except the Company's intellectual property, which is the subject of a negative pledge.

The Company determined that certain loan features were embedded derivatives requiring bifurcation and separate accounting. Those embedded derivatives were bundled together as a single, compound embedded derivative and then bifurcated and accounted for separately from the host contract. The Company recorded a term loan compound derivative liability of approximately \$51,000 which will be marked-to-market in future periods. The Company calculated the fair value of the compound derivative by computing the difference between the fair value of the term loan with the compound derivative using the "with and without" method under the income approach, and the fair value of the term loan without the compound derivative. The Company calculated the fair values using a probability-weighted discounted cash flow analysis. The key valuation assumptions used consist of the discount rate and the probability of the occurrence of a change in control event. The term loan compound derivative liability is being re-measured at each financial reporting period with any changes in fair value being recognized as a component of other income (expense), net in the consolidated statement of operations and comprehensive loss. As of December 31, 2019, the fair value of the compound derivative liability was approximately \$51,000 and was recorded in other long-term liabilities on the consolidated balance sheet.

The fair value of Series B convertible preferred shares warrant liability at issuance, fair value of embedded derivatives which were bifurcated and other debt issuance costs have been treated as debt discounts on the Company's consolidated balance sheet and together with the final payment are being amortized to interest expense throughout the life of the term loan using the effective interest rate method.

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As of December 31, 2019, there were unamortized issuance costs and debt discounts of \$0.6 million which were recorded as a direct deduction from the term loan on the consolidated balance sheet. Interest expense for the term loan was immaterial for the year ended December 31, 2019. For future payments of principal and interest as of December 31, 2019 is as follows.

YEAR ENDING DECEMBER 31:	
2020	\$ 401
2021	3,743
2022	3,007
	<u>7,151</u>
Less: amount representing interest	(791)
Less: amount representing final payment	(360)
Long-term debt, gross	6,000
Less: unamortized issuance costs and debt discount	(579)
Less: current portion	—
Long-term portion of term loan	<u>\$5,421</u>

(5) CAPITAL STRUCTURE

Ordinary Shares

In 2015, in conjunction with the founding of the Company, 14,000,000 ordinary shares were issued to the founders, or Founder Stock, at a price of \$0.005 per share. These shares are subject to repurchase at the option of the Company at a price that is the lower of (i) the original issuance price or (ii) the fair market value as of the date of repurchase, in the event that the founders' employment is terminated either voluntarily or involuntarily. Such repurchase rights generally lapse over a period of four years from the date the Founder Stock was issued. As of December 31, 2018, and December 31, 2019, there were 749,333 and no founder shares subject to repurchase, respectively. See Note 6 for Founder Stock activity for the years ended December 31, 2018 and December 31, 2019.

Ordinary shares reserved for future issuance, on an as if converted basis, as of December 31, 2018 and December 31, 2019, consists of the following:

	DECEMBER 31,	
	2018	2019
Convertible preferred shares, issued and outstanding	61,180,500	67,871,229
Share options, issued and outstanding	5,691,123	7,789,923
Share options, authorized for future issuance	480,471	3,730,445
Warrants, issued and outstanding	—	403,348
Warrants, authorized for future issuance	—	201,674
Total	<u>67,352,094</u>	<u>79,996,619</u>

Convertible Preferred Shares

As of December 31, 2018 and December 31, 2019, the Company's convertible preferred shares consisted of the following (in thousands, except share amounts):

	DECEMBER 31, 2018			AGGREGATE LIQUIDATION PREFERENCE
	AUTHORIZED SHARES	SHARES ISSUED AND OUTSTANDING	NET PROCEEDS ⁽¹⁾	
Shares designated as:				
Series A convertible preferred shares	62,000,000	61,180,500	\$ 60,933	\$ 69,863
Total	<u>62,000,000</u>	<u>61,180,500</u>	<u>\$ 60,933</u>	<u>\$ 69,863</u>
	DECEMBER 31, 2019			AGGREGATE LIQUIDATION PREFERENCE
	AUTHORIZED SHARES	SHARES ISSUED AND OUTSTANDING	NET PROCEEDS ⁽¹⁾	
Shares designated as:				
Series A convertible preferred shares	62,000,000	61,180,500	\$ 60,933	\$ 73,571
Series B convertible preferred shares	14,117,822	6,690,729	9,430	10,014
Total	<u>76,117,822</u>	<u>67,871,229</u>	<u>\$ 70,363</u>	<u>\$ 83,585</u>

(1) Net proceeds are gross proceeds from the offerings net of issuance costs.

In May 2015, the Company entered into a Series A Preferred Share Purchase Agreement, or Series A Agreement, with certain existing investors, employees, and new investors, or collectively, the Series A Investors. Under the terms of the Series A Agreement, the Company authorized the sale and issuance of up to 36,000,000 of the Company's Series A convertible preferred shares. The purchase and sale of the Series A convertible preferred shares could be sold in one or more closings in accordance with the Series A Agreement. In March 2017, the Company entered into a convertible promissory note purchase agreement, or the Note Purchase Agreement, with certain existing investors, employees and new investors, or collectively, the Promissory Note Investors. Under the terms of the Note Purchase Agreement, the Company issued promissory notes in the aggregate principal amount of \$25.0 million that are convertible into Series A convertible preferred shares to the Promissory Note Investors.

In 2015 and 2016, the Company issued a total of 36,000,000 Series A convertible preferred shares to investors at \$1.00 per share for cash proceeds of \$34.8 million. In September 2017, the Company issued a total of 25,180,500 Series A convertible preferred shares for cash proceeds of \$1.2 million pursuant to the conversion of outstanding convertible promissory notes. The gross proceeds of \$37.2 million were reduced by total issuance costs incurred of \$0.2 million.

In May 2019, the Company entered into a Series B Preferred Share Purchase Agreement or the Series B Agreement, with certain existing investors, employees and new investors, or collectively, the Series B Investors. Under the terms of the Series B Agreement, the Company authorized the sale and issuance of up to 14,117,822 of the Company's Series B convertible preferred shares at a purchase price of \$1.4432 per share. The purchase and sale of the Series B convertible preferred shares could be sold in one or more closings in accordance with the Series B Agreement. As of December 31, 2019, a total of 6,690,729 shares had been purchased with gross proceeds of \$9.6 million. The gross proceeds of \$9.6 million were reduced by total issuance costs incurred of \$0.2 million.

The rights, preferences and privileges of the Series A and Series B convertible preferred shares, or Preferred Shares, as of December 31, 2019 are as follows:

Dividend Provisions – Cumulative dividends of 6.0% per annum of the original issue price for each Preferred Shares series are payable when and as declared by the Company's Board of Directors, or Board of Directors,

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upon the occurrence of a liquidation event or upon a contingent mandatory conversion of the Preferred Shares in connection with a qualified initial public offering as described below. The Series A original issue price is \$1.00, and the Series B original issue price is \$1.4432. The original issue price is subject to adjustment in the event of any share dividend, share split, combination, consolidation or other recapitalization. The dividends shall accrue from day to day from the issue date of such Preferred Shares whether or not declared and shall be cumulative. In addition, the Preferred Shares participate on an as-converted basis in any dividends payable to ordinary shareholders. Cumulative dividends for the years ended December 31, 2018 and December 31, 2019 was \$8.7 million and \$12.7 million, respectively. No dividends have been declared or paid since the issuance of convertible preferred shares through December 31, 2019.

Liquidation – In the event of liquidation, dissolution or winding up of the Company, merger or a reduction of capital through the sale or lease of all or substantial part of the business of the Company, before any distribution or payment shall be made to the holders of ordinary shares, the holders of Preferred Shares shall be entitled to be paid an amount in cash equal to the original issue price (subject to adjustment in the event of any share dividend, share split, combination, or other recapitalization) plus all dividends accumulated and unpaid thereon. First, the holders of the Preferred Shares are paid in full the amounts specified in the immediately preceding sentence on a pro-rata basis; then, after holders of the Preferred Shares are satisfied, any remaining amounts shall be distributed on a pro-rata basis to the holders of the Preferred Shares (calculated on an as converted basis) and the ordinary shares.

Voting Rights – On any matter presented to the shareholders of the Company, each holder of outstanding Preferred Shares shall be entitled to cast the number of votes equal to the number of whole ordinary shares into which the Preferred Shares held by such holder are convertible. The holders of Preferred Shares shall vote together with the holders of ordinary shares as a single class. Additionally, as long as at least 9,000,000 Preferred Shares are outstanding (subject to adjustment in the event of any recapitalizations), the Company must receive approval of holders of at least two-third of the voting rights then held in aggregate by the holders of the Preferred Shares in issue on an as-converted basis in order to effect certain corporate actions. Two investors have contractual rights to elect three out of five board members.

Optional Conversion at Holders' Option – Each share of Preferred Shares shall be convertible, at the option of the holder, at any time and from time to time, into such number of fully paid and non-assessable ordinary shares as is determined by dividing the original issue price by the Applicable Conversion Price. The Applicable Conversion Price for each series of Preferred Shares is currently equal to the original issue price for such series. Upon conversion, the holders shall also receive only declared but as yet unpaid dividends. Note only holders of Preferred Shares receive declared and unpaid dividends; preferred shareholders who chose to convert prior to the declaration of such dividends are not entitled to receive accumulated dividends.

Contingent Mandatory Conversion – Upon the closing of the first underwritten public offering pursuant to an effective registration statement under the Securities Act of 1933, as amended, or pursuant to a corresponding securities issuance application process in any non-U.S. jurisdiction, covering the offer and sale of the Company's ordinary shares in which (i) the per share price is not less than \$2.30912 (as adjusted for any share dividends, combinations, splits, recapitalizations and the like with respect to such shares after the filing date hereof) and (ii) the gross cash proceeds to the Company (before underwriting discounts, commissions and fees) are at least \$50.0 million then all outstanding Preferred Shares shall automatically be converted into a number of ordinary shares, at a conversion rate determined by dividing the applicable original price of such Preferred Shares by the applicable conversion price of such Preferred Shares. Upon conversion, the holders shall also receive any cumulative and unpaid dividends, whether or not declared as conversion ordinary shares at the same conversion rate for the applicable Preferred Shares.

Down-Round Antidilution Protection – In the event the Company issues its ordinary shares without consideration or for consideration per share that is less than the conversion price in effect for each series of the Preferred Shares, then the conversion price for that series shall be reduced in order to increase the number of ordinary shares into which such series of Preferred Shares is convertible to.

(6) SHARE-BASED COMPENSATION

During 2015, the Company adopted an equity compensation plan, the 2015 Share Award Scheme, or the Plan, for eligible employees, officers, directors, advisors, and consultants. The Plan provides for the grant of incentive and non-statutory share options. The Plan permits the Company to grant up to 14,103,000 ordinary share awards, including incentive share options, non-statutory share options, conditional share awards and restricted share awards.

The terms of the share option agreements, including vesting requirements, are determined by the Board of Directors, subject to the provisions of the Plan. The term of the options generally expire, upon the earliest of (i) termination of continuous service for cause (ii) three months after the termination of continuous service for reasons other than cause, death or disability (iii) twelve months after the termination of continuous service due to disability (iv) eighteen months after the employee's death if the employee died during the period of continuous service (v) expiration date in the grant notice or (vi) the day before the tenth anniversary of the date of grant. The exercise price of the incentive share options must equal at least the fair market value of the share on the date of grant.

All awards that are canceled, forfeited or expired are returned to the Plan and are available for grant in conjunction with the issuance of new awards. Share options granted are exercisable over a maximum term of 10 years from the date of grant and generally vest over an agreed service period, usually four years.

Certain share options granted under the Plan provide option holders the right to elect to exercise unvested options in exchange for ordinary shares. Such unvested ordinary shares are subject to a repurchase right held by the Company at the original issuance price in the event the optionee's service to the Company is terminated either voluntarily or involuntarily. The right lapses as the underlying repurchase right expires. These repurchase terms are considered to be a forfeiture provision. The cash received from employees for exercise of unvested options is treated as a refundable deposit and is classified as a liability on the consolidated balance sheets. At December 31, 2018 and December 31, 2019, there were 763,708 and 223,923 unvested early exercised options and the liability related to these unvested options was \$0.1 million and approximately \$27,000, respectively.

(a) Option Activity

The following table provides a summary of share option activity under the Plan and related information:

	SHARES AVAILABLE TO GRANT	NUMBER OF OPTIONS	OUTSTANDING OPTIONS		
			WEIGHTED AVERAGE EXERCISE PRICE	WEIGHTED AVERAGE REMAINING CONTRACTUAL LIFE (YEARS)	AGGREGATE INTRINSIC VALUE (in thousands)
Balance outstanding at December 31, 2017	1,436,695	4,735,000	\$ 0.15	9.18	\$ —
Granted	(1,231,823)	1,231,823	\$ 0.28		
Exercised		(45,505)	\$ 0.15		
Canceled/forfeited	230,195	(230,195)	\$ 0.15		
Shares repurchased	45,404	—	—		
Balance outstanding at December 31, 2018	480,471	5,691,123	\$ 0.18	8.54	\$ 582
Authorized	5,383,000	—			
Granted	(2,249,800)	2,249,800	\$ 0.29		
Exercised	—	(34,226)	\$ 0.28		
Canceled/forfeited	116,774	(116,774)	\$ 0.28		
Balance outstanding at December 31, 2019	3,730,445	7,789,923	\$ 0.21	8.06	\$ 638
Exercisable at December 31, 2019		3,724,615	\$ 0.18	7.56	\$ 424

As of December 31, 2019, there was unrecognized share-based compensation expense of \$0.6 million, related to unvested share options which the Company expects to recognize over a weighted-average period of 2.7 years.

The aggregate intrinsic values of options outstanding and exercisable were calculated as the difference between the exercise price of the options and the estimated fair value of the Company's ordinary shares as determined by the Board of Directors as of December 31, 2018 and December 31, 2019. The total intrinsic value of options exercised during the years ended December 31, 2018 and 2019 were immaterial.

Compensation cost for share options granted is based on the grant-date fair value estimated and is recognized over the vesting period of the applicable option on a straight-line basis. The weighted-average grant-date fair value per share for share options granted during the years ended December 31, 2018 and December 31, 2019 was \$0.17 and \$0.19, respectively. The total fair value of options that vested during the years ended December 31, 2018 and December 31, 2019 was approximately \$0.1 million and \$0.3 million, respectively.

Share-based compensation expense includes share options granted to employees and nonemployees and has been reported in the Company's consolidated statements of operations and comprehensive loss as follows (in thousands):

	YEAR ENDED DECEMBER 31,	
	2018	2019
Research and development	\$ 16	\$ 105
General and administrative	195	33
Cost of services for related-party revenue	58	159
Total	\$ 269	\$ 297

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The Company's computation of share-based compensation expense for the years ended December 31, 2018 and December 31, 2019 is based on the fair value of ordinary shares of \$0.28 and \$0.29, respectively, and is adjusted for actual forfeitures as they occur. The fair value of each option grant during the years ended December 31, 2018 and December 31, 2019 was estimated on the date of grant using the Black-Scholes option-pricing model with the following:

	YEAR ENDED DECEMBER 31,	
	2018	2019
Expected term (in years)	5.2 – 6.0	4.4 – 6.0
Risk-free interest rate	2.6% – 3.0%	1.7% – 2.1%
Expected dividend rate	—	—
Expected share price volatility	66.5% – 68.7%	75.2% – 80.5%

Expected Term. The expected term of the options represents the average period the share options are expected to remain outstanding. As the Company does not have sufficient historical information to develop reasonable expectations about future exercise patterns and post-vesting employment termination behavior, the expected term of options granted is derived from the average midpoint between the weighted average vesting and the contractual term, also known as the simplified method.

Risk-Free Interest Rate. The risk-free interest rate is based on the yield of U.S. Treasury notes as of the grant date with terms commensurate with the expected term of the option.

Dividend Yield. The expected dividends assumption is based on the Company's expectation of not paying dividends in the foreseeable future.

Volatility. Since the Company is private and does not have any trading history for its ordinary shares, the expected volatility is based on the historical volatilities of the common shares of comparable publicly traded companies. The Company selected companies with comparable characteristics, including enterprise value, risk profiles, position within the industry, and with historical share price information sufficient to meet the expected life of the Company's share-based awards.

Estimated Fair Value. The estimated fair value of the shares of common stock underlying stock options was determined by the Company's board of directors. Because there was no public market for the Company's common stock, the board of directors determined fair value of the common stock at the time of grant of the options by considering a number of objective and subjective factors including important developments in the Company's operations, valuations performed by an independent third party, sales of convertible preferred stock, actual operating results and financial performance, the conditions in the biotechnology industry and the economy in general, the stock price performance and volatility of comparable public companies, and the lack of liquidity of the Company's common stock, among other factors.

(b) Founder Stock Activity

The following table provides a summary of Founder Stock activity:

	NUMBER OF SHARES	WEIGHTED-AVERAGE GRANT DATE FAIR VALUE
Unvested at December 31, 2017	2,997,333	\$0.05
Vested	(2,248,000)	0.05
Unvested at December 31, 2018	749,333	0.05
Vested	(749,333)	0.05
Unvested at December 31, 2019	—	\$ —

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There were no Founder Stock granted during the years ended December 31, 2018 and December 31, 2019. The total fair value of Founder Stock that vested during the years ended December 31, 2018 and December 31, 2019 were \$0.1 million and \$40,000, respectively.

(7) INCOME TAXES

The domestic (Ireland) and foreign components of pre-tax loss for the years ending December 31, 2018 and December 31, 2019 are as follows (in thousands):

	DECEMBER 31,	
	2018	2019
Foreign	\$ (12,576)	\$ (16,803)
Domestic (Ireland)	(1,110)	(2,406)
Loss before income taxes	<u>\$ (13,686)</u>	<u>\$ (19,209)</u>

The provision for income taxes consist of the following (in thousands):

	YEAR ENDED DECEMBER 31,	
	2018	2019
Current		
Domestic (Ireland)	\$ —	\$ —
State (U.S.)	1	1
Foreign/federal	44	33
Total current	45	34
Deferred		
Domestic (Ireland)	\$ —	\$ —
State (U.S.)	—	—
Foreign/federal	—	—
Total deferred	—	—
Provision for income taxes	<u>\$ 45</u>	<u>\$ 34</u>

A reconciliation of the Irish statutory income tax rate of 12.5% to the actual tax rate for the years ended December 31, 2018 and December 31, 2019 are as follows (in thousands):

	YEAR ENDED DECEMBER 31,	
	2018	2019
At statutory rate	\$ (1,711)	\$ (2,401)
Foreign income tax at different rates	1,404	378
U.S. R&D credits	(499)	(861)
Change in valuation allowance	732	3,733
Share-based compensation	57	60
Prior period true ups	(38)	(950)
Other	100	75
Provision for income taxes	<u>\$ 45</u>	<u>\$ 34</u>

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Significant components of the Company's deferred tax assets as of December 31, 2018 and December 31, 2019 are as follows (in thousands):

	DECEMBER 31,	
	2018	2019
Deferred tax assets:		
Net operating loss carryforwards	\$ 363	\$ 3,259
Research & other credits	1,701	3,260
Other	208	333
Total gross DTA	<u>\$ 2,272</u>	<u>\$ 6,852</u>
Less: Val. Allowance	<u>(2,181)</u>	<u>(6,686)</u>
Total deferred tax assets	<u>\$ 91</u>	<u>\$ 166</u>
Deferred tax liabilities:		
Fixed assets	<u>\$ (91)</u>	<u>\$ 166</u>
Total gross DTL	<u>\$ (91)</u>	<u>\$ 166</u>
Net deferred tax assets	<u>\$ —</u>	<u>\$ —</u>

Realization of deferred tax assets is dependent upon the Company generating future taxable income, the timing and amount of which are uncertain. Accordingly, the deferred tax assets have been largely offset by a valuation allowance. The valuation allowance increased by approximately \$0.8 million and \$4.5 million for the years ended December 31, 2018 and December 31, 2019, respectively.

As of December 31, 2019, the Company had a net operating loss carryforwards for U.S. state income tax purposes of approximately \$30.9 million, that expire in the year 2038, and for Ireland income tax purposes of approximately \$4.0 million that never expire. As of December 31, 2019, the Company had U.S. federal research and development credit carryforwards of approximately \$1.5 million, that expire in the year 2038, and U.S. state research and development credit carryforwards of approximately \$2.4 million, that do not expire.

Utilization of the Company's U.S. net operating loss and credit carryforwards may be subject to substantial annual limitation due to the ownership change limitations provided by the Internal Revenue Code and similar state provisions. Such annual limitation could result in the expiration of the U.S. net operating loss and credit carryforwards before utilization. To date, the Company has not performed an analysis to determine whether there would be a substantial annual limitation due to a change in ownership.

Unrecognized Tax Benefits

The Company's policy is to include interest and penalties related to unrecognized tax benefits, if any, within the provision for taxes in the consolidated statements of operations and comprehensive loss. If the Company is eventually able to recognize its uncertain tax positions, the Company's effective tax rate would be reduced. The Company currently has a full valuation allowance against its net deferred tax asset which would impact the timing of the effective tax rate benefit should any of these uncertain tax positions be favorably settled in the future.

The Company files income tax returns in Ireland, the U.S., and Malta. All of the Company's tax years since 2015 remain open to examination.

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The Company has the following activity relating to unrecognized tax benefits (in thousands):

	DECEMBER 31,	
	2018	2019
Beginning balance	\$ 247	\$ 418
Gross increase—tax positions in prior periods	11	9
Gross decreases—tax positions in prior periods	—	(7)
Gross increases—tax position in current period	160	272
Ending balance	<u>\$ 418</u>	<u>\$ 692</u>

Although it is reasonably possible that certain unrecognized tax benefits may increase or decrease within the next 12 months due to tax examination changes, settlement activities, expirations of statute of limitations or the impact on recognition and measurement considerations related to the results of published tax cases or other similar activities, the Company does not anticipate any significant changes to unrecognized tax benefits over the next 12 months. During the years ended December 31, 2018 and December 31, 2019, no interest or penalties were required to be recognized relating to unrecognized tax benefits.

(8) COMMITMENTS & CONTINGENCIES

In the normal course of business, the Company enters into contracts and agreements that contain a variety of representations and warranties and provide for general indemnifications. The Company's exposure under these agreements is unknown because it involves claims that may be made against the Company in the future but have not yet been made. To date, the Company has not paid any claims or been required to defend any action related to its indemnification obligations. However, the Company may record charges in the future as a result of these indemnification obligations. The Company also has indemnification obligations to its officers and directors for specified events or occurrences, subject to some limits, while they are serving at the Company's request in such capacities. There have been no claims to date and the Company has director and officer insurance that may enable the Company to recover a portion of any amounts paid for future potential claims. The Company believes the fair value of these indemnification agreements is minimal. Accordingly, the Company has not recorded any liabilities for these agreements as of December 31, 2018 and December 31, 2019.

Legal Proceedings

From time to time, the Company may be a party to various claims in the normal course of business. Legal fees and other costs associated with such actions will be expensed as incurred. The Company will assess, in conjunction with its legal counsel, the need to record a liability for litigation and contingencies. Reserve estimates will be recorded when and if it is determined that a loss related matter is both probable and reasonably estimable. For the years ended December 31, 2018 and December 31, 2019, the Company had no pending or threatened litigation.

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Contractual Obligations and Other Commitments

The following table summarizes the Company's commitments and contractual obligations as of December 31, 2019 (in thousands):

YEAR ENDED DECEMBER 31:	OPERATING LEASE OBLIGATIONS (1)	MANUFACTURING AND SERVICE CONTRACTS (2)	TERM LOAN (3)
2020	\$ 544	\$ 926	\$ 401
2021	560	5,805	3,743
2022	577	—	3,007
2023	247	—	—
Total	\$ 1,928	\$ 6,731	\$7,151

(1) Payments due for the office and laboratory space in Burlingame, California under a single operating lease agreement that expires in 2023.

(2) These amounts are based on non-cancellable commitments and forecasts that include estimates of future market demand, quantity discounts and manufacturing efficiencies that may impact timing of purchases.

(3) In December 2019, the Company entered into a term loan pursuant to the Loan Agreement as described above in Note 4.

Facilities

In 2015, the Company entered into a noncancelable lease for office space for a period of three years and two months, commencing March 2015 and ending May 31, 2018.

In 2016, the Company entered into a sublease agreement for office space for a period of four years, commencing June 2016 and ending May 31, 2020. This sublease was terminated early in May 2018 without any fees and penalties.

In 2017, the Company entered into a lease agreement for office space for a period of five years and four months, commencing February 1, 2018 and ending May 31, 2023.

Minimum rent payments under operating leases are recognized on a straight-line basis over the term of the lease including any periods of free rent. Rent expense for years ended December 31, 2018 and December 31, 2019 were \$1.0 million and \$0.8 million, respectively.

Manufacturing and Service Contracts

In November 2015, the Company entered into a Master Service Agreement, or MSA, with KBI Biopharma, Inc, or KBI, relating to formulation development, process development and cGMP manufacturing of ALX148 for use in clinical trials on a project basis. The MSA had an initial term of three years which the Company subsequently extended. See table above for future committed purchases with KBI.

The Company also enters into other contracts in the normal course of business with CROs, contract development and manufacturing organizations and other service providers and vendors. These contracts generally provide for termination on short notice and are cancelable contracts and, accordingly, are not included in the contractual obligations and disclosures summarized above.

(9) LICENSE AGREEMENT

Exclusive (Equity) Agreement with The Board of Trustees of the Leland Stanford Junior University

In March 2015, the Company entered into a license agreement, or the Stanford Agreement, with the Board of Trustees of the Leland Stanford Junior University, or Stanford, under which the Company obtained a worldwide, royalty-bearing, sublicensable license under certain patents relating to the Company's current product candidates, to develop, manufacture and commercialize products for use in certain licensed fields, the scope of

which would include the application of the licensed intellectual property in oncology. The license granted to the Company in the Stanford Agreement includes an exclusive grant, subject to certain pre-existing non-exclusive or exclusive rights that Stanford retained for grant to third parties with respect to certain categories of the licensed patents in certain fields of use and retained rights by Stanford and all other nonprofit institutions to use and practice the licensed patents and technology for internal research and other nonprofit purposes. The license granted to the Company in the Stanford Agreement also includes non-exclusive grants to certain Stanford patents.

In consideration for the rights granted to the Company under the Stanford Agreement, the Company paid Stanford a nonrefundable license royalty and reimbursed Stanford for past patent expenses, together totaling less than \$0.1 million, and granted Stanford a specified number of ordinary shares of the Company. In addition, the Company is obligated to pay Stanford ongoing patent expenses and an annual license maintenance fee, which are nominal and will be creditable against any royalties payable to Stanford in the applicable year. The Company is required to make milestone payments up to a specified amount in respect of a specified number of licensed products that successfully satisfy certain clinical and regulatory milestones. No milestone payments have been made through December 31, 2019. The Company also agreed to pay Stanford tiered royalties on a specified percentage of net sales made by the Company, its affiliates and its sublicensees of licensed products at rates ranging within low single-digit percentages, subject to certain reductions and offsets. The license, on a licensed product-by-licensed product and country-by-country basis, shall become royalty-free and fully paid-up upon the later of the date on which the last valid claim included in the exclusively or non-exclusively licensed patents expires and certain number of years after the first commercial sale of the licensed product in such country.

The Company may terminate the Stanford Agreement, on a licensed product-by-licensed product basis, at any time for any reason by providing at least 60 days' written notice to Stanford. Stanford may terminate the Stanford Agreement, if the Company is in breach of any provision of the Stanford Agreement and fail to remedy such breach within 60 days after written notice of such breach by Stanford. In addition, Stanford has the right to terminate the Stanford Agreement, on a licensed product-by-licensed product basis, if the Company is not diligently developing and commercializing such licensed product under certain conditions or if the Company fails to achieve specified development milestones for such licensed product by certain dates, subject to the Company's extension rights.

Commercial License Agreement with Selexis SA

In June 2016, the Company entered into a license agreement with Selexis SA, or Selexis, under which the Company obtained a worldwide, royalty-bearing, sublicensable license under certain patents, know-how and other intellectual property, to use Selexis generated cell lines to manufacture ALX148 and to make, use and sell licensed products containing such compound in all fields of use. The rights granted under this agreement include the rights to grant sublicenses to contractors or other collaboration partners, in each case to develop production processes or manufacture licensed products containing ALX148.

In consideration for the rights granted to the Company under the agreement, the Company paid Selexis a nominal one-time fee and will pay Selexis an annual maintenance fee. The Company also agreed to pay Selexis milestone payments in respect of each licensed product developed and/or commercialized under the grant that successfully satisfies certain milestone events. The Company also agreed to pay Selexis a flat royalty of a very low single-digit percentage on net sales made by the Company, its affiliates and sublicensees of products. This royalty obligation, on a product-by-product and country-by-country basis, shall terminate and become fully paid-up upon the passing of certain number of years after the first commercial sale of the product in such country, or the Company's exercise of the royalty buyout option exercisable at any time prior to the first commercial sale of a licensed product.

The Company may terminate the license agreement at any time for any reason with at least 60 days' written notice to Selexis. Either party may terminate the license agreement if the other party enters into a bankruptcy event or in the event of a material breach of the agreement (that cannot be cured or remains uncured for 60 days after the date that the defaulting party is provided with written notice of such breach). The Company's obligations to pay royalties that are accrued or accruable will survive any termination of the agreement, and in

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certain circumstances the licenses granted under the agreement will terminate unless they have become fully paid up as described in the previous paragraph.

Commercial Antibody Agreement with Crystal Bioscience, Inc. (Now a Subsidiary of Ligand Pharmaceuticals Incorporated)

In March 2017, the Company entered into an agreement with Crystal Bioscience, Inc. (now a subsidiary of Ligand Pharmaceuticals Incorporated), or Crystal, under which the Company obtained an assignment of certain patents, covering certain SIRPa antibodies. Under this agreement, the Company also received a worldwide, royalty-bearing non-exclusive license, with the right to grant sublicenses through multiple tiers of sublicenses, under certain of Crystal's background patents and know-how necessary to commercialize the rights under the assigned patents.

In consideration for the rights granted to the Company under the agreement, it agreed to pay Crystal milestone payments up to \$11.1 million in respect of all licensed products developed under the assigned patents, that successfully satisfy certain clinical and regulatory milestones, each milestone being paid only once for all products. The Company also agreed to pay Crystal tiered royalties on net sales made by the Company, its affiliates and sublicensees of products at rates ranging within low single-digit percentages, subject to certain potential reductions. This royalty obligation, on a product-by-product and country-by-country basis, shall terminate and become fully paid-up upon the later of the date on which the last valid claim included in the licensed patents expires and a certain number of years after the first commercial sale of the product in such country.

The Company agreed to use commercially reasonable efforts to develop and commercialize licensed products, including meeting defined development milestones by certain specified dates.

The Company may terminate the agreement at any time for any reason with at least 60 days' written notice to Crystal. Either party may terminate the agreement if the other party enters into a bankruptcy event or in the event of material breach of the agreement (that remains uncured for 60 days after the date that it is provided with written notice of such breach). The Company's obligations to pay royalties and milestone payments which accrued pre-termination or accrue post-termination will survive any termination.

(10) DEFINED CONTRIBUTION PLAN

The Company has a qualified 401(k) Savings and Investment Plan, or the Plan, whereby employees may contribute up to the Federal annual limits. The Company does not match employee contributions.

(11) RELATED-PARTY TRANSACTIONS

Related-Party Revenue

In June 2018, the Company entered into a Research and Development Services Agreement, or Tollnine Agreement, with Tollnine, Inc., or Tollnine, a related-party of the Company, to provide research and development services to Tollnine. The Company's Chief Executive Officer is also the Chief Executive Officer of Tollnine and two of the Company's investors are also investors in Tollnine. As such, Tollnine was deemed to be a related-party. The Tollnine Agreement has an initial term of 3 years, to be automatically renewed for additional one-year terms unless terminated by either party. The services are to be provided at a price based on the costs incurred by the Company plus a mark-up equal to 10% of such costs. The Company recognizes revenue when Tollnine, as our customer, obtains control of promised goods or services, in an amount that reflects the consideration which the Company expects to receive in exchange for those goods or services. For the years ended December 31, 2018 and December 31, 2019, the Company recognized related-party revenues of \$2.1 million and \$4.8 million, respectively, under the Tollnine Agreement.

Receivables due from Related-Party

As of December 31, 2018, and 2019, the Company had outstanding related-party receivables from Tollnine of \$0.9 million and \$0.5 million, respectively.

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The following table sets forth the computation of the basic and diluted net loss per share attributable to ordinary shareholders (in thousands, except share and per share data):

	YEAR ENDED DECEMBER 31,	
	2018	2019
Numerator:		
Net loss	\$ (13,731)	\$(19,243)
Less: cumulative dividends allocated to preferred shareholders	(3,671)	(4,028)
Net loss attributable to ordinary shareholders	<u>\$ (17,402)</u>	<u>\$(23,271)</u>
Denominator:		
Weighted-average ordinary shares outstanding	18,102,402	20,245,115
Net loss per share attributable to ordinary shareholders, basic and diluted	<u>\$ (0.96)</u>	<u>\$ (1.15)</u>

Since the Company was in a loss position for all periods presented, basic net loss per share is the same as diluted net loss per share for all periods as the inclusion of all potential ordinary shares outstanding would have been anti-dilutive. Potentially dilutive securities that were not included in the diluted per share calculations as of December 31, 2018 and December 31, 2019 because they would be anti-dilutive were as follows:

	DECEMBER 31,	
	2018	2019
Series A convertible preferred shares	61,180,500	61,180,500
Series B convertible preferred shares	—	6,690,729
Warrants to purchase convertible preferred shares	—	403,348
Ordinary shares subject to repurchase	1,513,041	223,923
Options issued and outstanding	5,691,123	7,789,923
Total	<u>68,384,664</u>	<u>76,288,423</u>

The following table sets forth the computation of the Company's unaudited pro forma basic and diluted net loss per share (in thousands, except share and per share amounts):

	YEAR ENDED
	DECEMBER 31, 2019
Net loss	<u>\$ (19,243)</u>
Weighted-average ordinary shares used to compute net loss per share attributable to ordinary shareholders, basic and diluted	20,245,115
Pro forma adjustment to reflect assumed conversion of convertible preferred shares and accrued dividends allocable to preferred shareholders	<u>74,028,943</u>
Weighted-average ordinary shares used to compute pro forma net loss per share, basic and diluted	<u>94,274,058</u>
Pro forma net loss per share, basic and diluted	<u>\$ (0.20)</u>

(13) SUBSEQUENT EVENTS

The Company has evaluated subsequent events from the balance sheet date through May 5, 2020, the date at which the consolidated financial statements were available to be issued.

In February 2020, the Company entered into a Series C Preferred Share Purchase Agreement, or the Series C Agreement, with certain existing investors, employees and new investors, or collectively, the Series C Investors. Under the terms of the Series C Agreement, the Company authorized the sale and issuance of up to 72,754,989 Series C convertible preferred shares at a purchase price of \$1.4432 per share. To date, all authorized Series C convertible preferred shares have been purchased with gross proceeds of \$105.0 million.

On April 1, 2020, the Company completed an internal reorganization transaction pursuant to which ALX Oncology Limited became a wholly-owned subsidiary ALX Oncology Holdings Inc., a newly formed Delaware corporation. As part of the transaction, all of the equity, option and warrant holders of ALX Oncology Limited became equity, option and warrant holders of ALX Oncology Holdings Inc., holding the same number of corresponding shares, options and/or warrants in ALX Oncology Holdings Inc., as they did in the Company immediately prior to the reorganization.

Shares



ALX Oncology Holdings Inc.

Common Stock

PRELIMINARY PROSPECTUS

Jefferies

Credit Suisse

Piper Sandler

Cantor

LifeSci Capital

, 2020

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 filing fee of the Financial Industry Regulatory Authority, Inc., or FINRA, and the Nasdaq Stock Market LLC, or Nasdaq, listing fee.

	AMOUNT PAID OR TO BE PAID	
SEC Registration Fee	\$	*
FINRA filing fee		*
Nasdaq listing fee		*
Printing and engraving expenses		*
Legal fees and expenses		*
Accounting fees and expenses		*
Transfer agent and registrar fees		*
Miscellaneous expenses		*
Total	\$	*

* To be completed by amendment.

Item 14. Indemnification of Directors and Officers

Section 145 of the Delaware General Corporation Law, or DGCL, 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 DGCL 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 DGCL. 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 DGCL 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 DGCL 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 DGCL, as so amended.

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Section 174 of the DGCL 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 DGCL, 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 DGCL.

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.

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 ALX Oncology Limited from January 1, 2017 to March 31, 2020, the period prior to our incorporation and the effectiveness of the reorganization, and all unregistered securities sold by us since our incorporation on April 1, 2020. For all other times, it includes transactions between us and related parties. 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.

- (1) From March 2017 to August 2017, ALX Oncology Limited received total proceeds of \$25,000,000 from the issuance of convertible promissory notes to investors.
- (2) In September 2017, all of the convertible promissory notes were converted to an aggregate of 25,180,500 shares of Series A convertible preferred stock of ALX Oncology Limited at a conversion price of \$1.00 per share.
- (3) In May 2019, ALX Oncology Limited issued and sold to investors an aggregate of 6,690,729 shares of its Series B convertible preferred stock at \$1.4432 per share, for an aggregate consideration of approximately \$9.7 million.
- (4) In December 2019, ALX Oncology Limited issued to certain lenders warrants to purchase an aggregate of 403,348 shares of its Series B convertible preferred stock at \$1.4432 per share pursuant to a loan and security agreement.
- (5) In February 2020, ALX Oncology Limited issued and sold to investors an aggregate of 72,754,989 shares of its Series C convertible preferred stock at \$1.4432 per share for an aggregate consideration of approximately \$105.0 million.

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- (6) Between January 2017 to March 2020, ALX Oncology Limited granted to certain service providers stock options to purchase an aggregate of 21,465,623 shares of its common stock upon the exercise of options at exercise prices per share ranging from \$0.15 to \$0.62.
- (7) Between January 2017 to March 2020, ALX Oncology Limited issued and sold to certain service providers 99,731 shares of common stock upon the exercise of options at exercise prices per share ranging from \$0.15 to \$0.29, for an aggregate exercise price of approximately \$19,491.69.
- (8) On April 1, 2020, we incorporated ALX Oncology Holdings Inc. in Delaware, and we completed a reorganization whereby ALX Oncology Limited became our wholly-owned subsidiary and all of the shareholders and optionholders of ALX Oncology Limited became our stockholders and optionholders, holding the same number of corresponding shares and/or options in us as they did in ALX Oncology Limited immediately prior to the reorganization. In connection with this reorganization, on April 1, 2020: (a) we issued and sold to the existing shareholders of ALX Oncology Limited an aggregate of 20,840,532 shares of our common stock at purchase prices per share ranging from \$0.001 to \$0.29, an aggregate of 61,180,500 shares of our Series A convertible preferred stock at a purchase price per share of \$1.000, an aggregate of 6,690,729 shares of our Series B convertible preferred stock at a purchase price per share of \$1.4432 and an aggregate of 72,754,989 shares of our Series C convertible preferred stock at a purchase price per share of \$1.4432, in exchange for promissory notes with an aggregate principal amount of approximately \$176.3 million; (b) we acquired 525,000,000 shares of common stock of ALX Oncology Limited in exchange for the promissory notes that were acquired in connection with the issuance and sale of our capital stock described in clause (a); and (c) we granted stock options to the holders of outstanding options to purchase common stock of ALX Oncology Limited to purchase an aggregate of 21,063,923 shares of our common stock upon the exercise of options at exercise prices per share ranging from \$0.13 to \$0.62.
- (9) In connection with the reorganization and to replace the warrants that were originally issued by ALX Oncology Limited, on April 1, 2020, we issued to certain lenders warrants to purchase an aggregate of 403,348 shares of our Series B convertible preferred stock with an exercise price of \$1.4432 per share pursuant to the amended loan and security agreement that was originally entered into by ALX Oncology Limited in December 2019.
- (10) Since April 2, 2020, we have granted options to purchase an aggregate of 4,120,000 shares of our common stock at an exercise price per share of \$0.73, to a total of 16 service providers under our 2020 Equity Incentive Plan.

The offers, sales and issuances of the securities described in Items 15(1), (2), (3), (4), (5) and (9) were exempt from registration under the Securities Act under Section 4(a)(2) of the Securities Act 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(6), (7) and (10) were exempt from registration under the Securities Act under Rule 701 in that the transactions were under compensatory benefit plans and contracts relating to compensation as provided under Rule 701. The recipients of such securities were the registrant's employees, consultants or directors and received the securities under ALX Oncology Limited's equity incentive 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.

The offers, sales and issuances of the securities described in Items 15(8) 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 2020 Equity Incentive Plan.

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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.

See the Exhibit Index immediately preceding the signature page hereto for a list of exhibits filed as part of this registration statement on Form S-1, which Exhibit Index is incorporated herein by reference.

(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 consolidated 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 of 1933 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.
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	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 April 1, 2020.
4.2*	Specimen common stock certificate of the Registrant.
4.3*	Form of Amended and Restated Warrant to Purchase Stock.
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+*	Amended and Restated 2020 Equity Incentive Plan and forms of agreements thereunder, to be in effect upon the completion of this offering.
10.3+*	Confirmatory Offer Letter between the Registrant and Jaume Pons, Ph.D. effective as of _____, 2020.
10.4+*	Confirmatory Offer Letter between the Registrant and Nathan Caffo, effective as of _____, 2020.
10.5+*	Confirmatory Offer Letter between the Registrant and Peter García, effective as of _____, 2020.
10.6+*	Confirmatory Offer Letter between the Registrant and Steffen Pietzke, effective as of _____, 2020.
10.7+*	Confirmatory Offer Letter between the Registrant and Sophia Randolph, M.D., Ph.D., effective as of _____, 2020.
10.8+*	Confirmatory Offer Letter between the Registrant and Hong Wan, Ph.D., effective as of _____, 2020.
10.9+*	Executive Incentive Compensation Plan.
10.10+*	Outside Director Compensation Policy.
10.11+*	Change in Control and Severance Policy.
10.12#*	Exclusive (Equity) Agreement between the Registrant and The Board of Trustees of the Leland Stanford Junior University, effective as of March 24, 2015, as amended on April 24, 2015 and May 15, 2015.
10.13*	Loan and Security Agreement, dated as of December 20, 2019, among the Registrant, certain of its affiliates, Silicon Valley Bank and WestRiver Innovation Lending Fund VIII, L.P., as amended by the Joinder and First Amendment to Loan and Security Agreement on _____, 2020.
21.1	List of subsidiaries of the Registrant.
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.

+ 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 Burlingame, State of California, on .

ALX ONCOLOGY HOLDINGS INC.

By: _____
Jaume Pons, 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 Jaume Pons, Ph.D., and Peter Garcia 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 or her capacity as a director and/or officer of ALX Oncology Holdings 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.

<u>SIGNATURE</u>	<u>TITLE</u>	<u>DATE</u>
_____ Jaume Pons, Ph.D.	President, Chief Executive Officer and Director <i>(Principal Executive Officer)</i>	
_____ Peter Garcia	Chief Financial Officer <i>(Principal Financial Officer)</i>	
_____ Steffen Pietzke	Vice President, Finance & Chief Accounting Officer <i>(Principal Accounting Officer)</i>	
_____ Corey Goodman, Ph.D.	Executive Chairman of the Board of Directors	
_____ Rekha Hemrajani	Director	
_____ Jason Lettmann	Director	
_____ Jack Nielsen	Director	
_____ Graham Walmsley, M.D., Ph.D.	Director	

**AMENDED AND RESTATED
CERTIFICATE OF INCORPORATION
OF
ALX ONCOLOGY HOLDINGS INC.**

**AMENDED AND RESTATED
CERTIFICATE OF INCORPORATION
OF
ALX ONCOLOGY HOLDINGS INC.**

(Pursuant to Sections 242 and 245 of the
General Corporation Law of the State of Delaware)

ALX Oncology Holdings Inc., a corporation organized and existing under and by virtue of the provisions of the General Corporation Law of the State of Delaware (the “**General Corporation Law**”),

DOES HEREBY CERTIFY:

1. That the name of this corporation is ALX Oncology Holdings Inc., and that this corporation was originally incorporated pursuant to the General Corporation Law on April 1, 2020 under the name “ALX Oncology Holdings Inc.”.

2. That the Board of Directors of the Corporation (the “**Board of Directors**”) duly adopted resolutions proposing to amend and restate the Certificate of Incorporation of this corporation, declaring said amendment and restatement to be advisable and in the best interests of this corporation and its stockholders, and authorizing the appropriate officers of this corporation to solicit the consent of the stockholders therefor, which resolution setting forth the proposed amendment and restatement is as follows:

RESOLVED, that the Certificate of Incorporation of this corporation be amended and restated in its entirety to read as follows:

FIRST: The name of this corporation is ALX Oncology Holdings Inc. (the “**Corporation**”).

SECOND: The address of the registered office of the Corporation in the State of Delaware is 1209 Orange Street, in the City of Wilmington, County of New Castle, Zip Code 19801. The name of its registered agent at such address is The Corporation Trust Company.

THIRD: The nature of the business or purposes to be conducted or promoted is to engage in any lawful act or activity for which corporations may be organized under the General Corporation Law.

FOURTH: The total number of shares of all classes of stock which the Corporation shall have authority to issue is (i) 10,000,000,000 shares of Common Stock, \$0.001 par value per share (“**Common Stock**”) and (ii) 141,231,241 shares of Preferred Stock, \$0.001 par value per share (“**Preferred Stock**”), of which 61,180,500 shares are hereby designated as “**Series A Preferred Stock**”, 7,295,752 shares are hereby designated as “**Series B Preferred Stock**”, and 72,754,989 shares are hereby designated as “**Series C Preferred Stock**”.

The following is a statement of the designations and the powers, privileges and rights, and the qualifications, limitations or restrictions thereof in respect of each class of capital stock of the Corporation.

A. COMMON STOCK

1. General. The voting, dividend and liquidation rights of the holders of the Common Stock are subject to and qualified by the rights, powers and preferences of the holders of the Preferred Stock set forth herein.

2. Voting. The holders of the Common Stock are entitled to one vote for each share of Common Stock held at all meetings of stockholders (and written actions in lieu of meetings). Except as otherwise provided herein or as required by law, the holders of the Common Stock and the Preferred Stock shall vote together as a single class on all matters submitted to the stockholders for a vote. There shall be no cumulative voting.

3. Dividends. Subject to the preferential rights of the Preferred Stock, if any, and Section 1 of Part B of this Article Fourth, the holders of the Common Stock are entitled to receive, when, as and if declared by the Board of Directors, out of the assets of the Corporation which are by law available therefor, dividends payable either in cash, in property or fully paid Common Stock.

4. Authorized Shares. The number of authorized shares of Common Stock may be increased or decreased (but not below the number of shares thereof then outstanding) by (in addition to any vote of the holders of one or more series of Preferred Stock that may be required by the terms of this Amended and Restated Certificate of Incorporation) the affirmative vote of the holders of shares of capital stock of the Corporation representing a majority of the votes represented by all outstanding shares of capital stock of the Corporation entitled to vote, irrespective of the provisions of Section 242(b)(2) of the General Corporation Law.

B. PREFERRED STOCK

The rights, preferences, powers, privileges and restrictions, qualifications and limitations granted to and imposed on the Preferred Stock are set forth below in this Part B of this Article Fourth. Unless otherwise indicated, references to “sections” or “subsections” in this Part B of this Article Fourth refer to sections and subsections of Part B of this Article Fourth.

1. Dividends.

1.1 Holders of the outstanding shares of Preferred Stock shall be entitled to receive, out of funds legally available therefor, cash dividends calculated in accordance with this Subsection 1.1. From and after the applicable Preferred Stock Original Issue Date (as defined below) of each series of Preferred Stock, dividends at the rate of six percent (6%) of the Applicable Preferred Stock Original Issue Price (as defined below) per annum shall accrue on each outstanding share of Series A Preferred Stock, Series B Preferred Stock and Series C Preferred Stock (subject to appropriate adjustment in the event of any stock dividend, stock split, combination or other similar recapitalization with respect of the applicable series of Preferred Stock) (the “**Preferred Dividends**”), each payable in preference and priority

to any declaration or payment of any dividend or other distribution or return of capital on any other class of stocks in the capital of the Corporation. The Preferred Dividends shall be calculated based on a 365-day year and shall accrue from day to day, whether or not declared, and shall be cumulative; provided, however, that except as set forth in Subsection 1.3 and Subsection 2.1, such Preferred Dividends shall be payable only when, as, and if declared by the Board of Directors and the Corporation shall be under no obligation to pay such Preferred Dividends. Payment of any Preferred Dividends to the holders of Preferred Stock shall be made on a pro rata, *pari passu* basis among the holders of Series A Preferred Stock, the holders of Series B Preferred Stock, and the holders of Series C Preferred Stock.

1.2 For purpose hereof, (a) the “**Applicable Preferred Stock Original Issue Price**” shall be equal to (i) in the case of the Series A Preferred Stock, \$1.00 per share, subject to appropriate adjustment in the event of any stock dividend, stock split, combination or other similar recapitalization with respect to the Series A Preferred Stock (the “**Series A Original Issue Price**”), (ii) in the case of the Series B Preferred Stock, \$1.4432 per share, subject to appropriate adjustment in the event of any stock dividend, stock split, combination or other similar recapitalization with respect to the Series B Preferred Stock (the “**Series B Original Issue Price**”), and (iii) in the case of the Series C Preferred Stock, \$1.4432 per share, subject to appropriate adjustment in the event of any stock dividend, stock split, combination or other similar recapitalization with respect to the Series C Preferred Stock (the “**Series C Original Issue Price**”); and the “**Preferred Stock Original Issue Date**” shall mean (i) in the case of the Series A Preferred Stock, May 8, 2015, (ii) in the case of Series B Preferred Stock, May 16, 2019, and (iii) in the case of Series C Preferred Stock, February 6, 2020.

1.3 The Corporation shall not declare, pay or set aside any dividends on shares of Common Stock or any other class or series of capital stock of the Corporation (other than dividends on shares of Common Stock payable in shares of Common Stock) unless (in addition to the obtaining of any consents required elsewhere in this Amended and Restated Certificate of Incorporation) the holders of the Preferred Stock then outstanding shall first receive, or simultaneously receive, a dividend on each outstanding share of Preferred Stock in an amount at least equal to the greater of (i) the amount of the aggregate Preferred Dividends then accrued on such share of Preferred Stock and not previously paid and (ii) (A) in the case of a dividend on Common Stock or any class or series that is convertible into Common Stock, that dividend per share of Preferred Stock as would equal the product of (1) the dividend payable on each share of such class or series determined, if applicable, as if all shares of such class or series had been converted into Common Stock and (2) the number of shares of Common Stock issuable upon conversion of a share of Preferred Stock, in each case calculated on the record date for determination of holders entitled to receive such dividend or (B) in the case of a dividend on any class or series that is not convertible into Common Stock, at a rate per share of Preferred Stock determined by (1) dividing the amount of the dividend payable on each share of such class or series of capital stock by the original issuance price of such class or series of capital stock (subject to appropriate adjustment in the event of any stock dividend, stock split, combination or other similar recapitalization with respect to such class or series) and (2) multiplying such fraction by an amount equal to the Applicable Preferred Stock Original Issue Price; provided that if the Corporation declares, pays or sets aside, on the same date, a dividend on shares of more than one class or series of capital stock of the Corporation, the dividend payable to the holders of Preferred Stock pursuant to this Section 1.3 shall be calculated based upon the dividend on the class or series of capital stock that would result in the highest Preferred Stock dividend.

2. Liquidation, Dissolution or Winding Up; Certain Mergers, Consolidations and Asset Sales.

2.1 Preferential Payments to Holders of Preferred Stock. In the event of any voluntary or involuntary liquidation, dissolution or winding up of the Corporation or Deemed Liquidation Event (as defined below), the holders of shares of Preferred Stock then outstanding shall be entitled to be paid, on a *pari passu* basis among each other, out of the assets of the Corporation available for distribution to its stockholders or, in the case of a Deemed Liquidation Event, out of the consideration payable to stockholders in such Deemed Liquidation Event or the Available Proceeds (as defined below), before any payment shall be made to the holders of Common Stock by reason of their ownership thereof, an amount per share equal to one (1) times the Applicable Preferred Stock Original Issue Price, plus any applicable Preferred Dividends for such Preferred Stock accrued but unpaid thereon, whether or not declared. If upon any such liquidation, dissolution or winding up of the Corporation or Deemed Liquidation Event, the assets of the Corporation available for distribution to its stockholders shall be insufficient to pay all holders of shares of Preferred Stock the full amount to which they shall be entitled under this Subsection 2.1, the holders of shares of Preferred Stock shall share ratably in any distribution of the assets available for distribution in proportion to the respective amounts which would otherwise be payable in respect of the shares held by them upon such distribution if all amounts payable on or with respect to such shares were paid in full.

2.2 Distribution of Remaining Assets. In the event of any voluntary or involuntary liquidation, dissolution or winding up of the Corporation, after the payment in full of all preferential amounts required to be paid to the holders of shares of Preferred Stock described in Subsection 2.1, the remaining assets of the Corporation available for distribution to its stockholders or, in the case of a Deemed Liquidation Event, the consideration not payable to the holders of shares of Preferred Stock pursuant to Subsection 2.1 or the remaining Available Proceeds, as the case may be, shall be distributed among the holders of the shares of Preferred Stock and Common Stock, pro rata based on the number of shares held by each such holder, treating for this purpose all such securities as if they had been converted to Common Stock pursuant to the terms of this Amended and Restated Certificate of Incorporation immediately prior to such liquidation, dissolution or winding up of the Corporation. The aggregate amount which a holder of a share of a series of Preferred Stock is entitled to receive under Subsections 2.1 and 2.2 is hereinafter referred to as the “**Applicable Preferred Stock Liquidation Amount.**”

2.3 Deemed Liquidation Events.

2.3.1 Definition. Each of the following events shall be considered a “**Deemed Liquidation Event**” unless the holders of at least two-thirds of the then outstanding shares of Preferred Stock, voting together as a single class on an as-converted basis (the “**Requisite Holders**”), elect otherwise by written notice sent to the Corporation at least ten (10) days prior to the effective date of any such event:

- (a) a merger or consolidation in which
 - (i) the Corporation is a constituent party or
 - (ii) a subsidiary of the Corporation is a constituent party and the Corporation issues shares of its capital stock pursuant to such merger or consolidation,

except any such merger or consolidation involving the Corporation or a subsidiary in which the shares of capital stock of the Corporation outstanding immediately prior to such merger or consolidation continue to represent, or are converted into or exchanged for shares of capital stock that represent, immediately following such merger or consolidation, at least a majority, by voting power, of the capital stock of (1) the surviving or resulting corporation; or (2) if the surviving or resulting corporation is a wholly owned subsidiary of another corporation immediately following such merger or consolidation, the parent corporation of such surviving or resulting corporation; or

(b) the sale, lease, transfer, exclusive license or other disposition, in a single transaction or series of related transactions, of (i) all of the main operating subsidiaries of the Corporation (whether by merger, consolidation or otherwise, and whether in a single transaction or a series of related transactions), (ii) all or substantially all of the business of the Corporation, (iii) all or substantially all the assets of the Corporation or its subsidiaries (including all or substantially all of the Corporation's or its subsidiaries' intellectual property).

2.3.2 Effecting a Deemed Liquidation Event.

(a) The Corporation shall not have the power to effect a Deemed Liquidation Event referred to in Subsection 2.3.1(a)(i) unless the agreement or plan of merger or consolidation for such transaction (the "**Merger Agreement**") provides that the consideration payable to the stockholders of the Corporation in such Deemed Liquidation Event shall be paid to the holders of capital stock of the Corporation in accordance with Subsections 2.1 and 2.2.

(b) In the event of a Deemed Liquidation Event referred to in Subsection 2.3.1(a)(ii) or 2.3.1(b), if the Corporation does not effect a dissolution of the Corporation under the General Corporation Law within ninety (90) days after such Deemed Liquidation Event, then (i) the Corporation shall send a written notice to each holder of Preferred Stock no later than the ninetieth (90th) day after the Deemed Liquidation Event advising such holders of their right (and the requirements to be met to secure such right) pursuant to the terms of the following clauses, (ii) the Corporation shall require the redemption of such shares of Preferred Stock, and (iii) if the Requisite Holders so request in a written instrument delivered to the Corporation not later than one hundred twenty (120) days after such Deemed Liquidation Event, the Corporation shall use the consideration received by the Corporation for such Deemed Liquidation Event (net of any retained liabilities associated with the assets sold or technology licensed, as determined in good faith by the Board of Directors), together with any other assets of the Corporation available for distribution to its stockholders, all to the extent permitted by Delaware law governing distributions to stockholders (the "**Available Proceeds**"), on the one hundred fiftieth (150th) day after such Deemed Liquidation Event, to redeem all outstanding shares of Preferred Stock at a price per share equal to the Applicable Preferred Stock Liquidation Amount. Notwithstanding the foregoing, in the event of a redemption pursuant to the preceding sentence, if the Available Proceeds are not sufficient to redeem all outstanding shares of

Preferred Stock, the Corporation shall redeem a pro rata portion of each holder's shares of Preferred Stock to the fullest extent of such Available Proceeds, based on the respective amounts which would otherwise be payable in respect of the shares to be redeemed if the Available Proceeds were sufficient to redeem all such shares, and shall redeem the remaining shares as soon as it may lawfully do so under Delaware law governing distributions to stockholders. Prior to the distribution or redemption provided for in this Subsection 2.3.2(b), the Corporation shall not expend or dissipate the consideration received for such Deemed Liquidation Event, except to discharge expenses incurred in connection with such Deemed Liquidation Event or in the ordinary course of business.

2.3.3 Amount Deemed Paid or Distributed. The amount deemed paid or distributed to the holders of capital stock of the Corporation upon any such merger, consolidation, sale, transfer, exclusive license, other disposition or redemption shall be the cash or the value of the property, rights or securities to be paid or distributed to such holders pursuant to such Deemed Liquidation Event. The value of such property, rights or securities shall be determined in good faith by the Board of Directors. The Board of Directors shall seek to obtain agreement on the value of such property, rights or securities with the Requisite Holder and, if agreement is unable to be obtained, independent competent appraisers shall be promptly engaged to determine the value of such property, rights or securities. The Corporation shall, upon the date the valuation is agreed by the Board of Directors and Requisite Holders or upon receipt of such appraiser's valuation, as the case may be, give prompt written notice to the holders of capital stock of the Corporation of the valuation. Notwithstanding the foregoing, any securities to be distributed to holders of capital stock of the Corporation shall be valued as follows:

2.3.4 Valuation of Securities. Notwithstanding Subsection 2.3.3, any securities to be distributed to the stockholders of the Corporation shall be valued as follows:

- (a) Securities not subject to an investment letter or other similar restrictions on free marketability covered by subsection (b) hereof:
- (i) if traded on a securities exchange, the value shall be deemed to be the volume weighted average of the closing prices of the securities on such exchange over the 30-day period ending three (3) business days prior to the closing;
 - (ii) if actively traded over-the-counter, the value shall be deemed to be the volume weighted average of the closing bid or sale prices (whichever is applicable) over the 30-day period ending three (3) business days prior to the closing; and
 - (iii) if there is no active public market, the value shall be the fair market value thereof, as reasonably determined by the Board of Directors or independent competent appraisers (as the case may be) in good faith.

(b) The method of valuation of securities subject to an investment letter or other restrictions on free marketability (other than restrictions arising solely by virtue of a stockholder's status as an affiliate or former affiliate) shall be to make an appropriate discount from the market value determined as provided in subsections 4.3.3(a)(i), (ii) and (iii), to reflect the adjusted fair market value thereof, as reasonably determined by the Board of Directors or independent competent appraisers (as the case may be) in good faith.

2.3.5 Allocation of Escrow and Contingent Consideration. In the event of a Deemed Liquidation Event pursuant to Subsection 2.3.1(a)(i), if any portion of the consideration payable to the stockholders of the Corporation is payable only upon satisfaction of contingencies (the "**Additional Consideration**"), the Merger Agreement shall provide that (a) the portion of such consideration that is not Additional Consideration (such portion, the "**Initial Consideration**") shall be allocated among the holders of capital stock of the Corporation in accordance with Subsections 2.1 and 2.2 as if the Initial Consideration were the only consideration payable in connection with such Deemed Liquidation Event; and (b) any Additional Consideration which becomes payable to the stockholders of the Corporation upon satisfaction of such contingencies shall be allocated among the holders of capital stock of the Corporation in accordance with Subsections 2.1 and 2.2 after taking into account the previous payment of the Initial Consideration as part of the same transaction. For the purposes of this Subsection 2.3.4, consideration placed into escrow or retained as a holdback to be available for satisfaction of indemnification or similar obligations in connection with such Deemed Liquidation Event shall be deemed to be Initial Consideration.

3. Voting.

3.1 General. On any matter presented to the stockholders of the Corporation for their action or consideration at any meeting of stockholders of the Corporation (or by written consent of stockholders in lieu of meeting), each holder of outstanding shares of Preferred Stock shall be entitled to cast the number of votes equal to the number of whole shares of Common Stock into which the shares of Preferred Stock held by such holder are convertible as of the record date for determining stockholders entitled to vote on such matter. Except as provided by law or by the other provisions of this Amended and Restated Certificate of Incorporation, holders of Preferred Stock shall vote together with the holders of Common Stock as a single class and on an as-converted to Common Stock basis. Fractional votes shall not, however, be permitted and any fractional voting rights resulting from the above formula (after aggregating all Common Stock into which Preferred Stock held by each holder could be converted) shall be reduced to the nearest whole number.

3.2 Election of Directors. (a) The holders of record of the shares of Series A Preferred Stock and Series B Preferred Stock, voting together as a single class on an as-converted basis, shall be entitled to elect two (2) directors of the Corporation (the "**Series A/B Directors**"); (b) the holders of record of the shares of Series C Preferred Stock, exclusively and as a separate class, shall be entitled to elect two (2) director of the Corporation (the "**Series C Director**" and together with the Series A/B Directors, the "**Preferred Directors**"); (c) the holders of record of the shares of Common Stock, exclusively and as a separate class, shall be

entitled to elect one (1) director of the Corporation (the “**Common Stock Director**”); and (d) the Requisite Holders, voting together as a single class and on an as-converted basis, shall be entitled to elect one (1) directors of the Corporation, subject to the consent of the majority of holders of record of the shares of Common Stock (the “**Mutual Directors**”). Any director elected as provided in the preceding sentence may be removed without cause by, and only by, the affirmative vote of the holders of the shares of the class or series of capital stock entitled to elect such director or directors, given either at a special meeting of such stockholders duly called for that purpose or pursuant to a written consent of stockholders. If the holders of shares of Series A Preferred Stock, Series B Preferred Stock, Series C Preferred Stock or Common Stock, as the case may be, fail to elect a sufficient number of directors to fill all directorships for which they are entitled to elect directors, voting exclusively and as a separate class, pursuant to the first sentence of this Subsection 3.2, then any directorship not so filled shall remain vacant until such time as the holders of shares of Series A Preferred Stock, Series B Preferred Stock, Series C Preferred Stock or Common Stock, as the case may be, elect a person to fill such directorship by vote or written consent in lieu of a meeting; and no such directorship may be filled by stockholders of the Corporation other than by the stockholders of the Corporation that are entitled to elect a person to fill such directorship, voting exclusively and as a separate class. The holders of record of the shares of Common Stock and of any other class or series of voting stock (including the Preferred Stock), exclusively and voting together as a single class, shall be entitled to elect the balance of the total number of directors of the Corporation. At any meeting held for the purpose of electing a director, the presence in person or by proxy of the holders of a majority of the outstanding shares of the class or series entitled to elect such director shall constitute a quorum for the purpose of electing such director. Except as otherwise provided in this Subsection 3.2, a vacancy in any directorship filled by the holders of any class or series shall be filled only by vote or written consent in lieu of a meeting of the holders of such class or series or by any remaining director or directors elected by the holders of such class or series pursuant to this Subsection 3.2.

3.3 Preferred Stock Protective Provisions. At any time when at least 9,000,000 shares of Preferred Stock (subject to appropriate adjustment in the event of any stock dividend, stock split, combination or other similar recapitalization with respect to any series of Preferred Stock) are outstanding, the Corporation shall not, either directly or indirectly by amendment, merger, consolidation or otherwise, do any of the following without (in addition to any other vote required by law or this Amended and Restated Certificate of Incorporation) the written consent or affirmative vote of the Requisite Holders, given in writing or by vote at a meeting, consenting or voting (as the case may be) separately as a class, and any such act or transaction entered into without such consent or vote shall be null and void *ab initio*, and of no force or effect:

3.3.1 amend, alter or repeal any provision of this Amended and Restated Certificate of Incorporation or Bylaws of the Corporation in a manner that adversely affects the powers, preferences or rights of any series of Preferred Stock;

3.3.2 create, or authorize the creation of, or issue or obligate itself to issue shares of, or any other security convertible into or exercisable for, any class or series of equity security having rights, preferences or privileges senior to or on parity with any series of Preferred Stock;

3.3.3 (i) reclassify, alter or amend any existing security of the Corporation that is *pari passu* with any series of Preferred Stock in respect of the distribution of assets on the liquidation, dissolution or winding up of the Corporation, the payment of dividends or rights of redemption, if such reclassification, alteration or amendment would render such other security senior to any series of Preferred Stock in respect of any such right, preference, or privilege or (ii) reclassify, alter or amend any existing security of the Corporation that is junior to any series of Preferred Stock in respect of the distribution of assets on the liquidation, dissolution or winding up of the Corporation, the payment of dividends or rights of redemption, if such reclassification, alteration or amendment would render such other security senior to or *pari passu* with the Preferred Stock in respect of any such right, preference or privilege;

3.3.4 effect a liquidation, dissolution or winding-up of the business and affairs of the Corporation and/or any of its subsidiaries, or effect any merger or consolidation or any other Deemed Liquidation Event;

3.3.5 increase the authorized number of shares of Common Stock or issues shares of Common Stock, except for the purpose of (i) issuing shares upon exercise of outstanding options to purchase Common Stock for up to an aggregate of 24,923,591 shares of Common Stock or warrants for the purchase of Common Stock; (ii) issuing shares upon the conversion of Preferred Stock; or (iii) issuing shares in connection with a share split, share dividend or other recapitalization;

3.3.6 increase or decrease the authorized number of directors constituting the Board of Directors or change the procedures by which the members of the Board of Directors are elected or appointed;

3.3.7 purchase or redeem (or permit any subsidiary to purchase or redeem) or pay or declare any dividend or make any distribution on, any shares of capital stock of the Corporation other than repurchases of stock from service providers of the Corporation or any subsidiary upon the cessation of services pursuant to agreements to repurchase such shares that are approved by the Board of Directors (including a majority of Preferred Directors);

3.3.8 incur indebtedness in respect of the Corporation or any of its subsidiaries for borrowed money (including operating and capital leases) in excess of \$250,000 in the aggregate; provided, that the incurrence of any direct or indirect guarantee of the payment or performance of the indebtedness of any other party shall be construed as the incurrence of indebtedness;

3.3.9 amend or modify any existing stock option or equity incentive plan of the Corporation or adopt any new stock option or equity incentive plan;

3.3.10 cause the Corporation and/or any of its subsidiaries to acquire, merge or consolidate with or into any corporation or to purchase all or substantially all of the assets of any corporation; or

3.3.11 amend, terminate or waive any provision of the Corporation's and/or any of its subsidiaries' certificate of incorporation or by-laws or other equivalent organizational documents or any shareholders agreements (including the existing amended and restated voting agreement, the existing amended and restated right of first refusal and co-sale agreement, the existing amended and restated investors' rights agreement relating to the Corporation, as well as any other agreement executed by Requisite Holders relating to the Corporation entered into on or after the effective date of this Amended and Restated Certificate of Incorporation).

4. Optional Conversion.

The holders of the Preferred Stock shall have conversion rights as follows (the "**Conversion Rights**"):

4.1 Right to Convert.

4.1.1 Conversion Ratio. Each share of Preferred Stock shall be convertible, at the option of the holder thereof, at any time and from time to time, and without the payment of additional consideration by the holder thereof, into such number of fully paid and non-assessable shares of Common Stock as is determined by dividing the Applicable Preferred Stock Original Issue Price by the Applicable Preferred Stock Conversion Price (as defined below) in effect at the time of conversion. For purposes hereof, the "**Applicable Preferred Stock Conversion Price**" shall initially (as of the Series C Original Issue Date and before any adjustment is required pursuant to Subsection 4.4 hereof) be equal to (a) in the case of the Series A Preferred Stock, \$1.00; (b) in the case of the Series B Preferred Stock, \$1.4432; (c) in the case of the Series C Preferred Stock, \$1.4432; provided, that, the Applicable Preferred Stock Conversion Price for a series of Preferred Stock shall only be adjusted pursuant to this Section 4 if the issuance of Additional Shares of Common Stock is made for consideration less than the Applicable Preferred Stock Conversion Price then in effect for such series of Preferred Stock. Such initial Applicable Preferred Stock Conversion Price, and the initial rate at which shares of Series A Preferred Stock, Series B Preferred Stock or Series C Preferred Stock, as applicable, may be converted into shares of Common Stock, shall be subject to adjustment as provided below.

4.1.2 Termination of Conversion Rights. In the event of a liquidation, dissolution or winding up of the Corporation or a Deemed Liquidation Event, the Conversion Rights shall terminate at the close of business on the last full day preceding the date fixed for the payment of any such amounts distributable on such event to the holders of Preferred Stock.

4.2 Fractional Shares. No fractional shares of Common Stock shall be issued upon conversion of the Preferred Stock. In lieu of any fractional shares to which the holder would otherwise be entitled, the Corporation shall pay cash equal to such fraction multiplied by the fair market value of a share of Common Stock as determined in good faith by the Board of Directors. Whether or not fractional shares would be issuable upon such conversion shall be determined on the basis of the total number of shares of any series of class of Preferred Stock the holder is at the time converting into Common Stock and the aggregate number of shares of Common Stock issuable upon such conversion.

4.3 Mechanics of Conversion.

4.3.1 Notice of Conversion. In order for a holder of Preferred Stock to voluntarily convert shares of Preferred Stock into shares of Common Stock, such holder shall (a) provide written notice to the Corporation's transfer agent at the office of the transfer agent for the Preferred Stock (or at the principal office of the Corporation if the Corporation serves as its own transfer agent) that such holder elects to convert all or any number of such holder's shares of Preferred Stock and, if applicable, any event on which such conversion is contingent and (b), if such holder's shares are certificated, surrender the certificate or certificates for such shares of Preferred Stock (or, if such registered holder alleges that such certificate has been lost, stolen or destroyed, a lost certificate affidavit and agreement reasonably acceptable to the Corporation to indemnify the Corporation against any claim that may be made against the Corporation on account of the alleged loss, theft or destruction of such certificate), at the office of the transfer agent for the Preferred Stock (or at the principal office of the Corporation if the Corporation serves as its own transfer agent). Such notice shall state such holder's name or the names of the nominees in which such holder wishes the shares of Common Stock to be issued. If required by the Corporation, any certificates surrendered for conversion shall be endorsed or accompanied by a written instrument or instruments of transfer, in form satisfactory to the Corporation, duly executed by the registered holder or his, her or its attorney duly authorized in writing. The close of business on the date of receipt by the transfer agent (or by the Corporation if the Corporation serves as its own transfer agent) of such notice and, if applicable, certificates (or lost certificate affidavit and agreement) shall be the time of conversion (the "**Conversion Time**"), and the shares of Common Stock issuable upon conversion of the specified shares shall be deemed to be outstanding of record as of such date. The Corporation shall, as soon as practicable after the Conversion Time (i) issue and deliver to such holder of Preferred Stock, or to his, her or its nominees, a certificate or certificates for the number of full shares of Common Stock issuable upon such conversion in accordance with the provisions hereof and a certificate for the number (if any) of the shares of Preferred Stock represented by the surrendered certificate that were not converted into Common Stock, (ii) pay in cash such amount as provided in Subsection 4.2 in lieu of any fraction of a share of Common Stock otherwise issuable upon such conversion and (iii) pay all declared but unpaid dividends on the shares of Preferred Stock converted.

4.3.2 Reservation of Shares. The Corporation shall at all times when the Preferred Stock shall be outstanding, reserve and keep available out of its authorized but unissued capital stock, for the purpose of effecting the conversion of the Preferred Stock, such number of its duly authorized shares of Common Stock as shall from time to time be sufficient to effect the conversion of all outstanding Preferred Stock; and if at any time the number of authorized but unissued shares of Common Stock shall not be sufficient to effect the conversion of all then outstanding shares of the Preferred Stock, the Corporation shall take such corporate action as may be necessary to increase its authorized but unissued shares of Common Stock to such number of shares as shall be sufficient for such purposes, including, without limitation, engaging in best efforts to obtain the requisite stockholder approval of any necessary amendment to this Amended and Restated Certificate of Incorporation. Before taking any action which would cause an adjustment reducing the Applicable Preferred Stock Conversion Price below the then par value of the shares of Common Stock issuable upon conversion of the applicable series of Preferred Stock, the Corporation will take any corporate action which may, in the opinion of its counsel, be necessary in order that the Corporation may validly and legally issue fully paid and non-assessable shares of Common Stock at such adjusted Applicable Preferred Stock Conversion Price.

4.3.3 Effect of Conversion. All shares of Preferred Stock which shall have been surrendered for conversion as herein provided shall no longer be deemed to be outstanding and all rights with respect to such shares shall immediately cease and terminate at the Conversion Time, except only the right of the holders thereof to receive shares of Common Stock in exchange therefor, to receive payment in lieu of any fraction of a share otherwise issuable upon such conversion as provided in Subsection 4.2 and to receive payment of any dividends declared but unpaid thereon. Any shares of Preferred Stock so converted shall be retired and cancelled and may not be reissued as shares of such series, and the Corporation may thereafter take such appropriate action (without the need for stockholder action) as may be necessary to reduce the authorized number of shares of such series of Preferred Stock accordingly.

4.3.4 No Further Adjustment. Upon any such conversion, no adjustment to the Applicable Preferred Stock Conversion Price shall be made for any declared but unpaid dividends on the applicable series of Preferred Stock surrendered for conversion or on the Common Stock delivered upon conversion.

4.3.5 Taxes. The Corporation shall pay any and all issue and other similar taxes that may be payable in respect of any issuance or delivery of shares of Common Stock upon conversion of shares of Preferred Stock pursuant to this Section 4. The Corporation shall not, however, be required to pay any tax which may be payable in respect of any transfer involved in the issuance and delivery of shares of Common Stock in a name other than that in which the shares of Preferred Stock so converted were registered, and no such issuance or delivery shall be made unless and until the person or entity requesting such issuance has paid to the Corporation the amount of any such tax or has established, to the satisfaction of the Corporation, that such tax has been paid.

4.4 Adjustments to Applicable Preferred Stock Conversion Price for Diluting Issues.

4.4.1 Special Definitions. For purposes of this Article Fourth, the following definitions shall apply:

(a) “**Option**” shall mean rights, options or warrants to subscribe for, purchase or otherwise acquire Common Stock or Convertible Securities.

(b) “**Series C Original Issue Date**” shall mean February 6, 2020.

(c) “**Convertible Securities**” shall mean any evidences of indebtedness, shares or other securities directly or indirectly convertible into or exchangeable for Common Stock, but excluding Options.

(d) “**Additional Shares of Common Stock**” shall mean all shares of Common Stock issued (or, pursuant to Subsection 4.4.3 below, deemed to be issued) by the Corporation after the Series C Original Issue Date, other than (1) the following shares of Common Stock and (2) shares of Common Stock deemed issued pursuant to the following Options and Convertible Securities (clauses (1) and (2), collectively, “**Exempted Securities**”):

- (i) shares of Common Stock issued upon conversion of the Preferred Stock;
- (ii) shares of Common Stock or Options issued to employees or directors of, or consultants or advisors to, the Corporation or any of its subsidiaries pursuant to a plan, agreement or arrangement approved by the Board of Directors, including a majority of the Preferred Directors;
- (iii) shares of Common Stock, Options or Convertible Securities issued to the public in a firm commitment underwritten public offering pursuant to an effective registration statement for a total public offering amount of not less than \$50,000,000 after deducting underwriters commissions and expenses;
- (iv) shares of Common Stock, Options or Convertible Securities issued pursuant to the acquisition by the Corporation of another corporation or other entity by consolidation, corporate reorganizations, or merger or purchase of all or substantially all of the assets of such corporation or other entity as approved by the Board of Directors, including a majority of the Preferred Directors;
- (v) shares of Common Stock, Options or Convertible Securities issued to persons providing equipment leasing, real estate leasing, bank financing or similar transactions approved by the Board of Directors, including a majority of the Preferred Directors; or
- (vi) shares of Common Stock, Options or Convertible Securities issued to suppliers or third party service providers other than for capital raising purposes approved by the Board of Directors, including a majority of the Preferred Directors.

4.4.2 No Adjustment of Applicable Preferred Stock Conversion Price. No adjustment in the Applicable Preferred Stock Conversion Price shall be made as the result of the issuance or deemed issuance of Additional Shares of Common Stock if the Corporation receives written notice from the Requisite Holders agreeing that no such adjustment shall be made as the result of the issuance or deemed issuance of such Additional Shares of Common Stock.

4.4.3 Deemed Issue of Additional Shares of Common Stock.

(a) If the Corporation at any time or from time to time after the Series C Original Issue Date shall issue any Options or Convertible Securities (excluding Options or Convertible Securities which are themselves Exempted Securities) or shall fix a record date for the determination of holders of any class of securities entitled to receive any such Options or Convertible Securities, then the maximum number of shares of Common Stock (as set forth in the instrument relating thereto, assuming the satisfaction of any conditions to exercisability, convertibility or exchangeability but without regard to any provision contained therein for a subsequent adjustment of such number) issuable upon the exercise of such Options or, in the case of Convertible Securities and Options therefor, the conversion or exchange of such Convertible Securities, shall be deemed to be Additional Shares of Common Stock issued as of the time of such issue or, in case such a record date shall have been fixed, as of the close of business on such record date.

(b) If the terms of any Option or Convertible Security, the issuance of which resulted in an adjustment to the Applicable Preferred Stock Conversion Price pursuant to the terms of Subsection 4.4.4, are revised as a result of an amendment to such terms or any other adjustment pursuant to the provisions of such Option or Convertible Security (but excluding automatic adjustments to such terms pursuant to anti-dilution or similar provisions of such Option or Convertible Security) to provide for either (1) any increase or decrease in the number of shares of Common Stock issuable upon the exercise, conversion and/or exchange of any such Option or Convertible Security or (2) any increase or decrease in the consideration payable to the Corporation upon such exercise, conversion and/or exchange, then, effective upon such increase or decrease becoming effective, the Applicable Preferred Stock Conversion Price computed upon the original issue of such Option or Convertible Security (or upon the occurrence of a record date with respect thereto) shall be readjusted to such Applicable Preferred Stock Conversion Price as would have obtained had such revised terms been in effect upon the original date of issuance of such Option or Convertible Security. Notwithstanding the foregoing, no readjustment pursuant to this clause (b) shall have the effect of increasing the Applicable Preferred Stock Conversion Price to an amount which exceeds the lower of (i) the Applicable Preferred Stock Conversion Price in effect immediately prior to the original adjustment made as a result of the issuance of such Option or Convertible Security, or (ii) the Applicable Preferred Stock Conversion Price that would have resulted from any issuances of Additional Shares of Common Stock (other than deemed issuances of Additional Shares of Common Stock as a result of the issuance of such Option or Convertible Security) between the original adjustment date and such readjustment date.

(c) If the terms of any Option or Convertible Security (excluding Options or Convertible Securities which are themselves Exempted Securities), the issuance of which did not result in an adjustment to the Applicable Preferred Stock Conversion Price pursuant to the terms of Subsection 4.4.4 (either because the consideration per share (determined pursuant to Subsection 4.4.5) of the Additional Shares of Common Stock subject thereto was equal to or greater than the Applicable Preferred Stock Conversion Price then in effect, or because such Option or Convertible Security was issued before the Series C Original Issue Date), are revised after the Series C Original Issue Date as a result of an amendment to such terms or any other adjustment pursuant to the provisions of such Option or Convertible Security (but excluding automatic adjustments to such terms pursuant to anti-dilution or similar provisions of such Option or Convertible Security) to provide for either (1) any increase in the number of shares of Common Stock issuable upon the exercise, conversion or exchange of any such Option or Convertible Security or (2) any decrease in the consideration payable to the Corporation upon such exercise, conversion or exchange, then such Option or Convertible Security, as so amended or adjusted, and the Additional Shares of Common Stock subject thereto (determined in the manner provided in Subsection 4.4.3(a)) shall be deemed to have been issued effective upon such increase or decrease becoming effective).

(d) Upon the expiration or termination of any unexercised Option or unconverted or unexchanged Convertible Security (or portion thereof) which resulted (either upon its original issuance or upon a revision of its terms) in an adjustment to the Applicable Preferred Stock Conversion Price pursuant to the terms of Subsection 4.4.4, the Applicable Preferred Stock Conversion Price shall be readjusted to such Applicable Preferred Stock Conversion Price as would have obtained had such Option or Convertible Security (or portion thereof) never been issued.

(e) If the number of shares of Common Stock issuable upon the exercise, conversion and/or exchange of any Option or Convertible Security, or the consideration payable to the Corporation upon such exercise, conversion and/or exchange, is calculable at the time such Option or Convertible Security is issued or amended but is subject to adjustment based upon subsequent events, any adjustment to the Applicable Preferred Stock Conversion Price provided for in this Subsection 4.4.3 shall be effected at the time of such issuance or amendment based on such number of shares or amount of consideration without regard to any provisions for subsequent adjustments (and any subsequent adjustments shall be treated as provided in clauses (b) and (c) of this Subsection 4.4.3). If the number of shares of Common Stock issuable upon the exercise, conversion and/or exchange of any Option or Convertible Security, or the consideration payable to the Corporation upon such exercise, conversion and/or exchange, cannot be calculated at all at the time such Option or Convertible Security is issued or amended, any adjustment to the Applied Preferred Stock Conversion Price that would result under the terms of this Subsection 4.4.3 at the time of such issuance or amendment shall instead be effected at the time such number of shares and/or amount of consideration is first calculable (even if subject to subsequent adjustments), assuming for purposes of calculating such adjustment to the Applicable Preferred Stock Conversion Price that such issuance or amendment took place at the time such calculation can first be made.

4.4.4 Adjustment of Applicable Preferred Stock Conversion Price Upon Issuance of Additional Shares of Common Stock. In the event the Corporation shall at any time after the Series C Original Issue Date issue Additional Shares of Common Stock (including Additional Shares of Common Stock deemed to be issued pursuant to Subsection 4.4.3), without consideration or for a consideration per share less than the Applicable Preferred Stock Conversion Price in effect immediately prior to such issuance or deemed issuance, then the Applicable Preferred Stock Conversion Price shall be reduced, concurrently with such issue, to a price (calculated to the nearest cent) determined in accordance with the following formula:

$$CP_2 = CP_1 * (A + B) \div (A + C).$$

For purposes of the foregoing formula, the following definitions shall apply:

(a) “CP₂” shall mean the Applicable Preferred Stock Conversion Price in effect immediately after such issuance or deemed issuance of Additional Shares of Common Stock;

(b) “CP₁” shall mean the Applicable Preferred Stock Conversion Price in effect immediately prior to such issuance or deemed issuance of Additional Shares of Common Stock;

(c) “A” shall mean the number of shares of Common Stock outstanding immediately prior to such issuance or deemed issuance of Additional Shares of Common Stock (treating for this purpose as outstanding all shares of Common Stock issuable upon exercise of Options outstanding immediately prior to such issuance or deemed issuance or upon conversion or exchange of Convertible Securities (including the Preferred Stock) outstanding (assuming exercise of any outstanding Options therefor) immediately prior to such issue);

(d) “B” shall mean the number of shares of Common Stock that would have been issued if such Additional Shares of Common Stock had been issued or deemed issued at a price per share equal to CP₁ (determined by dividing the aggregate consideration received by the Corporation in respect of such issue by CP₁); and

(e) “C” shall mean the number of such Additional Shares of Common Stock issued in such transaction.

4.4.5 Determination of Consideration. For purposes of this Subsection 4.4, the consideration received by the Corporation for the issuance or deemed issuance of any Additional Shares of Common Stock shall be computed as follows:

(a) Cash and Property: Such consideration shall:

- (i) insofar as it consists of cash, be computed at the aggregate amount of cash received by the Corporation, excluding amounts paid or payable for accrued interest or dividends and before deducting any expenses paid or incurred and any underwriting commissions or concessions paid or allowed by the Corporation in connection with such issuance or deemed issuance;

- (ii) insofar as it consists of property other than cash, be computed at the fair market value thereof at the time of such issue, as determined in good faith by the Board of Directors, excluding any accrued interest or dividends; and
- (iii) in the event Additional Shares of Common Stock are issued together with other shares or securities or other assets of the Corporation for consideration which covers both, be the proportion of such consideration so received, computed as provided in clauses (i) and (ii) above, as determined in good faith by the Board of Directors.

(b) Options and Convertible Securities. The consideration per share received by the Corporation for Additional Shares of Common Stock deemed to have been issued pursuant to Subsection 4.4.3, relating to Options and Convertible Securities, shall be determined by dividing:

- (i) The total amount, if any, received or receivable by the Corporation as consideration for the issue of such Options or Convertible Securities, plus the minimum aggregate amount of additional consideration (as set forth in the instruments relating thereto, without regard to any provision contained therein for a subsequent adjustment of such consideration) payable to the Corporation upon the exercise of such Options or the conversion or exchange of such Convertible Securities, or in the case of Options for Convertible Securities, the exercise of such Options for Convertible Securities and the conversion or exchange of such Convertible Securities, in each case after excluding any accrued interest or dividends, by
- (ii) the maximum number of shares of Common Stock (as set forth in the instruments relating thereto, without regard to any provision contained therein for a subsequent adjustment of such number) issuable upon the exercise of such Options or the conversion or exchange of such Convertible Securities, or in the case of Options for Convertible Securities, the exercise of such Options for Convertible Securities and the conversion or exchange of such Convertible Securities.

4.4.6 Multiple Closing Dates. In the event the Corporation shall issue on more than one date Additional Shares of Common Stock that are a part of one transaction or a series of related transactions and that would result in an adjustment to the Applicable Preferred Stock Conversion Price pursuant to the terms of Subsection 4.4.4, then, upon the final such issuance, the Applicable Preferred Stock Conversion Price shall be readjusted to give effect to all such issuances as if they occurred on the date of the first such issuance (and without giving effect to any additional adjustments as a result of any such subsequent issuances within such period).

4.5 Adjustment for Stock Splits and Combinations. If the Corporation shall at any time or from time to time after the Series C Original Issue Date effect a subdivision of the outstanding Common Stock, the Applicable Preferred Stock Conversion Price in effect immediately before that subdivision shall be proportionately decreased so that the number of shares of Common Stock issuable on conversion of each share of such series shall be increased in proportion to such increase in the aggregate number of shares of Common Stock outstanding. If the Corporation shall at any time or from time to time after the Series C Original Issue Date combine the outstanding shares of Common Stock, the Applicable Preferred Stock Conversion Price in effect immediately before the combination shall be proportionately increased so that the number of shares of Common Stock issuable on conversion of each share of such series shall be decreased in proportion to such decrease in the aggregate number of shares of Common Stock outstanding. Any adjustment under this subsection shall become effective at the close of business on the date the subdivision or combination becomes effective.

4.6 Adjustment for Certain Dividends and Distributions. In the event the Corporation at any time or from time to time after the Series C Original Issue Date shall make or issue, or fix a record date for the determination of holders of Common Stock entitled to receive, a dividend or other distribution payable on the Common Stock in additional shares of Common Stock, then and in each such event the Applicable Preferred Stock Conversion Price in effect immediately before such event shall be decreased as of the time of such issuance or, in the event such a record date shall have been fixed, as of the close of business on such record date, by multiplying the Applicable Preferred Stock Conversion Price then in effect by a fraction:

(1) the numerator of which shall be the total number of shares of Common Stock issued and outstanding immediately prior to the time of such issuance or the close of business on such record date, and

(2) the denominator of which shall be the total number of shares of Common Stock issued and outstanding immediately prior to the time of such issuance or the close of business on such record date plus the number of shares of Common Stock issuable in payment of such dividend or distribution.

Notwithstanding the foregoing (a) if such record date shall have been fixed and such dividend is not fully paid or if such distribution is not fully made on the date fixed therefor, the Applicable Preferred Stock Conversion Price shall be recomputed accordingly as of the close of business on such record date and thereafter the Applicable Preferred Stock Conversion Price shall be adjusted pursuant to this subsection as of the time of actual payment of such dividends or distributions; and (b) that no such adjustment shall be made if the holders of Preferred Stock simultaneously receive a dividend or other distribution of shares of Common Stock in a number equal to the number of shares of Common Stock as they would have received if all outstanding shares of Preferred Stock had been converted into Common Stock on the date of such event.

4.7 Adjustments for Other Dividends and Distributions. In the event the Corporation at any time or from time to time after the Series C Original Issue Date shall make or issue, or fix a record date for the determination of holders of Common Stock entitled to receive, a dividend or other distribution payable in securities of the Corporation (other than a distribution of shares of Common Stock in respect of outstanding shares of Common Stock) or in other property and the provisions of Section 1 do not apply to such dividend or distribution, then and in each such event the holders of Preferred Stock shall receive, simultaneously with the distribution to the holders of Common Stock, a dividend or other distribution of such securities or other property in an amount equal to the amount of such securities or other property as they would have received if all outstanding shares of Preferred Stock had been converted into Common Stock on the date of such event.

4.8 Adjustment for Merger or Reorganization, etc. Subject to the provisions of Subsection 2.3, if there shall occur any reorganization, recapitalization, reclassification, consolidation or merger involving the Corporation (other than a Deemed Liquidation Even under Subsection 2.3) in which the Common Stock (but not the Preferred Stock) is converted into or exchanged for securities, cash or other property (other than a transaction covered by Subsections 4.4, 4.6 or 4.7), then, following any such reorganization, recapitalization, reclassification, consolidation or merger, each share of Preferred Stock shall thereafter be convertible in lieu of the Common Stock into which it was convertible prior to such event into the kind and amount of securities, cash or other property which a holder of the number of shares of Common Stock of the Corporation issuable upon conversion of one share of Preferred Stock immediately prior to such reorganization, recapitalization, reclassification, consolidation or merger would have been entitled to receive pursuant to such transaction; and, in such case, appropriate adjustment (as determined in good faith by the Board of Directors) shall be made in the application of the provisions in this Section 4 with respect to the rights and interests thereafter of the holders of the Preferred Stock, to the end that the provisions set forth in this Section 4 (including provisions with respect to changes in and other adjustments of the Applicable Preferred Stock Conversion Price) shall thereafter be applicable, as nearly as reasonably may be, in relation to any securities or other property thereafter deliverable upon the conversion of the Preferred Stock.

4.9 Certificate as to Adjustments. Upon the occurrence of each adjustment or readjustment of the Applicable Preferred Stock Conversion Price pursuant to this Section 4, the Corporation at its expense shall, as promptly as reasonably practicable but in any event not later than thirty (30) days thereafter, compute such adjustment or readjustment in accordance with the terms hereof and furnish to each holder of Preferred Stock a certificate setting forth such adjustment or readjustment (including the kind and amount of securities, cash

or other property into which the Preferred Stock is convertible) and showing in detail the facts upon which such adjustment or readjustment is based. The Corporation shall, as promptly as reasonably practicable after the written request at any time of any holder of Preferred Stock (but in any event not later than thirty (30) days thereafter), furnish or cause to be furnished to such holder a certificate setting forth (i) the Applicable Preferred Stock Conversion Price then in effect for each series of Preferred Stock, and (ii) the number of shares of Common Stock and the amount, if any, of other securities, cash or property which then would be received upon the conversion of Preferred Stock.

4.10 Notice of Record Date. In the event:

(a) the Corporation shall take a record of the holders of its Common Stock (or other capital stock or securities at the time issuable upon conversion of the Preferred Stock) for the purpose of entitling or enabling them to receive any dividend or other distribution, or to receive any right to subscribe for or purchase any shares of capital stock of any class or any other securities, or to receive any other security; or

(b) of any capital reorganization of the Corporation, any reclassification of the Common Stock, or any Deemed Liquidation Event; or

(c) of the voluntary or involuntary dissolution, liquidation or winding-up of the Corporation,

then, and in each such case, the Corporation will send or cause to be sent to the holders of the Preferred Stock a notice specifying, as the case may be, (i) the record date for such dividend, distribution or right, and the amount and character of such dividend, distribution or right, or (ii) the effective date on which such reorganization, reclassification, consolidation, merger, transfer, dissolution, liquidation or winding-up is proposed to take place, and the time, if any is to be fixed, as of which the holders of record of Common Stock (or such other capital stock or securities at the time issuable upon the conversion of the Preferred Stock) shall be entitled to exchange their shares of Common Stock (or such other capital stock or securities) for securities or other property deliverable upon such reorganization, reclassification, consolidation, merger, transfer, dissolution, liquidation or winding-up, and the amount per share and character of such exchange applicable to each series of Preferred Stock and the Common Stock. Such notice shall be sent at least ten (10) days prior to the record date or effective date for the event specified in such notice.

5. Mandatory Conversion.

5.1 Trigger Events. Upon either (a) the closing of the sale of shares of Common Stock to the public in a firm-commitment underwritten public offering pursuant to an effective registration statement under the Securities Act of 1933, as amended, or a corresponding securities issuance application process in any non-U.S. jurisdiction covering the offer and of the Common Stock for the account of the Corporation, in which the proceeds to the Corporation are not less than \$50,000,000, net of the underwriting discount, commissions and expenses, and in connection with such offering the Common Stock is listed for trading on the Nasdaq Stock Market, the New York Stock Exchange or London Stock Exchange or (b) the date and time, or the occurrence of an event, specified by vote or written consent of the Requisite Holders (the

time of such closing or the date and time specified or the time of the event specified in such vote or written consent is referred to herein as the “**Mandatory Conversion Time**”), then (i) all outstanding shares of Preferred Stock, including accrued but unpaid, whether or not declared, Preferred Dividends together with any other declared but unpaid dividends on such Preferred Share, shall automatically be converted into shares of Common Stock, at the then effective conversion rate as calculated pursuant to Subsection 4.1.1. and (ii) such shares may not be reissued by the Corporation.

5.2 Procedural Requirements. All holders of record of shares of Preferred Stock shall be sent written notice of the Mandatory Conversion Time and the place designated for mandatory conversion of all such shares of Preferred Stock pursuant to this Section 5. Such notice need not be sent in advance of the occurrence of the Mandatory Conversion Time. Upon receipt of such notice, each holder of shares of Preferred Stock in certificated form shall surrender his, her or its certificate or certificates for all such shares (or, if such holder alleges that such certificate has been lost, stolen or destroyed, a lost certificate affidavit and agreement reasonably acceptable to the Corporation to indemnify the Corporation against any claim that may be made against the Corporation on account of the alleged loss, theft or destruction of such certificate) to the Corporation at the place designated in such notice. If so required by the Corporation, any certificates surrendered for conversion shall be endorsed or accompanied by written instrument or instruments of transfer, in form satisfactory to the Corporation, duly executed by the registered holder or by his, her or its attorney duly authorized in writing. All rights with respect to the Preferred Stock converted pursuant to Subsection 5.1, including the rights, if any, to receive notices and vote (other than as a holder of Common Stock), will terminate at the Mandatory Conversion Time (notwithstanding the failure of the holder or holders thereof to surrender any certificates at or prior to such time), except only the rights of the holders thereof, upon surrender of any certificate or certificates of such holders (or lost certificate affidavit and agreement) therefor, to receive the items provided for in the next sentence of this Subsection 5.2. As soon as practicable after the Mandatory Conversion Time and, if applicable, the surrender of any certificate or certificates (or lost certificate affidavit and agreement) for Preferred Stock, the Corporation shall (a) issue and deliver to such holder, or to his, her or its nominees, a certificate or certificates for the number of full shares of Common Stock issuable on such conversion in accordance with the provisions hereof and (b) pay cash as provided in Subsection 4.2 in lieu of any fraction of a share of Common Stock otherwise issuable upon such conversion. Such converted Preferred Stock shall be retired and cancelled and may not be reissued as shares of such series, and the Corporation may thereafter take such appropriate action (without the need for stockholder action) as may be necessary to reduce the authorized number of shares of Preferred Stock accordingly.

6. Redeemed or Otherwise Acquired Shares. Any shares of Preferred Stock that are redeemed or otherwise acquired by the Corporation or any of its subsidiaries shall be automatically and immediately cancelled and retired and shall not be reissued, sold or transferred. Neither the Corporation nor any of its subsidiaries may exercise any voting or other rights granted to the holders of Preferred Stock following redemption.

7. Waiver. Any of the rights, powers, preferences and other terms of the Preferred Stock set forth herein may be waived on behalf of all holders of Preferred Stock by the affirmative written consent or vote of the holders of at least two-thirds (2/3rds) of the shares of Preferred Stock then outstanding.

8. **Notices.** Any notice required or permitted by the provisions of this Article Fourth to be given to a holder of shares of Preferred Stock shall be mailed, postage prepaid, to the post office address last shown on the records of the Corporation, or given by electronic communication in compliance with the provisions of the General Corporation Law, and shall be deemed sent upon such mailing or electronic transmission.

FIFTH: Subject to any additional vote required by this Amended and Restated Certificate of Incorporation or Bylaws, in furtherance and not in limitation of the powers conferred by statute, the Board of Directors is expressly authorized to make, repeal, alter, amend and rescind any or all of the Bylaws of the Corporation.

SIXTH: Subject to any additional vote required by this Amended and Restated Certificate of Incorporation, the number of directors of the Corporation shall be determined in the manner set forth in the Bylaws of the Corporation.

SEVENTH: Elections of directors need not be by written ballot unless the Bylaws of the Corporation shall so provide.

EIGHTH: Meetings of stockholders may be held within or without the State of Delaware, as the Bylaws of the Corporation may provide. The books of the Corporation may be kept outside the State of Delaware at such place or places as may be designated from time to time by the Board of Directors or in the Bylaws of the Corporation.

NINTH: To the fullest extent permitted by law, a director of the Corporation shall not be personally liable to the Corporation or its stockholders for monetary damages for breach of fiduciary duty as a director. If the General Corporation Law or any other law of the State of Delaware is amended after approval by the stockholders of this Article Ninth to authorize corporate action further eliminating or limiting the personal liability of directors, then the liability of a director of the Corporation shall be eliminated or limited to the fullest extent permitted by the General Corporation Law as so amended.

Any repeal or modification of the foregoing provisions of this Article Ninth by the stockholders of the Corporation shall not adversely affect any right or protection of a director of the Corporation existing at the time of, or increase the liability of any director of the Corporation with respect to any acts or omissions of such director occurring prior to, such repeal or modification.

TENTH: To the fullest extent permitted by applicable law, the Corporation is authorized to provide indemnification of (and advancement of expenses to) directors, officers and agents of the Corporation (and any other persons to which General Corporation Law permits the Corporation to provide indemnification) through Bylaw provisions, agreements with such agents or other persons, vote of stockholders or disinterested directors or otherwise, in excess of the indemnification and advancement otherwise permitted by Section 145 of the General Corporation Law.

Any amendment, repeal or modification of the foregoing provisions of this Article Tenth shall not (a) adversely affect any right or protection of any director, officer or other agent of the Corporation existing at the time of such amendment, repeal or modification or (b) increase the liability of any director of the Corporation with respect to any acts or omissions of such director, officer or agent occurring prior to, such amendment, repeal or modification.

The Board of Directors may, to the full extent permitted by applicable law as it presently exists, or may hereafter be amended from time to time, authorize an appropriate officer or officers to purchase and maintain at the Corporation's expense insurance: (a) to indemnify the Corporation for any obligation which it incurs as a result of the indemnification of directors, officers and employees under the provisions of this Article Tenth; and (b) to indemnify or insure directors, officers and employees against liability in instances in which they may not otherwise be indemnified by the Corporation under the provisions of this Article Tenth.

ELEVENTH: The Corporation renounces, to the fullest extent permitted by law, any interest or expectancy of the Corporation in, or in being offered an opportunity to participate in, any Excluded Opportunity. An “**Excluded Opportunity**” is any matter, transaction or interest that is presented to, or acquired, created or developed by, or which otherwise comes into the possession of (i) any director of the Corporation who is not an employee of the Corporation or any of its subsidiaries, or (ii) any holder of Preferred Stock or any partner, member, director, stockholder, employee or agent of any such holder, other than someone who is an employee of the Corporation or any of its subsidiaries (collectively, the persons referred to in clauses (i) and (ii) are “**Covered Persons**”), unless such matter, transaction or interest is presented to, or acquired, created or developed by, or otherwise comes into the possession of, a Covered Person expressly and solely in such Covered Person's capacity as a director of the Corporation while such Covered Person is performing services in such capacity.

TWELFTH: Unless the Corporation consents in writing to the selection of an alternative forum, the Court of Chancery in the State of Delaware shall be the sole and exclusive forum for any stockholder (including a beneficial owner) to bring (i) any derivative action or proceeding brought on behalf of the Corporation, (ii) any action asserting a claim of breach of fiduciary duty owed by any director, officer or other employee of the Corporation to the Corporation or the Corporation's stockholders, (iii) any action asserting a claim against the Corporation, its directors, officers or employees arising pursuant to any provision of the Delaware General Corporation Law or the Corporation's certificate of incorporation or bylaws or (iv) any action asserting a claim against the Corporation, its directors, officers or employees governed by the internal affairs doctrine, except for, as to each of clauses (i) through (iv) above, any claim as to which the Court of Chancery determines that there is an indispensable party not subject to the jurisdiction of the Court of Chancery (and the indispensable party does not consent to the personal jurisdiction of the Court of Chancery within ten (10) days following such determination), which is vested in the exclusive jurisdiction of a court or forum other than the Court of Chancery, or for which the Court of Chancery does not have subject matter jurisdiction. If any provision or provisions of this Article Twelfth shall be held to be invalid, illegal or unenforceable as applied to any person or entity or circumstance for any reason whatsoever, then, to the fullest extent permitted by law, the validity, legality and enforceability of such provisions in any other circumstance and of the remaining provisions of this Article Twelfth (including, without limitation, each portion of any sentence of this Article Twelfth containing any such provision held to be invalid, illegal or unenforceable that is not itself held to be invalid, illegal or unenforceable) and the application of such provision to other persons or entities and circumstances shall not in any way be affected or impaired thereby.

THIRTEENTH: For purposes of Section 500 of the California Corporations Code (to the extent applicable), in connection with any repurchase of shares of Common Stock permitted under this Amended and Restated Certificate of Incorporation from employees, officers, directors or consultants of the Corporation in connection with a termination of employment or services pursuant to agreements or arrangements approved by the Board of Directors (in addition to any other consent required under this Amended and Restated Certificate of Incorporation), such repurchase may be made without regard to any “preferential dividends arrears amount” or “preferential rights amount” (as those terms are defined in Section 500 of the California Corporations Code). Accordingly, for purposes of making any calculation under California Corporations Code Section 500 in connection with such repurchase, the amount of any “preferential dividends arrears amount” or “preferential rights amount” (as those terms are defined therein) shall be deemed to be zero (0).

* * *

3. That the foregoing amendment and restatement was approved by the holders of the requisite number of shares of this corporation in accordance with Section 228 of the General Corporation Law.

4. That this Certificate of Incorporation, which restates and integrates and further amends the provisions of this Corporation’s Certificate of Incorporation, has been duly adopted in accordance with Sections 242 and 245 of the General Corporation Law.

IN WITNESS WHEREOF, this Amended and Restated Certificate of Incorporation has been executed by a duly authorized officer of this corporation on this 1st day of April, 2020.

By: /s/ Jaume Pons

Jaume Pons

Chief Executive Officer and President

**BYLAWS OF
ALX ONCOLOGY HOLDINGS INC.**

Adopted as of April 1, 2020

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BYLAWS

ARTICLE I — MEETINGS OF STOCKHOLDERS

1.1 **Place of Meetings** Meetings of stockholders of ALX Oncology Holdings Inc. (the “**Company**”) shall be held at any place, within or outside the State of Delaware, determined by the Company’s board of directors (the “**Board**”). The Board may, in its sole discretion, determine that a meeting of stockholders shall not be held at any place, but may instead be held solely by means of remote communication as authorized by Section 211(a)(2) of the Delaware General Corporation Law (the “**DGCL**”). In the absence of any such designation or determination, stockholders’ meetings shall be held at the Company’s principal executive office. The Board may cancel, postpone, or reschedule any previously scheduled meeting of stockholders at any time, before or after the notice for such meeting has been given to the stockholders.

1.2 **Annual Meeting** Unless directors are elected by written consent in lieu of an annual meeting as permitted by Section 211(b) of the DGCL, an annual meeting of stockholders shall be held for the election of directors at such date and time as may be designated by resolution of the Board from time to time. Stockholders may, unless the certificate of incorporation otherwise provides, act by written consent to elect directors; *provided, however*, that, if such consent is less than unanimous, such action by written consent may be in lieu of holding an annual meeting only if all of the directorships to which directors could be elected at an annual meeting held at the effective time of such action are vacant and are filled by such action. Any other proper business may be transacted at the annual meeting.

1.3 **Special Meeting** A special meeting of the stockholders may be called at any time by the Board, Chairperson of the Board, Chief Executive Officer or President (in the absence of a Chief Executive Officer).

If a special meeting of the stockholders has been called, the Company shall cause notice to be given to the stockholders entitled to vote at such meeting, in accordance with these bylaws, that a meeting will be held at the time requested by the person or persons calling the meeting. No business may be transacted at such special meeting other than the business specified in such notice to stockholders. Nothing contained in this paragraph of this **section 1.3** shall be construed as limiting, fixing, or affecting the time when a meeting of stockholders called by action of the Board may be held or the business that may be transacted at such meeting.

1.4 **Notice of Stockholders’ Meetings** Whenever stockholders are required or permitted to take any action at a meeting, a notice of the meeting in the form of a writing or electronic transmission (as defined in **section 7.1** of these bylaws) shall be given which shall state the place, if any, date and hour of the meeting, the means of remote communications, if any, by which stockholders and proxy holders may be deemed to be present in person and vote at such meeting, the record date for determining the stockholders entitled to vote at the meeting, if such date is different from the record date for determining stockholders entitled to notice of the meeting, and, in the case of a special meeting, the purpose or purposes for which the meeting is called. Except as otherwise provided in the DGCL, the certificate of incorporation or these bylaws, the notice of any meeting of stockholders shall be given not less than 10 nor more than 60 days before the date of the meeting to each stockholder entitled to vote at such meeting as of the record date for determining the stockholders entitled to notice of the meeting.

1.5 Quorum Except as otherwise provided by law, the certificate of incorporation or these bylaws, at each meeting of stockholders the presence in person or by proxy of the holders of shares of stock having a majority of the votes which could be cast by the holders of all outstanding shares of stock entitled to vote at the meeting shall be necessary and sufficient to constitute a quorum. Where a separate vote by a class or series or classes or series is required, a majority of the outstanding shares of such class or series or classes or series, present in person or represented by proxy, shall constitute a quorum entitled to take action with respect to that vote on that matter, except as otherwise provided by law, the certificate of incorporation or these bylaws.

If, however, such quorum is not present or represented at any meeting of the stockholders, then either (i) the chairperson of the meeting, or (ii) the stockholders entitled to vote at the meeting, present in person or represented by proxy, shall have the power to adjourn the meeting from time to time, in the manner provided in **section 1.6** of these bylaws, until a quorum is present or represented.

1.6 Adjourned Meeting; Notice Any meeting of stockholders, annual or special, may adjourn from time to time to reconvene at the same or some other place, and notice need not be given of the adjourned meeting if the time, place, if any, thereof, and the means of remote communications, if any, by which stockholders and proxy holders may be deemed to be present in person and vote at such adjourned meeting are announced at the meeting at which the adjournment is taken. At the adjourned meeting, the Company may transact any business which might have been transacted at the original meeting. If the adjournment is for more than 30 days, a notice of the adjourned meeting shall be given to each stockholder of record entitled to vote at the meeting. If after the adjournment a new record date for stockholders entitled to vote is fixed for the adjourned meeting, the Board shall fix a new record date for notice of such adjourned meeting in accordance with Section 213(a) of the DGCL and **section 1.10** of these bylaws, and shall give notice of the adjourned meeting to each stockholder of record entitled to vote at such adjourned meeting as of the record date fixed for notice of such adjourned meeting.

1.7 Conduct of Business Meetings of stockholders shall be presided over by the Chairperson of the Board, if any, or in his or her absence by the Vice Chairperson of the Board, if any, or in the absence of the foregoing persons by the Chief Executive Officer, or in the absence of the foregoing persons by the President, or in the absence of the foregoing persons by a Vice President, or in the absence of the foregoing persons by a chairperson designated by the Board, or in the absence of such designation by a chairperson chosen at the meeting. The Secretary shall act as secretary of the meeting, but in his or her absence the chairperson of the meeting may appoint any person to act as secretary of the meeting. The chairperson of any meeting of stockholders shall determine the order of business and the procedure at the meeting, including such regulation of the manner of voting and the conduct of business, and shall have the power to adjourn the meeting to another place, if any, date or time, whether or not a quorum is present.

1.8 Voting The stockholders entitled to vote at any meeting of stockholders shall be determined in accordance with the provisions of **section 1.10** of these bylaws, subject to Section 217 (relating to voting rights of fiduciaries, pledgors and joint owners of stock) and Section 218 (relating to voting trusts and other voting agreements) of the DGCL.

Except as may be otherwise provided in the certificate of incorporation, each stockholder entitled to vote at any meeting of stockholders shall be entitled to one vote for each share of capital stock held by such stockholder as of the applicable record date which has voting power upon the matter in question. Voting at meetings of stockholders need not be by written ballot and, unless otherwise required by law, need not be conducted by inspectors of election unless so determined by the holders of shares of stock having a majority of the votes which could be cast by the holders of all outstanding shares of stock entitled to vote thereon which are present in person or by proxy at such meeting. If authorized by the Board, such

requirement of a written ballot shall be satisfied by a ballot submitted by electronic transmission, *provided* that any such electronic transmission must either set forth or be submitted with information from which it can be determined that the electronic transmission was authorized by the stockholder or proxy holder.

Except as otherwise required by law, the certificate of incorporation or these bylaws, in all matters other than the election of directors, the affirmative vote of a majority of the voting power of the shares present in person or represented by proxy at the meeting and entitled to vote on the subject matter shall be the act of the stockholders. Except as otherwise required by law, the certificate of incorporation or these bylaws, directors shall be elected by a plurality of the voting power of the shares present in person or represented by proxy at the meeting and entitled to vote on the election of directors. Where a separate vote by a class or series or classes or series is required, in all matters other than the election of directors, the affirmative vote of the majority of shares of such class or series or classes or series present in person or represented by proxy at the meeting shall be the act of such class or series or classes or series, except as otherwise provided by law, the certificate of incorporation or these bylaws.

1.9 Stockholder Action by Written Consent Without a Meeting Unless otherwise provided in the certificate of incorporation, any action required by the DGCL to be taken at any annual or special meeting of stockholders of a corporation, or any action which may be taken at any annual or special meeting of such stockholders, may be taken without a meeting, without prior notice and without a vote, if a consent or consents in writing, setting forth the action so taken, shall be signed by the holders of outstanding stock having not less than the minimum number of votes that would be necessary to authorize or take such action at a meeting at which all shares entitled to vote thereon were present and voted.

No written consent shall be effective to take the corporate action referred to therein unless written consents signed by a sufficient number of holders to take action are delivered to the Company in the manner required by Section 228 of the DGCL within 60 days of the first date on which a written consent is so delivered to the Company. Any person executing a consent may provide, whether through instruction to an agent or otherwise, that such a consent will be effective at a future time (including a time determined upon the happening of an event), no later than 60 days after such instruction is given or such provision is made, if evidence of such instruction or provision is provided to the Company. Unless otherwise provided, any such consent shall be revocable prior to its becoming effective.

An electronic transmission consenting to an action to be taken and transmitted by a stockholder or proxy holder, or by a person or persons authorized to act for a stockholder or proxy holder, shall be deemed to be written and signed for purposes of this **section 1.9**, *provided* that any such electronic transmission sets forth or is delivered with information from which the Company can determine (i) that the electronic transmission was transmitted by the stockholder or proxy holder or by a person or persons authorized to act for the stockholder or proxy holder and (ii) the date on which such stockholder or proxy holder or authorized person or persons transmitted such electronic transmission.

A consent given by electronic transmission is delivered to the Company upon the earliest of (i) when the consent enters an information processing system, if any, designated by the Company for receiving consents, so long as the electronic transmission is in a form capable of being processed by that system and the Company is able to retrieve that electronic transmission; (ii) when a paper reproduction of the consent is delivered to the Company's principal place of business or an officer or agent of the Company having custody of the book in which proceedings of meetings of stockholders are recorded; (iii) when a paper reproduction of the consent is delivered to the Company's registered office in the State of Delaware by hand or by certified or registered mail, return receipt requested; or (iv) when delivered in such other manner, if any, provided by resolution of the Board. A consent given by electronic transmission is delivered under this **section 1.9** even if no person is aware of its receipt. Receipt of an electronic acknowledgement from an information processing system establishes that a consent given by electronic transmission was received but, by itself, does not establish that the content sent corresponds to the content received.

In the event that the Board shall have instructed the officers of the Company to solicit the vote or written consent of the stockholders of the Company, an electronic transmission of a stockholder written consent given pursuant to such solicitation, to be effective, must be delivered by electronic mail (as defined in **section 7.1** of these bylaws) or facsimile telecommunications to the Secretary or the President of the Company or to a person designated by the Company for receiving such consent, or delivered to an information processing system designated by the Company for receiving such consent.

Prompt notice of the taking of the corporate action without a meeting by less than unanimous written consent shall be given to those stockholders who have not consented in writing and who, if the action had been taken at a meeting, would have been entitled to notice of the meeting if the record date for notice of such meeting had been the date that written consents signed by a sufficient number of holders to take the action were delivered to the Company as provided in Section 228 of the DGCL. In the event that the action which is consented to is such as would have required the filing of a certificate under any provision of the DGCL, if such action had been voted on by stockholders at a meeting thereof, the certificate filed under such provision shall state, in lieu of any statement required by such provision concerning any vote of stockholders, that written consent has been given in accordance with Section 228 of the DGCL.

1.10 Record Dates In order that the Company may determine the stockholders entitled to notice of any meeting of stockholders or any adjournment thereof, the Board may fix a record date, which record date shall not precede the date upon which the resolution fixing the record date is adopted by the Board and which record date shall not be more than 60 nor less than 10 days before the date of such meeting. If the Board so fixes a date, such date shall also be the record date for determining the stockholders entitled to vote at such meeting unless the Board determines, at the time it fixes such record date, that a later date on or before the date of the meeting shall be the date for making such determination.

If no record date is fixed by the Board, the record date for determining stockholders entitled to notice of and to vote at a meeting of stockholders shall be at the close of business on the day next preceding the day on which notice is given, or, if notice is waived, at the close of business on the day next preceding the day on which the meeting is held.

A determination of stockholders of record entitled to notice of or to vote at a meeting of stockholders shall apply to any adjournment of the meeting; *provided, however*, that the Board may fix a new record date for determination of stockholders entitled to vote at the adjourned meeting, and in such case shall also fix as the record date for stockholders entitled to notice of such adjourned meeting the same or an earlier date as that fixed for determination of stockholders entitled to vote in accordance with the provisions of Section 213 of the DGCL and this **section 1.10** at the adjourned meeting.

In order that the Company may determine the stockholders entitled to consent to corporate action in writing without a meeting, the Board may fix a record date, which record date shall not precede the date upon which the resolution fixing the record date is adopted by the Board, and which date shall not be more than 10 days after the date upon which the resolution fixing the record date is adopted by the Board. If no record date has been fixed by the Board, the record date for determining stockholders entitled to consent to corporate action in writing without a meeting, when no prior action by the Board is required by law, shall be the first date on which a signed written consent setting forth the action taken or proposed to be taken is delivered to the Company in accordance with applicable law. If no record date has been fixed by the Board and prior action by the Board is required by law, the record date for determining stockholders entitled to consent to corporate action in writing without a meeting shall be at the close of business on the day on which the Board adopts the resolution taking such prior action.

In order that the Company may determine the stockholders entitled to receive payment of any dividend or other distribution or allotment of any rights or the stockholders entitled to exercise any rights in respect of any change, conversion or exchange of stock, or for the purpose of any other lawful action, the Board may fix a record date, which record date shall not precede the date upon which the resolution fixing the record date is adopted, and which record date shall be not more than 60 days prior to such action. If no record date is fixed, the record date for determining stockholders for any such purpose shall be at the close of business on the day on which the Board adopts the resolution relating thereto.

1.11 **Proxies** Each stockholder entitled to vote at a meeting of stockholders or to express consent or dissent to corporate action in writing without a meeting may authorize another person or persons to act for such stockholder by proxy authorized by a document (as defined in **section 7.1** of these bylaws) or by an electronic transmission permitted by law filed in accordance with the procedure established for the meeting, but no such proxy shall be voted or acted upon after three years from its date, unless the proxy provides for a longer period. The revocability of a proxy that states on its face that it is irrevocable shall be governed by the provisions of Section 212 of the DGCL.

1.12 **List of Stockholders Entitled to Vote** The Company shall prepare, at least ten days before every meeting of stockholders, a complete list of the stockholders entitled to vote at the meeting; *provided, however*, if the record date for determining the stockholders entitled to vote is less than 10 days before the meeting date, the list shall reflect the stockholders entitled to vote as of the tenth day before the meeting date, arranged in alphabetical order, and showing the address of each stockholder and the number of shares registered in the name of each stockholder. The Company shall not be required to include electronic mail addresses or other electronic contact information on such list. Such list shall be open to the examination of any stockholder for any purpose germane to the meeting for a period of at least ten days prior to the meeting: (i) on a reasonably accessible electronic network, *provided* that the information required to gain access to such list is provided with the notice of the meeting, or (ii) during ordinary business hours, at the Company's principal place of business. In the event that the Company determines to make the list available on an electronic network, the Company may take reasonable steps to ensure that such information is available only to stockholders of the Company. If the meeting is to be held at a place, then a list of stockholders entitled to vote at the meeting shall be produced and kept at the time and place of the meeting during the whole time thereof, and may be examined by any stockholder who is present. If the meeting is to be held solely by means of remote communication, then such list shall also be open to the examination of any stockholder during the whole time of the meeting on a reasonably accessible electronic network, and the information required to access such list shall be provided with the notice of the meeting.

ARTICLE II — DIRECTORS

2.1 **Powers** The business and affairs of the Company shall be managed by or under the direction of the Board, except as may be otherwise provided in the DGCL or the certificate of incorporation.

2.2 **Number of Directors** The Board shall consist of one or more members, each of whom shall be a natural person. Unless the certificate of incorporation fixes the number of directors, the number of directors shall be determined from time to time by resolution of the Board. No reduction of the authorized number of directors shall have the effect of removing any director before that director's term of office expires.

2.3 Election, Qualification and Term of Office of Directors Except as provided in **section 2.4** of these bylaws, and subject to **sections 1.2** and **1.9** of these bylaws, directors shall be elected at each annual meeting of stockholders. Directors need not be stockholders unless so required by the certificate of incorporation or these bylaws. The certificate of incorporation or these bylaws may prescribe other qualifications for directors. Each director shall hold office until such director's successor is elected and qualified or until such director's earlier death, resignation or removal.

2.4 Resignation and Vacancies Any director may resign at any time upon notice given in writing or by electronic transmission to the Company. A resignation is effective when the resignation is delivered unless the resignation specifies a later effective date or an effective date determined upon the happening of an event or events. A resignation which is conditioned upon the director failing to receive a specified vote for reelection as a director may provide that it is irrevocable. Unless otherwise provided in the certificate of incorporation or these bylaws, when one or more directors resign from the Board, effective at a future date, a majority of the directors then in office, including those who have so resigned, shall have power to fill such vacancy or vacancies, the vote thereon to take effect when such resignation or resignations shall become effective.

Unless otherwise provided in the certificate of incorporation or these bylaws:

(i) Vacancies and newly created directorships resulting from any increase in the authorized number of directors elected by all of the stockholders having the right to vote as a single class may be filled by a majority of the directors then in office, although less than a quorum, or by a sole remaining director.

(ii) Whenever the holders of any class or classes of stock or series thereof are entitled to elect one or more directors by the provisions of the certificate of incorporation, vacancies and newly created directorships of such class or classes or series may be filled by a majority of the directors elected by such class or classes or series thereof then in office, or by a sole remaining director so elected.

If at any time, by reason of death or resignation or other cause, the Company should have no directors in office, then any officer or any stockholder or an executor, administrator, trustee or guardian of a stockholder, or other fiduciary entrusted with like responsibility for the person or estate of a stockholder, may call a special meeting of stockholders in accordance with the provisions of the certificate of incorporation or these bylaws, or may apply to the Court of Chancery for a decree summarily ordering an election as provided in Section 211 of the DGCL.

If, at the time of filling any vacancy or any newly created directorship, the directors then in office constitute less than a majority of the whole Board (as constituted immediately prior to any such increase), the Court of Chancery may, upon application of any stockholder or stockholders holding at least 10% of the voting stock at the time outstanding having the right to vote for such directors, summarily order an election to be held to fill any such vacancies or newly created directorships, or to replace the directors chosen by the directors then in office as aforesaid, which election shall be governed by the provisions of Section 211 of the DGCL as far as applicable.

A director elected to fill a vacancy shall be elected for the unexpired term of his or her predecessor in office and until such director's successor is elected and qualified, or until such director's earlier death, resignation or removal.

2.5 Place of Meetings; Meetings by Telephone The Board may hold meetings, both regular and special, either within or outside the State of Delaware.

Unless otherwise restricted by the certificate of incorporation or these bylaws, members of the Board, or any committee designated by the Board or any subcommittee, may participate in a meeting of the Board, or any such committee or subcommittee, by means of conference telephone or other communications equipment by means of which all persons participating in the meeting can hear each other, and such participation in a meeting shall constitute presence in person at the meeting.

2.6 Conduct of Business Meetings Meetings of the Board shall be presided over by the Chairperson of the Board, if any, or in his or her absence by the Vice Chairperson of the Board, if any, or in the absence of the foregoing persons by a chairperson designated by the Board, or in the absence of such designation by a chairperson chosen at the meeting. The Secretary shall act as secretary of the meeting, but in his or her absence the chairperson of the meeting may appoint any person to act as secretary of the meeting.

2.7 Regular Meetings Regular meetings of the Board may be held without notice at such time and at such place as shall from time to time be determined by the Board.

2.8 Special Meetings; Notice Special meetings of the Board for any purpose or purposes may be called at any time by the Chairperson of the Board, the Chief Executive Officer, the President, the Secretary or any two directors.

Notice of the time and place of special meetings shall be:

- (i) delivered personally by hand, by courier or by telephone;
- (ii) sent by United States first-class mail, postage prepaid; or
- (iii) given by electronic transmission,

directed to each director at that director's address or telephone number, or by means of electronic transmission, as the case may be, as shown on the Company's records.

If the notice is delivered personally by hand, by courier, or by telephone, or given by means of electronic transmission, it shall be delivered, sent or otherwise directed to each director, as applicable, at least 24 hours before the time of the holding of the meeting. If the notice is sent by United States mail, it shall be deposited in the United States mail at least four days before the time of the holding of the meeting. Any oral notice may be communicated to the director. The notice need not specify the place of the meeting (if the meeting is to be held at the Company's principal executive office) nor the purpose of the meeting, to the fullest extent permitted by applicable law.

2.9 Quorum; Voting At all meetings of the Board, a majority of the total authorized number of directors shall constitute a quorum for the transaction of business. If a quorum is not present at any meeting of the Board, then the directors present thereat may adjourn the meeting from time to time, without notice other than announcement at the meeting, until a quorum is present.

The vote of a majority of the directors present at any meeting at which a quorum is present shall be the act of the Board, except as may be otherwise specifically provided by statute, the certificate of incorporation or these bylaws.

If the certificate of incorporation provides that one or more directors shall have more or less than one vote per director on any matter, every reference in these bylaws to a majority or other proportion of the directors shall refer to a majority or other proportion of the votes of the directors.

2.10 Board Action by Written Consent Without a Meeting Unless otherwise restricted by the certificate of incorporation or these bylaws, any action required or permitted to be taken at any meeting of the Board, or of any committee or subcommittee thereof, may be taken without a meeting if all members of the Board or committee or subcommittee, as the case may be, consent thereto in writing or by electronic transmission. Any person (whether or not then a director) may provide, whether through instruction to an agent or otherwise, that a consent to action will be effective at a future time (including a time determined upon the happening of an event), no later than 60 days after such instruction is given or such provision is made and such consent shall be deemed to have been given for purposes of this **section 2.10** at such effective time so long as such person is then a director and did not revoke the consent prior to such time. Any such consent shall be revocable prior to its becoming effective. After an action is taken, the consent or consents relating thereto shall be filed with the minutes of the proceedings of the Board, or the committee or subcommittee thereof, in the same paper or electronic form as the minutes are maintained.

2.11 Fees and Compensation of Directors Unless otherwise restricted by the certificate of incorporation or these bylaws, the Board shall have the authority to fix the compensation of directors.

2.12 Removal of Directors Unless otherwise restricted by statute, the certificate of incorporation or these bylaws, any director or the entire Board may be removed, with or without cause, by the holders of a majority of the shares then entitled to vote at an election of directors.

No reduction of the authorized number of directors shall have the effect of removing any director prior to the expiration of such director's term of office.

ARTICLE III — COMMITTEES

3.1 Committees of Directors The Board may designate one or more committees, each committee to consist of one or more of the directors of the Company. The Board may designate one or more directors as alternate members of any committee, who may replace any absent or disqualified member at any meeting of the committee. In the absence or disqualification of a member of a committee, the member or members thereof present at any meeting and not disqualified from voting, whether or not such member or members constitute a quorum, may unanimously appoint another member of the Board to act at the meeting in the place of any such absent or disqualified member. Any such committee, to the extent provided in the resolution of the Board or in these bylaws, shall have and may exercise all the powers and authority of the Board in the management of the business and affairs of the Company, and may authorize the seal of the Company to be affixed to all papers that may require it; but no such committee shall have the power or authority to (i) approve or adopt, or recommend to the stockholders, any action or matter (other than the election or removal of directors) expressly required by the DGCL to be submitted to stockholders for approval or (ii) adopt, amend or repeal any bylaw of the Company.

3.2 Committee Minutes Each committee and subcommittee shall keep regular minutes of its meetings and report the same to the Board, or the committee, when required.

3.3 Meetings and Actions of Committees A majority of the directors then serving on a committee or subcommittee shall constitute a quorum for the transaction of business by the committee or subcommittee, unless the certificate of incorporation, these bylaws, a resolution of the Board or a resolution of a committee that created the subcommittee requires a greater or lesser number, *provided* that in no case shall a quorum be less than 1/3 of the directors then serving on the committee or subcommittee. The vote of the majority of the members of a committee or subcommittee present at a meeting at which a quorum is present shall be the act of the committee or subcommittee, unless the certificate of incorporation, these bylaws, a resolution of the Board or a resolution of a committee that created the subcommittee requires a greater number. Meetings and actions of committees and subcommittees shall otherwise be governed by, and held and taken in accordance with, the provisions of:

- (i) **section 2.5** (Place of Meetings; Meetings by Telephone);

(ii) **section 2.7** (Regular Meetings);

(iii) **section 2.8** (Special Meetings; Notice);

(iv) **section 2.9** (Quorum; Voting);

(v) **section 2.10** (Board Action by Written Consent Without a Meeting); and

(vi) **section 7.4** (Waiver of Notice)

with such changes in the context of those bylaws as are necessary to substitute the committee or subcommittee and its members for the Board and its members. *However:*

(i) the time and place of regular meetings of committees and subcommittees may be determined either by resolution of the Board or by resolution of the committee or subcommittee;

(ii) special meetings of committees and subcommittees may also be called by resolution of the Board or the committee or subcommittee; and

(iii) notice of special meetings of committees and subcommittees shall also be given to all alternate members, as applicable, who shall have the right to attend all meetings of the committee or subcommittee. The Board, or, in the absence of any such action by the Board, the committee or subcommittee, may adopt rules for the government of any committee or subcommittee not inconsistent with the provisions of these bylaws.

Any provision in the certificate of incorporation providing that one or more directors shall have more or less than one vote per director on any matter shall apply to voting in any committee or subcommittee, unless otherwise provided in the certificate of incorporation or these bylaws.

3.4 Subcommittees Unless otherwise provided in the certificate of incorporation, these bylaws or the resolutions of the Board designating the committee, a committee may create one or more subcommittees, each subcommittee to consist of one or more members of the committee, and delegate to a subcommittee any or all of the powers and authority of the committee.

ARTICLE IV — OFFICERS

4.1 Officers The officers of the Company shall be a President and a Secretary. The Company may also have, at the discretion of the Board, a Chairperson of the Board, a Vice Chairperson of the Board, a Chief Executive Officer, one or more Vice Presidents, a Chief Financial Officer, a Treasurer, one or more Assistant Treasurers, one or more Assistant Secretaries and any such other officers as may be appointed in accordance with the provisions of these bylaws. Any number of offices may be held by the same person.

4.2 Appointment of Officers The Board shall appoint the officers of the Company, except such officers as may be appointed in accordance with the provisions of **section 4.3** of these bylaws.

4.3 Subordinate Officers The Board may appoint, or empower the Chief Executive Officer or, in the absence of a Chief Executive Officer, the President, to appoint, such other officers and agents as the business of the Company may require. Each of such officers and agents shall hold office for such period, have such authority and perform such duties as are provided in these bylaws or as the Board may from time to time determine.

4.4 Removal and Resignation of Officers Any officer may be removed, either with or without cause, by the Board or, for the avoidance of doubt, any duly authorized committee or subcommittee thereof or by any officer upon whom such power of removal has been conferred by the Board or, for the avoidance of doubt, any duly authorized committee or subcommittee thereof.

Any officer may resign at any time by giving written notice to the Company. Any resignation shall take effect at the date of the receipt of that notice or at any later time specified in that notice. Unless otherwise specified in the notice of resignation, the acceptance of the resignation shall not be necessary to make it effective. Any resignation is without prejudice to the rights, if any, of the Company under any contract to which the officer is a party.

4.5 Vacancies in Offices Any vacancy occurring in any office of the Company shall be filled by the Board or as provided in **section 4.3** of these bylaws.

4.6 Representation of Securities of Other Corporations or Entities Unless otherwise directed by the Board, the Chief Executive Officer or, in the absence of a Chief Executive Officer, the President or any other person authorized by the Board, the Chief Executive Officer or, in the absence of a Chief Executive Officer, the President is authorized to vote, represent and exercise on behalf of the Company all rights incident to any and all shares or other securities or interests in, or issued by, any other entity or entities, and all rights incident to any management authority conferred on the Company in accordance with the governing documents of any entity or entities, standing in the name of the Company, including the right to act by written consent in lieu of a meeting. The authority granted herein may be exercised either by such person directly or by any other person authorized to do so by proxy or power of attorney duly executed by such person having the authority.

4.7 Authority and Duties of Officers Except as otherwise provided in these bylaws, the officers of the Company shall have such powers and duties in the management of the Company as may be designated from time to time by the Board and, to the extent not so provided, as generally pertain to their respective offices, subject to the control of the Board.

ARTICLE V — INDEMNIFICATION

5.1 Indemnification of Directors and Officers in Third Party Proceedings Subject to the other provisions of this **Article V**, the Company shall indemnify, to the fullest extent permitted by the DGCL, as now or hereinafter in effect, any person who was or is a party or is threatened to be made a party to any threatened, pending or completed action, suit or proceeding, whether civil, criminal, administrative or investigative (a "**Proceeding**") (other than an action by or in the right of the Company) by reason of the fact that such person is or was a director or officer of the Company, or is or was a director or officer of the Company serving at the request of the Company as a director, officer, employee or agent of another corporation, partnership, joint venture, trust or other enterprise, against expenses (including attorneys' fees), judgments, fines and amounts paid in settlement actually and reasonably incurred by such person in connection with such Proceeding if such person acted in good faith and in a manner such person reasonably believed to be in or not opposed to the best interests of the Company, and, with respect to any criminal

action or proceeding, had no reasonable cause to believe such person's conduct was unlawful. The termination of any Proceeding by judgment, order, settlement, conviction, or upon a plea of *nolo contendere* or its equivalent, shall not, of itself, create a presumption that the person did not act in good faith and in a manner which such person reasonably believed to be in or not opposed to the best interests of the Company, and, with respect to any criminal action or proceeding, had reasonable cause to believe that such person's conduct was unlawful.

5.2 Indemnification of Directors and Officers in Actions by or in the Right of the Company Subject to the other provisions of this **Article V**, the Company shall indemnify, to the fullest extent permitted by the DGCL, as now or hereinafter in effect, any person who was or is a party or is threatened to be made a party to any threatened, pending or completed action or suit by or in the right of the Company to procure a judgment in its favor by reason of the fact that such person is or was a director or officer of the Company, or is or was a director or officer of the Company serving at the request of the Company as a director, officer, employee or agent of another corporation, partnership, joint venture, trust or other enterprise against expenses (including attorneys' fees) actually and reasonably incurred by such person in connection with the defense or settlement of such action or suit if such person acted in good faith and in a manner such person reasonably believed to be in or not opposed to the best interests of the Company; except that no indemnification shall be made in respect of any claim, issue or matter as to which such person shall have been adjudged to be liable to the Company unless and only to the extent that the Court of Chancery or the court in which such action or suit was brought shall determine upon application that, despite the adjudication of liability but in view of all the circumstances of the case, such person is fairly and reasonably entitled to indemnity for such expenses which the Court of Chancery or such other court shall deem proper.

5.3 Successful Defense To the extent that a present or former director or officer of the Company has been successful on the merits or otherwise in defense of any action, suit or proceeding described in **section 5.1** or **section 5.2** of these bylaws, or in defense of any claim, issue or matter therein, such person shall be indemnified against expenses (including attorneys' fees) actually and reasonably incurred by such person in connection therewith.

5.4 Indemnification of Others Subject to the other provisions of this **Article V**, the Company shall have power to indemnify its employees and agents to the extent not prohibited by the DGCL or other applicable law. The Board shall have the power to delegate to any person or persons identified in subsections (1) through (4) of Section 145(d) of the DGCL the determination of whether employees or agents shall be indemnified.

5.5 Advanced Payment of Expenses Expenses (including attorneys' fees) actually and reasonably incurred by an officer or director of the Company in defending any Proceeding shall be paid by the Company in advance of the final disposition of such Proceeding upon receipt of a written request therefor (together with documentation reasonably evidencing such expenses) and an undertaking by or on behalf of the person to repay such amounts if it shall ultimately be determined that the person is not entitled to be indemnified under this **Article V** or the DGCL. Such expenses (including attorneys' fees) actually and reasonably incurred by former directors and officers or other employees and agents of the Company or by persons serving at the request of the Company as directors, officers, employees or agents of another corporation, partnership, joint venture, trust or other enterprise may be so paid upon such terms and conditions, if any, as the Company deems appropriate. The right to advancement of expenses shall not apply to any Proceeding (or any part of any Proceeding) for which indemnity is excluded pursuant to these bylaws, but shall apply to any Proceeding (or any part of any Proceeding) referenced in **section 5.6(ii)** or **5.6(iii)** of these bylaws prior to a determination that the person is not entitled to be indemnified by the Company.

5.6 **Limitation on Indemnification** Subject to the requirements in **section 5.3** of these bylaws and the DGCL, the Company shall not be obligated to indemnify any person pursuant to this **Article V** in connection with any Proceeding (or any part of any Proceeding):

(i) for which payment has actually been made to or on behalf of such person under any statute, insurance policy, indemnity provision, vote or otherwise, except with respect to any excess beyond the amount paid;

(ii) for an accounting or disgorgement of profits pursuant to Section 16(b) of the Securities Exchange Act of 1934, as amended, or similar provisions of federal, state or local statutory law or common law, if such person is held liable therefor (including pursuant to any settlement arrangements);

(iii) for any reimbursement of the Company by such person of any bonus or other incentive-based or equity-based compensation or of any profits realized by such person from the sale of securities of the Company, as required in each case under the Securities Exchange Act of 1934, as amended (including any such reimbursements that arise from an accounting restatement of the Company pursuant to Section 304 of the Sarbanes-Oxley Act of 2002 (the “**Sarbanes-Oxley Act**”), or the payment to the Company of profits arising from the purchase and sale by such person of securities in violation of Section 306 of the Sarbanes-Oxley Act), if such person is held liable therefor (including pursuant to any settlement arrangements);

(iv) initiated by such person, including any Proceeding (or any part of any Proceeding) initiated by such person against the Company or its directors, officers, employees, agents or other indemnitees, unless (a) the Board authorized the Proceeding (or the relevant part of the Proceeding) prior to its initiation, (b) the Company provides the indemnification, in its sole discretion, pursuant to the powers vested in the Company under applicable law, (c) otherwise required to be made under **section 5.7** of these bylaws or (d) otherwise required by applicable law; or

(v) if prohibited by applicable law.

5.7 **Determination; Claim** If a claim for indemnification or advancement of expenses under this **Article V** is not paid by the Company or on its behalf within 90 days after receipt by the Company of a written request therefor, the claimant shall be entitled to an adjudication by a court of competent jurisdiction of his or her entitlement to such indemnification or advancement of expenses. To the extent not prohibited by law, the Company shall indemnify such person against all expenses actually and reasonably incurred by such person in connection with any action for indemnification or advancement of expenses from the Company under this **Article V**, to the extent such person is successful in such action, and, if requested by such person, shall advance such expenses to such person, subject to the provisions of **section 5.5** of these bylaws. In any such suit, the Company shall, to the fullest extent not prohibited by law, have the burden of proving that the claimant is not entitled to the requested indemnification or advancement of expenses.

5.8 **Non-Exclusivity of Rights** The indemnification and advancement of expenses provided by, or granted pursuant to, this **Article V** shall not be deemed exclusive of any other rights to which those seeking indemnification or advancement of expenses may be entitled under the certificate of incorporation or any statute, bylaw, agreement, vote of stockholders or disinterested directors or otherwise, both as to action in such person’s official capacity and as to action in another capacity while holding such office. The Company is specifically authorized to enter into individual contracts with any or all of its directors, officers, employees or agents respecting indemnification and advancement of expenses, to the fullest extent not prohibited by the DGCL or other applicable law.

5.9 **Insurance** The Company may purchase and maintain insurance on behalf of any person who is or was a director, officer, employee or agent of the Company, or is or was serving at the request of the Company as a director, officer, employee or agent of another corporation, partnership, joint venture, trust or other enterprise against any liability asserted against such person and incurred by such person in any such capacity, or arising out of such person's status as such, whether or not the Company would have the power to indemnify such person against such liability under the provisions of the DGCL.

5.10 **Survival** The rights to indemnification and advancement of expenses conferred by this **Article V** shall continue as to a person who has ceased to be a director, officer, employee or agent and shall inure to the benefit of the heirs, executors and administrators of such a person.

5.11 **Effect of Repeal or Modification** A right to indemnification or to advancement of expenses arising under a provision of the certificate of incorporation or a bylaw shall not be eliminated or impaired by an amendment to the certificate of incorporation or these bylaws after the occurrence of the act or omission that is the subject of the civil, criminal, administrative or investigative action, suit or proceeding for which indemnification or advancement of expenses is sought, unless the provision in effect at the time of such act or omission explicitly authorizes such elimination or impairment after such action or omission has occurred.

5.12 **Certain Definitions** For purposes of this **Article V**, references to the "**Company**" shall include, in addition to the resulting corporation, any constituent corporation (including any constituent of a constituent) absorbed in a consolidation or merger which, if its separate existence had continued, would have had power and authority to indemnify its directors, officers, employees or agents, so that any person who is or was a director, officer, employee or agent of such constituent corporation, or is or was serving at the request of such constituent corporation as a director, officer, employee or agent of another corporation, partnership, joint venture, trust or other enterprise, shall stand in the same position under the provisions of this **Article V** with respect to the resulting or surviving corporation as such person would have with respect to such constituent corporation if its separate existence had continued. For purposes of this **Article V**, references to "**other enterprises**" shall include employee benefit plans; references to "**finances**" shall include any excise taxes assessed on a person with respect to an employee benefit plan; references to "**serving at the request of the Company**" shall include any service as a director, officer, employee or agent of the Company which imposes duties on, or involves services by, such director, officer, employee or agent with respect to an employee benefit plan, its participants or beneficiaries; and a person who acted in good faith and in a manner such person reasonably believed to be in the interest of the participants and beneficiaries of an employee benefit plan shall be deemed to have acted in a manner "**not opposed to the best interests of the Company**" as referred to in this **Article V**.

ARTICLE VI — STOCK

6.1 **Stock Certificates; Partly Paid Shares** The shares of the Company shall be represented by uncertificated shares or by certificates if provided by a resolution of the Board. Any such resolution shall not apply to outstanding shares represented by a certificate until such certificate is surrendered to the Company. Unless otherwise provided by resolution of the Board, every holder of stock represented by certificates shall be entitled to have a certificate signed by, or in the name of, the Company by any two officers of the Company representing the number of shares registered in certificate form. Any or all of the signatures on the certificate may be a facsimile. In case any officer, transfer agent or registrar who has signed or whose facsimile signature has been placed upon a certificate has ceased to be such officer, transfer agent or registrar before such certificate is issued, it may be issued by the Company with the same effect as if such person were such officer, transfer agent or registrar at the date of issue. The Company shall not have power to issue a certificate in bearer form.

The Company may issue the whole or any part of its shares as partly paid and subject to call for the remainder of the consideration to be paid therefor. Upon the face or back of each stock certificate issued to represent any such partly paid shares, or upon the books and records of the Company in the case of uncertificated partly paid shares, the total amount of the consideration to be paid therefor and the amount paid thereon shall be stated. Upon the declaration of any dividend on fully paid shares, the Company shall declare a dividend upon partly paid shares of the same class, but only upon the basis of the percentage of the consideration actually paid thereon.

6.2 *Special Designation on Certificates* If the Company is authorized to issue more than one class of stock or more than one series of any class, then the powers, designations, preferences and relative, participating, optional or other special rights of each class of stock or series thereof and the qualifications, limitations or restrictions of such preferences and/or rights shall be set forth in full or summarized on the face or back of the certificate that the Company shall issue to represent such class or series of stock; *provided* that, except as otherwise provided in Section 202 of the DGCL, in lieu of the foregoing requirements, there may be set forth on the face or back of the certificate that the Company shall issue to represent such class or series of stock, a statement that the Company will furnish without charge to each stockholder who so requests the powers, designations, preferences and relative, participating, optional or other special rights of each class of stock or series thereof and the qualifications, limitations or restrictions of such preferences and/or rights. Within a reasonable time after the issuance or transfer of uncertificated stock, the registered owner thereof shall be given a notice, in writing or by electronic transmission, containing the information required to be set forth or stated on certificates pursuant to this **section 6.2** or Sections 156, 202(a), 218(a) or 364 of the DGCL or with respect to this **section 6.2** a statement that the Company will furnish without charge to each stockholder who so requests the powers, designations, preferences and relative, participating, optional or other special rights of each class of stock or series thereof and the qualifications, limitations or restrictions of such preferences and/or rights. Except as otherwise expressly provided by law, the rights and obligations of the holders of uncertificated stock and the rights and obligations of the holders of certificates representing stock of the same class and series shall be identical.

6.3 *Lost Certificates* Except as provided in this **section 6.3**, no new certificates for shares shall be issued to replace a previously issued certificate unless the latter is surrendered to the Company and cancelled at the same time. The Company may issue a new certificate of stock or uncertificated shares in the place of any certificate theretofore issued by it, alleged to have been lost, stolen or destroyed, and the Company may require the owner of the lost, stolen or destroyed certificate, or such owner's legal representative, to give the Company a bond sufficient to indemnify it against any claim that may be made against it on account of the alleged loss, theft or destruction of any such certificate or the issuance of such new certificate or uncertificated shares.

6.4 *Dividends* The Board, subject to any restrictions contained in the certificate of incorporation or applicable law, may declare and pay dividends upon the shares of the Company's capital stock. Dividends may be paid in cash, in property or in shares of the Company's capital stock, subject to the provisions of the certificate of incorporation.

The Board may set apart out of any of the funds of the Company available for dividends a reserve or reserves for any proper purpose and may abolish any such reserve.

6.5 Stock Transfer Agreements The Company shall have power to enter into and perform any agreement with any number of stockholders of any one or more classes of stock of the Company to restrict the transfer of shares of stock of the Company of any one or more classes owned by such stockholders in any manner not prohibited by the DGCL.

6.6 Registered Stockholders The Company:

(i) shall be entitled to treat the person registered on its books as the owner of any share or shares as the person exclusively entitled to receive dividends, vote, receive notifications and otherwise exercise all the rights and powers of an owner of such share or shares; and

(ii) shall not be bound to recognize any equitable or other claim to or interest in such share or shares on the part of another person, whether or not it shall have express or other notice thereof, except as otherwise provided by the laws of Delaware.

6.7 Transfers Transfers of record of shares of stock of the Company shall be made only upon its books by the holders thereof, in person or by an attorney duly authorized, and, if such stock is certificated, upon the surrender of a certificate or certificates for a like number of shares, properly endorsed or accompanied by proper evidence of succession, assignation or authority to transfer.

6.8 Transfer Restriction A stockholder shall not transfer (including, but not limited to, transfers by sale, gift, devise, bequest, descent, merger, operation of law or otherwise, assignments, pledges, encumbrances, hypothecations or other dispositions) Restricted Shares (as such term is defined below) to any person unless such transfer has been approved by the Board or a duly authorized committee thereof, which approval may be granted or withheld in the sole and absolute discretion of the Board or such committee; *provided*, that the Board or such committee may not withhold its approval if such refusal would result in a breach of an agreement entered into by the Company. “**Restricted Shares**” are shares of common stock and preferred stock of the Company, excluding in each case shares of common stock issued upon conversion of any preferred stock of the Company. Any purported transfer of Restricted Shares that violates this **section 6.8** shall be null and void and shall have no force and effect, and the Company shall not register any such purported transfer.

ARTICLE VII — MANNER OF GIVING NOTICE AND WAIVER

7.1 Delivery of Notice; Notice by Electronic Transmission (a) Without limiting the manner by which notice otherwise may be given effectively to stockholders, any notice to stockholders given by the Company under any provision of the DGCL, the certificate of incorporation or these bylaws may be given in writing directed to the stockholder’s mailing address (or by electronic transmission directed to the stockholder’s electronic mail address, as applicable) as it appears on the records of the Company and shall be given (i) if mailed, when the notice is deposited in the U.S. mail, postage prepaid, (ii) if delivered by courier service, the earlier of when the notice is received or left at such stockholder’s address or (iii) if given by electronic mail, when directed to such stockholder’s electronic mail address unless the stockholder has notified the Company in writing or by electronic transmission of an objection to receiving notice by electronic mail or such notice is prohibited by **section 7.1(e)** of these bylaws. A notice by electronic mail must include a prominent legend that the communication is an important notice regarding the Company.

(b) Without limiting the manner by which notice otherwise may be given effectively to stockholders, any notice to stockholders given by the Company under any provision of the DGCL, the certificate of incorporation or these bylaws shall be effective if given by a form of electronic transmission consented to by the stockholder to whom the notice is given. Any such consent shall be revocable by the stockholder by written notice or electronic transmission to the Company.

(c) Notice given pursuant to **section 7.1(b)** of these bylaws shall be deemed given:

(i) if by facsimile telecommunication, when directed to a number at which the stockholder has consented to receive notice;

(ii) if by a posting on an electronic network together with separate notice to the stockholder of such specific posting, upon the later of (A) such posting and (B) the giving of such separate notice; and

(iii) if by any other form of electronic transmission, when directed to the stockholder.

(d) For purposes of the DGCL, the certificate of incorporation and these bylaws, (i) “**electronic transmission**” means any form of communication, not directly involving the physical transmission of paper, including the use of, or participation in, one or more electronic networks or databases (including one or more distributed electronic networks or databases), that creates a record that may be retained, retrieved and reviewed by a recipient thereof, and that may be directly reproduced in paper form by such a recipient through an automated process, (ii) “**electronic mail**” means an electronic transmission directed to a unique electronic mail address (which electronic mail shall be deemed to include any files attached thereto and any information hyperlinked to a website if such electronic mail includes the contact information of an officer or agent of the Company who is available to assist with accessing such files and information), (iii) “**electronic mail address**” means a destination, commonly expressed as a string of characters, consisting of a unique user name or mailbox (commonly referred to as the “local part” of the address) and a reference to an internet domain (commonly referred to as the “domain part” of the address), whether or not displayed, to which electronic mail can be sent or delivered, and (iv) “**document**” means any tangible medium on which information is inscribed, and includes handwritten, typed, printed or similar instruments, and copies of such instruments and an electronic transmission.

(e) Notwithstanding the foregoing, a notice may not be given by an electronic transmission from and after the time that (i) the Company is unable to deliver by such electronic transmission two consecutive notices given by the Company and (ii) such inability becomes known to the Secretary or an Assistant Secretary of the Company or to the transfer agent, or other person responsible for the giving of notice; *provided, however*, the inadvertent failure to discover such inability shall not invalidate any meeting or other action.

(f) An affidavit of the Secretary or an Assistant Secretary or of the transfer agent or other agent of the Company that notice has been given shall, in the absence of fraud, be *prima facie* evidence of the facts stated therein.

(g) No provision of this **section 7.1**, except for **subsections 7.1(a)(i), 7.1(d)(ii) and 7.1(d)(iii)**, shall apply to Sections 164, 296, 311, 312 or 324 of the DGCL.

7.2 Notice to Stockholders Sharing an Address Except as otherwise prohibited under the DGCL, without limiting the manner by which notice otherwise may be given effectively to stockholders, any notice to stockholders given by the Company under the provisions of the DGCL, the certificate of incorporation or these bylaws shall be effective if given by a single written notice to stockholders who share an address if consented to by the stockholders at that address to whom such notice is given. Any such

consent shall be revocable by the stockholder by written notice to the Company. Any stockholder who fails to object in writing to the Company, within 60 days of having been given written notice by the Company of its intention to send the single notice, shall be deemed to have consented to receiving such single written notice.

7.3 Notice to Person with Whom Communication is Unlawful Whenever notice is required to be given, under the DGCL, the certificate of incorporation or these bylaws, to any person with whom communication is unlawful, the giving of such notice to such person shall not be required and there shall be no duty to apply to any governmental authority or agency for a license or permit to give such notice to such person. Any action or meeting which shall be taken or held without notice to any such person with whom communication is unlawful shall have the same force and effect as if such notice had been duly given. In the event that the action taken by the Company is such as to require the filing of a certificate under the DGCL, the certificate shall state, if such is the fact and if notice is required, that notice was given to all persons entitled to receive notice except such persons with whom communication is unlawful.

7.4 Waiver of Notice Whenever notice is required to be given under any provision of the DGCL, the certificate of incorporation or these bylaws, a written waiver, signed by the person entitled to notice, or a waiver by electronic transmission by the person entitled to notice, whether before or after the time of the event for which notice is to be given, shall be deemed equivalent to notice. Attendance of a person at a meeting shall constitute a waiver of notice of such meeting, except when the person attends a meeting for the express purpose of objecting at the beginning of the meeting, to the transaction of any business because the meeting is not lawfully called or convened. Neither the business to be transacted at, nor the purpose of, any regular or special meeting of the stockholders need be specified in any written waiver of notice or any waiver by electronic transmission unless so required by the certificate of incorporation or these bylaws.

ARTICLE VIII — GENERAL MATTERS

8.1 Fiscal Year The fiscal year of the Company shall be fixed by resolution of the Board and may be changed by the Board.

8.2 Seal The Company may adopt a corporate seal, which shall be in such form as may be approved from time to time by the Board. The Company may use the corporate seal by causing it or a facsimile thereof to be impressed or affixed or in any other manner reproduced.

8.3 Annual Report The Company shall cause an annual report to be sent to the stockholders of the Company to the extent required by applicable law. If and so long as there are fewer than 100 holders of record of the Company's shares, the requirement of sending an annual report to the stockholders of the Company is expressly waived (to the extent permitted under applicable law).

8.4 Construction; Definitions Unless the context requires otherwise, the general provisions, rules of construction and definitions in the DGCL shall govern the construction of these bylaws. Without limiting the generality of this provision, the singular number includes the plural, the plural number includes the singular, and the term "person" includes a corporation, any other entity and a natural person.

8.5 Forum Selection To the fullest extent permitted by applicable law, unless the Company consents in writing to the selection of an alternative forum, the Court of Chancery of the State of Delaware (or, if the Court of Chancery does not have jurisdiction, another State court in Delaware or the federal district court for the District of Delaware) shall, to the fullest extent permitted by law, be the sole and

exclusive forum for (a) any derivative action or proceeding brought on behalf of the Company, (b) any action asserting a claim of breach of a fiduciary duty owed by any director, stockholder, officer or other employee of the Company to the Company or the Company's stockholders, (c) any action arising pursuant to any provision of the DGCL or the certificate of incorporation or these bylaws (as either may be amended from time to time), or (d) any action asserting a claim governed by the internal affairs doctrine, except for, as to each of (a) through (d) above, any claim as to which such court determines that there is an indispensable party not subject to the jurisdiction of such court (and the indispensable party does not consent to the personal jurisdiction of such court within 10 days following such determination), which is vested in the exclusive jurisdiction of a court or forum other than such court, or for which such court does not have subject matter jurisdiction. To the fullest extent permitted by applicable law, unless the company consents in writing to the selection of an alternative forum, the federal district courts of the United States of America shall be the exclusive forum for the resolution of any complaint asserting a cause of action arising under the Securities Act of 1933. Any person or entity purchasing or otherwise acquiring or holding any interest in any security of the Company shall be deemed to have notice of and consented to the provisions of this **section 8.5**.

ARTICLE IX — AMENDMENTS

These bylaws may be adopted, amended or repealed by the stockholders entitled to vote. However, the Company may, in its certificate of incorporation, confer the power to adopt, amend or repeal bylaws upon the directors. The fact that such power has been so conferred upon the directors shall not divest the stockholders of the power, nor limit their power to adopt, amend or repeal bylaws.

A bylaw amendment adopted by stockholders which specifies the votes that shall be necessary for the election of directors shall not be further amended or repealed by the Board.

AMENDED AND RESTATED INVESTORS' RIGHTS AGREEMENT

THIS AMENDED AND RESTATED INVESTORS' RIGHTS AGREEMENT (this "**Agreement**"), is made as of April 1, 2020, by and among ALX Oncology Holdings, Inc., a Delaware corporation (the "**Company**"), ALX Oncology Limited, a private Irish company limited by shares (the "**ALX**") and each of the investors listed on Schedule A hereto, each of which is referred to in this Agreement as an "**Investor**".

RECITALS

WHEREAS, ALX and certain of the Investors have previously entered into an Investors' Rights Agreement dated as of May 8, 2015, which was amended and restated on May 16, 2019 and February 6, 2020 (as amended and restated, the "**Prior Agreement**");

WHEREAS, ALX is effectuating a reorganization through which the shareholders of ALX (including the Investors) would cease to be shareholders of ALX and become shareholders of the Company (the "**Reorganization**"); and

WHEREAS, as part of the Reorganization, the parties desire to amend and restate the Prior Agreement in order to provide the Investors with the rights and obligations that are substantially equivalent to the rights and obligations held by such Investors immediately prior to the Reorganization under the Prior Agreement.

NOW, THEREFORE, the Company, ALX and the Investors hereby agree that the Prior Agreement shall be amended and restated in its entirety by this Agreement, and the parties to this Agreement further agree as follows:

1. **Definitions.** For purposes of this Agreement:

1.1 "**Affiliate**" means, with respect to any specified Person, any other Person who, directly or indirectly, controls, is controlled by, or is under common control with such Person, including without limitation any general partner, managing member, officer or director of such Person or any venture capital fund now or hereafter existing that is controlled by one or more general partners or managing members of, or shares the same management company with, such Person.

1.2 "**Board of Directors**" means the board of directors of the Company.

1.3 "**Common Stock**" means the Company's common stock, par value \$0.001 per share.

1.4 "**Damages**" means any loss, damage, claim or liability (joint or several) to which a party hereto may become subject under the Securities Act, the Exchange Act, or other federal or state law or laws of any jurisdiction, insofar as such loss, damage, claim or liability (or any action in respect thereof) arises out of or is based upon: (i) any untrue statement or alleged untrue statement of a material fact contained in any registration statement of the Company, including any preliminary prospectus or final prospectus contained therein or any amendments or supplements thereto; (ii) an omission or alleged omission to state therein a material fact required

to be stated therein, or necessary to make the statements therein not misleading; or (iii) any violation or alleged violation by the indemnifying party (or any of its agents or Affiliates) of the Securities Act, the Exchange Act, any state securities law, or any rule or regulation promulgated under the Securities Act, the Exchange Act, or any state securities law.

1.5 “**Derivative Securities**” means any securities or rights convertible into, or exercisable or exchangeable for (in each case, directly or indirectly), Common Stock, including options and warrants.

1.6 “**Exchange Act**” means the Securities Exchange Act of 1934, as amended, and the rules and regulations promulgated thereunder.

1.7 “**Excluded Registration**” means (i) a registration relating to the sale of securities to employees of the Company or a subsidiary pursuant to a share option, share purchase, or similar plan; (ii) a registration relating to an SEC Rule 145 transaction; (iii) 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 the Registrable Securities; or (iv) a registration in which the only Common Stock being registered are the Common Stock issuable upon conversion of debt securities that are also being registered.

1.8 “**Form S-1**” means such form under the Securities Act as in effect on the date hereof or any successor registration form under the Securities Act subsequently adopted by the SEC.

1.9 “**Form S-3**” means such form under the Securities Act as in effect on the date hereof or any registration form under the Securities Act subsequently adopted by the SEC that permits incorporation of substantial information by reference to other documents filed by the Company with the SEC.

1.10 “**GAAP**” means generally accepted accounting principles in the United States.

1.11 “**Holder**” means any holder of Registrable Securities who is a party to this Agreement.

1.12 “**Immediate Family Member**” means a child, stepchild, grandchild, parent, stepparent, grandparent, spouse, sibling, mother-in-law, father-in-law, son-in-law, daughter-in-law, brother-in-law, or sister-in-law, including, adoptive relationships, of a natural person referred to herein.

1.13 “**Initiating Holders**” means, collectively, Holders who properly initiate a registration request under this Agreement.

1.14 “**IPO**” means the Company’s first underwritten public offering of its Common Stock under the Securities Act or comparable foreign securities laws applicable to an underwritten registration of securities on the NASDAQ Stock Market, the New York Stock Exchange or London Stock Exchange.

1.15 “**New Securities**” means, collectively, equity securities of the Company, whether or not currently authorized, as well as rights, options, or warrants to purchase such equity securities, or securities of any type whatsoever that are, or may become, convertible or exchangeable into or exercisable for such equity securities.

1.16 “**Person**” means any individual, corporation, partnership, trust, limited liability company, association or other entity.

1.17 “**Preferred Directors**” means the Series A Directors, the Series B Directors and Series C Directors.

1.18 “**Preferred Stock**” means the Series A Preferred Stock, the Series B Preferred Stock and the Series C Preferred Stock.

1.19 “**Qualified IPO**” means the Company’s first underwritten public offering of its Common Stock under the Securities Act or pursuant to a corresponding securities issuance application process in any non-U.S. jurisdiction, covering the offer and sale of the Common Stock for the account of the Company in which the proceeds to the Company (net of the underwriting discount and commissions and offering expenses) are in excess of \$50,000,000 in the aggregate and the Common Stock are listed for trading on the London Stock Exchange, the New York Stock Exchange or the NASDAQ Stock Market.

1.20 “**Registrable Securities**” means (i) the Common Stock issuable or issued upon conversion of the Preferred Stock; (ii) any Common Stock issued or issuable (directly or indirectly) upon conversion and/or exercise of any other securities of the Company, acquired by the Investors after the date hereof; (iii) any Common Stock issued as (or issuable upon the conversion or exercise of any warrant, right, or other security that is issued as) a dividend or other distribution with respect to, or in exchange for or in replacement of, the shares referenced in clauses (i) and (ii) above; and (iv) with respect to clause (y) of Subsection 2.1(a), clause (ii) of Subsection 2.1(b) and Subsection 2.2, the Common Stock held by Stanford that are not issuable or issued upon conversion of Preferred Stock; excluding in all cases, however, any Registrable Securities sold by a Person in a transaction in which the applicable rights under this Agreement are not assigned pursuant to Subsection 6.1, and excluding for purposes of Section 2 any shares for which registration rights have terminated pursuant to Subsection 2.13 of this Agreement.

1.21 “**Registrable Securities then outstanding**” means the number of shares determined by adding the number of issued Common Stock that are Registrable Securities and the number of Common Stock issuable (directly or indirectly) pursuant to then exercisable and/or convertible securities that are Registrable Securities.

1.22 “**Restricted Securities**” means the securities of the Company required to be notated with the legend set forth in Subsection 2.12(b) hereof.

1.23 “**SEC**” means the Securities and Exchange Commission.

1.24 “**SEC Rule 144**” means Rule 144 promulgated by the SEC under the Securities Act.

1.25 “**SEC Rule 145**” means Rule 145 promulgated by the SEC under the Securities Act.

1.26 “**Securities Act**” means the Securities Act of 1933, as amended, and the rules and regulations promulgated thereunder.

1.27 “**Selling Expenses**” means all underwriting discounts, selling commissions, and share transfer taxes applicable to the sale of Registrable Securities, and fees and disbursements of counsel for any Holder, except for the fees and disbursements of the Selling Holder Counsel borne and paid by the Company as provided in Subsection 2.6.

1.28 “**Series A Director**” means any director of the Company appointed to the Board of Directors pursuant to Section 1.2(a) or 1.2(b) of the Voting Agreement.

1.29 “**Series A Preferred Stock**” means the Company’s Series A Preferred Stock, par value \$0.001 per share.

1.30 “**Series B Director**” means any director of the Company appointed to the Board of Directors pursuant to Section 1.2(a) or 1.2(b) of the Voting Agreement.

1.31 “**Series B Preferred Stock**” means the Company’s Series B Preferred Stock, par value \$0.001 per share.

1.32 “**Series C Director**” means any director of the Company appointed to the Board of Directors pursuant to Section 1.2(c) or 1.2(d) of the Voting Agreement.

1.33 “**Series C Preferred Stock**” means the Company’s Series C Preferred Stock, par value \$0.001 per share.

1.34 “**Stanford**” means The President and Trustees of Leland Stanford Junior University.

1.35 “**Stanford License**” shall mean the Exclusive (Equity) Agreement, dated March 24, 2015, by and among Alexo Therapeutics International, a Cayman Islands exempted company, Stanford University and Howard Hughes Medical Institute.

1.36 “**Voting Agreement**” means the Amended and Restated Voting Agreement among the Company, ALX, the Investors and certain other shareholders of the Company, dated as of the date hereof.

2. Registration Rights. If the Company closes an IPO in the United States, the provisions of this Section 2 shall apply with respect to the registration rights held by the Holders. If the Company closes an IPO in a country other than the United States then prior to the closing of such IPO, the Company and the Holders shall enter into an amendment of Section 2 of this Agreement to bring the provisions of this Section 2 into conformity with the applicable laws and market practice for registration rights in the applicable country. The Company covenants and agrees as follows:

2.1 Demand Registration.

(a) Form S-1 Demand. If at any time after the earlier of (i) three (3) years after the date of this Agreement or (ii) one hundred eighty (180) days after the effective date of the registration statement for the IPO, the Company receives a request from Holders of fifty percent (50%) of the Registrable Securities then outstanding that the Company file a Form S-1 registration statement with respect to at least forty percent (40%) of the Registrable Securities then outstanding (or a lesser percent if the anticipated aggregate offering price, net of Selling Expenses, would exceed \$15 million dollars (\$15,000,000), then the Company shall (x) within ten (10) days after the date such request is given, give notice thereof (the “**Demand Notice**”) to all Holders other than the Initiating Holders; and (y) as soon as practicable, and in any event within sixty (60) days after the date such request is given by the Initiating Holders, file a Form S-1 registration statement under the Securities Act covering all Registrable Securities that the Initiating Holders requested to be registered and any additional Registrable Securities requested to be included in such registration by any other Holders, as specified by notice given by each such Holder to the Company within twenty (20) days of the date the Demand Notice is given, and in each case, subject to the limitations of Subsections 2.1(c) and 2.2.

(b) Form S-3 Demand. If at any time when it is eligible to use a Form S-3 registration statement, the Company receives a request from Holders of at least ten percent (10%) of the Registrable Securities then outstanding that the Company file a Form S-3 registration statement with respect to issued Registrable Securities of such Holders having an anticipated aggregate offering price, net of Selling Expenses, of at least \$1 million dollars (\$1,000,000), then the Company shall (i) within ten (10) days after the date such request is given, give a Demand Notice to all Holders other than the Initiating Holders; and (ii) as soon as practicable, and in any event within forty-five (45) days after the date such request is given by the Initiating Holders, file a Form S-3 registration statement under the Securities Act covering all Registrable Securities requested to be included in such registration by any other Holders, as specified by notice given by each such Holder to the Company within twenty (20) days of the date the Demand Notice is given, and in each case, subject to the limitations of Subsections 2.1(c) and 2.2.

(c) Notwithstanding the foregoing obligations, if the Company furnishes to Holders requesting a registration pursuant to this Subsection 2.1 a certificate signed by the Company’s chief executive officer stating that in the good faith judgment of the Board of Directors it would be materially detrimental to the Company and its shareholders for such registration statement to either become effective or remain effective for as long as such registration statement otherwise would be required to remain effective, because such action would (i) materially interfere with a significant acquisition, corporate reorganization, or other similar transaction involving the Company; (ii) require premature disclosure of material information that the Company has a bona fide business purpose for preserving as confidential; or (iii) render the Company unable to comply with requirements under the Securities Act or Exchange Act, then the Company shall have the right to defer taking action with respect to such filing, and any time periods with respect to filing or effectiveness thereof shall be tolled correspondingly, for a period of not more than one hundred twenty (120) days after the request of the Initiating Holders is given; provided, however, that the Company may not invoke this right more than once in any twelve (12) month period; and provided further that the Company shall not register any securities for its own account or that of any other shareholder during such one hundred twenty (120) day period other than an Excluded Registration.

(d) The Company shall not be obligated to effect, or to take any action to effect, any registration pursuant to Subsection 2.1(a): (i) during the period that is sixty (60) days before the Company's good faith estimate of the date of filing of, and ending on a date that is one hundred eighty (180) days after the effective date of, a Company-initiated registration, provided that the Company is actively employing in good faith commercially reasonable efforts to cause such registration statement to become effective; (ii) after the Company has effected two registrations pursuant to Subsection 2.1(a); or (iii) if the Initiating Holders propose to dispose of Registrable Securities that may be immediately registered on Form S-3 pursuant to a request made pursuant to Subsection 2.1(b). The Company shall not be obligated to effect, or to take any action to effect, any registration pursuant to Subsection 2.1(b) (i) during the period that is thirty (30) days before the Company's good faith estimate of the date of filing of, and ending on a date that is ninety (90) days after the effective date of, a Company-initiated registration, provided that the Company is actively employing in good faith commercially reasonable efforts to cause such registration statement to become effective; or (ii) if the Company has effected two registrations pursuant to Subsection 2.1(b) within the twelve (12) month period immediately preceding the date of such request. A registration shall not be counted as "effected" for purposes of this Subsection 2.1(d) until such time as the applicable registration statement has been declared effective by the SEC, unless the Initiating Holders withdraw their request for such registration, elect not to pay the registration expenses therefor, and forfeit their right to one demand registration statement pursuant to Subsection 2.6, in which case such withdrawn registration statement shall be counted as "effected" for purposes of this Subsection 2.1(d) provided, that if such withdrawal is during a period the Company has deferred taking action pursuant to Subsection 2.1(c), then the Initiating Holders may withdraw their request for registration and such registration will not be counted as "effected" for purposes of this Subsection 2.1(d).

2.2 Company Registration. If the Company proposes to register (including, for this purpose, a registration effected by the Company for shareholders other than the Holders) any of its securities under the Securities Act in connection with the public offering of such securities solely for cash (other than in an Excluded Registration), the Company shall, at such time, promptly give each Holder notice of such registration. Upon the request of each Holder given within twenty (20) days after such notice is given by the Company, the Company shall, subject to the provisions of Subsection 2.2, cause to be registered all of the Registrable Securities that each such Holder has requested to be included in such registration. The Company shall have the right to terminate or withdraw any registration initiated by it under this Subsection 2.2 before the effective date of such registration, whether or not any Holder has elected to include Registrable Securities in such registration. The expenses (other than Selling Expenses) of such withdrawn registration shall, subject always to compliance with applicable law, be borne by the Company in accordance with Subsection 2.6.

2.3 Underwriting Requirements.

(a) If, pursuant to Subsection 2.1, the Initiating Holders intend to distribute the Registrable Securities covered by their request by means of an underwriting, they shall so advise the Company as a part of their request made pursuant to Subsection 2.1, and the Company shall include such information in the Demand Notice. The underwriter(s) will be selected by the Initiating Holders, subject only to the reasonable approval of the Company. In such event, the right of any Holder to include such Holder's Registrable Securities in such registration shall be conditioned upon such Holder's participation in such underwriting and the inclusion of such Holder's Registrable Securities in the underwriting to the extent provided herein. All Holders proposing to distribute their securities through such underwriting shall (together with the Company as provided in Subsection 2.4(e)) enter into an underwriting agreement in customary form with the underwriter(s) selected for such underwriting. Notwithstanding any other provision of this Subsection 2.2, if the underwriter(s) advise(s) the Initiating Holders in writing that marketing factors require a limitation on the number of shares to be underwritten, then the Initiating Holders shall so advise all Holders of Registrable Securities that otherwise would be underwritten pursuant hereto, and the number of Registrable Securities that may be included in the underwriting shall be allocated among such Holders of Registrable Securities, including the Initiating Holders, in proportion (as nearly as practicable) to the number of Registrable Securities owned by each Holder or in such other proportion as shall mutually be agreed to by all such selling Holders; provided, however, that the number of Registrable Securities held by the Holders to be included in such underwriting shall not be reduced unless all other securities are first entirely excluded from the underwriting provided, further that the number of Registrable Securities held by the Holders to be included in such underwriting shall not be reduced below 25% of the total offering by the underwriters.

(b) In connection with any offering involving an underwriting of shares of the Company's capital stock pursuant to Subsection 2.2, the Company shall not be required to include any of the Holders' Registrable Securities in such underwriting unless the Holders accept the terms of the underwriting as agreed upon between the Company and its underwriters, and then only in such quantity as the underwriters in their sole discretion determine will not jeopardize the success of the offering by the Company. If the total number of securities, including Registrable Securities, requested by shareholders to be included in such offering exceeds the number of securities to be sold (other than by the Company) that the underwriters in their reasonable discretion determine is compatible with the success of the offering, then the Company shall be required to include in the offering only that number of such securities, including Registrable Securities, which the underwriters and the Company in their sole discretion determine will not jeopardize the success of the offering. If the underwriters determine that less than all of the Registrable Securities requested to be registered can be included in such offering, then the Registrable Securities that are included in such offering shall be allocated among the selling Holders in proportion (as nearly as practicable to) the number of Registrable Securities owned by each selling Holder or in such other proportions as shall mutually be agreed to by all such selling Holders. Notwithstanding the foregoing, in no event shall (i) the number of Registrable Securities included in the offering be reduced unless all other securities (other than securities to be sold by the Company) are first entirely excluded from the offering, or (ii) the number of Registrable Securities included in the offering be reduced below twenty-five percent

(25%) of the total number of securities included in such offering, unless such offering is the Qualified IPO, in which case the selling Holders may be excluded further if the underwriters make the determination described above and no other shareholder's securities are included in such offering. For purposes of the provision in this Subsection 2.3(b) concerning apportionment, for any selling Holder that is a partnership, limited liability company, or corporation, the partners, members, retired partners, retired members, shareholders, and Affiliates of such Holder, or the estates and Immediate Family Members of any such partners, retired partners, members, and retired members and any trusts for the benefit of any of the foregoing Persons, shall be deemed to be a single "selling Holder," and any *pro rata* reduction with respect to such "selling Holder" shall be based upon the aggregate number of Registrable Securities owned by all Persons included in such "selling Holder," as defined in this sentence.

(c) For purposes of Subsection 2.1, a registration shall not be counted as "effected" if, as a result of an exercise of the underwriter's cutback provisions in Subsection 2.3(a), fewer than fifty percent (50%) of the total number of Registrable Securities that Holders have requested to be included in such registration statement are actually included.

2.4 Obligations of the Company. Whenever required under this Section 2 to effect the registration of any Registrable Securities, the Company shall, as expeditiously as reasonably possible:

(a) prepare and file with the SEC a registration statement with respect to such Registrable Securities and use its commercially reasonable efforts to cause such registration statement to become effective and, upon the request of the Holders of a majority of the Registrable Securities registered thereunder, keep such registration statement effective for a period of up to one hundred twenty (120) days or, if earlier, until the distribution contemplated in the registration statement has been completed; provided, however, that (i) such one hundred twenty (120) day period shall be extended for a period of time equal to the period the Holder refrains, at the request of an underwriter of Common Stock (or other securities) of the Company, from selling any securities included in such registration, and (ii) in the case of any registration of Registrable Securities on Form S-3 that are intended to be offered on a continuous or delayed basis, subject to compliance with applicable SEC rules, such one hundred twenty (120) day period shall be extended, if necessary, to keep the registration statement effective until all such Registrable Securities are sold;

(b) prepare and file with the SEC such amendments and supplements to such registration statement, and the prospectus used in connection with such registration statement, as may be necessary to comply with the Securities Act in order to enable the disposition of all securities covered by such registration statement;

(c) furnish to the selling Holders such numbers of copies of a prospectus, including a preliminary prospectus, as required by the Securities Act, and such other documents as the Holders may reasonably request in order to facilitate their disposition of their Registrable Securities;

(d) use its commercially reasonable efforts to register and qualify the securities covered by such registration statement under such other securities or blue-sky laws of such jurisdictions as shall be reasonably requested by the selling Holders; provided that the Company shall not be required to qualify to do business or to file a general consent to service of process in any such states or jurisdictions, unless the Company is already subject to service in such jurisdiction and except as may be required by the Securities Act;

(e) in the event of any underwritten public offering, enter into and perform its obligations under an underwriting agreement, in usual and customary form, with the underwriter(s) of such offering;

(f) use its commercially reasonable efforts to cause all such Registrable Securities covered by such registration statement to be listed on a national securities exchange or trading system and each securities exchange and trading system (if any) on which similar securities issued by the Company are then listed;

(g) provide a transfer agent and registrar for all Registrable Securities registered pursuant to this Agreement and provide a CUSIP number for all such Registrable Securities, in each case not later than the effective date of such registration;

(h) promptly make available for inspection by the selling Holders, any underwriter(s) participating in any disposition pursuant to such registration statement, and any attorney or accountant or other agent retained by any such underwriter or selected by the selling Holders, all financial and other records, pertinent corporate documents, and properties of the Company, and cause the Company's officers, directors, employees, and independent accountants to supply all information reasonably requested by any such seller, underwriter, attorney, accountant, or agent, in each case, as necessary or advisable to verify the accuracy of the information in such registration statement and to conduct appropriate due diligence in connection therewith;

(i) notify each selling Holder, promptly after the Company receives notice thereof, of the time when such registration statement has been declared effective or a supplement to any prospectus forming a part of such registration statement has been filed; and

(j) after such registration statement becomes effective, notify each selling Holder of any request by the SEC that the Company amend or supplement such registration statement or prospectus.

In addition, the Company shall ensure that, at all times after any registration statement covering a public offering of securities of the Company under the Securities Act shall have become effective, its insider trading policy shall provide that the Company's directors may implement a trading program under Rule 10b5-1 of the Exchange Act.

2.5 Furnish Information. It shall be a condition precedent to the obligations of the Company to take any action pursuant to this Section 2 with respect to the Registrable Securities of any selling Holder that such Holder shall furnish to the Company such information regarding itself, the Registrable Securities held by it, and the intended method of disposition of such securities as is reasonably required to effect the registration of such Holder's Registrable Securities.

2.6 Expenses of Registration. All expenses (other than Selling Expenses) incurred in connection with registrations, filings, or qualifications pursuant to Section 2, including all registration, filing, and qualification fees; printers' and accounting fees; fees and disbursements of counsel for the Company; and the reasonable fees and disbursements of one counsel for the selling Holders ("**Selling Holder Counsel**"), shall, subject always to compliance with applicable law, be borne and paid by the Company; provided, however, that the Company shall not be required to pay for any expenses of any registration proceeding begun pursuant to Subsection 2.1 if the registration request is subsequently withdrawn at the request of the Holders of a majority of the Registrable Securities to be registered (in which case all selling Holders shall bear such expenses *pro rata* based upon the number of Registrable Securities that were to be included in the withdrawn registration), unless the Holders of a majority of the Registrable Securities agree to forfeit their right to one registration pursuant to Subsections 2.1(a) or 2.1(b), as the case may be; provided further that if, at the time of such withdrawal, the Holders shall have learned of a material adverse change in the condition, business, or prospects of the Company from that known to the Holders at the time of their request and have withdrawn the request with reasonable promptness after learning of such information then the Holders shall not be required to pay any of such expenses and shall not forfeit their right to one registration pursuant to Subsections 2.1(a) or 2.1(b). All Selling Expenses relating to Registrable Securities registered pursuant to this Section 2 shall be borne and paid by the Holders *pro rata* on the basis of the number of Registrable Securities registered on their behalf.

2.7 Delay of Registration. No Holder shall have any right to obtain or seek an injunction restraining or otherwise delaying any registration pursuant to this Agreement as the result of any controversy that might arise with respect to the interpretation or implementation of this Section 2.

2.8 Indemnification. If any Registrable Securities are included in a registration statement under this Section 2:

(a) To the extent permitted by law, the Company will indemnify and hold harmless each selling Holder, and the partners, members, officers, directors, and shareholders of each such Holder; legal counsel and accountants for each such Holder; any underwriter (as defined in the Securities Act) for each such Holder; and each Person, if any, who controls such Holder or underwriter within the meaning of the Securities Act or the Exchange Act, against any Damages, and the Company will pay to each such Holder, underwriter, controlling Person, or other aforementioned Person any legal or other expenses reasonably incurred thereby in connection with investigating or defending any claim or proceeding from which Damages may result, as such expenses are incurred; provided, however, that the indemnity agreement contained in this Subsection 2.8(a) shall not apply to amounts paid in settlement of any such claim or proceeding if such settlement is effected without the consent of the Company, which consent shall not be unreasonably withheld, nor shall the Company be liable for any Damages to the extent that they arise out of or are based upon actions or omissions made in reliance upon and in conformity with written information furnished by or on behalf of any such Holder, underwriter, controlling Person, or other aforementioned Person expressly for use in connection with such registration.

(b) To the extent permitted by law, each selling Holder, severally and not jointly, will indemnify and hold harmless the Company, and each of its directors, each of its officers who has signed the registration statement, each Person (if any), who controls the Company within the meaning of the Securities Act, legal counsel and accountants for the Company, any underwriter (as defined in the Securities Act), any other Holder selling securities in such registration statement, and any controlling Person of any such underwriter or other Holder, against any Damages, in each case only to the extent that such Damages arise out of or are based upon actions or omissions made in reliance upon and in conformity with written information furnished by or on behalf of such selling Holder expressly for use in connection with such registration; and each such selling Holder will pay to the Company and each other aforementioned Person any legal or other expenses reasonably incurred thereby in connection with investigating or defending any claim or proceeding from which Damages may result, as such expenses are incurred; provided, however, that the indemnity agreement contained in this Subsection 2.8(b) shall not apply to amounts paid in settlement of any such claim or proceeding if such settlement is effected without the consent of the Holder, which consent shall not be unreasonably withheld; and provided further that in no event shall the aggregate amounts payable by any Holder by way of indemnity or contribution under Subsections 2.8(b) and 2.8(d) exceed the proceeds from the offering received by such Holder (net of any Selling Expenses paid by such Holder), except in the case of fraud or willful misconduct by such Holder.

(c) Promptly after receipt by an indemnified party under this Subsection 2.8 of notice of the commencement of any action (including any governmental action) for which a party may be entitled to indemnification hereunder, such indemnified party will, if a claim in respect thereof is to be made against any indemnifying party under this Subsection 2.8, give the indemnifying party notice of the commencement thereof. The indemnifying party shall have the right to participate in such action and, to the extent the indemnifying party so desires, participate jointly with any other indemnifying party to which notice has been given, and to assume the defense thereof with counsel mutually satisfactory to the parties; provided, however, that an indemnified party (together with all other indemnified parties that may be represented without conflict by one counsel) shall have the right to retain one separate counsel, with the fees and expenses to be paid by the indemnifying party, if representation of such indemnified party by the counsel retained by the indemnifying party would be inappropriate due to actual or potential differing interests between such indemnified party and any other party represented by such counsel in such action.

(d) To provide for just and equitable contribution to joint liability under the Securities Act in any case in which either: (i) any party otherwise entitled to indemnification hereunder makes a claim for indemnification pursuant to this Subsection 2.8 but it is judicially determined (by the entry of a final judgment or decree by a court of competent jurisdiction and the expiration of time to appeal or the denial of the last right of appeal) that such indemnification may not be enforced in such case, notwithstanding the fact that this Subsection 2.8 provides for indemnification in such case, or (ii) contribution under the Securities Act may

be required on the part of any party hereto for which indemnification is provided under this Subsection 2.8, then, and in each such case, such parties will contribute to the aggregate losses, claims, damages, liabilities, or expenses to which they may be subject (after contribution from others) in such proportion as is appropriate to reflect the relative fault of each of the indemnifying party and the indemnified party in connection with the statements, omissions, or other actions that resulted in such loss, claim, damage, liability, or expense, as well as to reflect any other relevant equitable considerations. The relative fault of the indemnifying party and of the indemnified party shall be determined by reference to, among other things, whether the untrue or allegedly untrue statement of a material fact, or the omission or alleged omission of a material fact, relates to information supplied by the indemnifying party or by the indemnified party and the parties' relative intent, knowledge, access to information, and opportunity to correct or prevent such statement or omission; provided, however, that, in any such case (x) no Holder will be required to contribute any amount in excess of the public offering price of all such Registrable Securities offered and sold by such Holder pursuant to such registration statement, and (y) no Person guilty of fraudulent misrepresentation (within the meaning of Section 11(f) of the Securities Act) will be entitled to contribution from any Person who was not guilty of such fraudulent misrepresentation; and provided further that in no event shall a Holder's liability pursuant to this Subsection 2.8(d), when combined with the amounts paid or payable by such Holder pursuant to Subsection 2.8(b), exceed the proceeds from the offering received by such Holder (net of any Selling Expenses paid by such Holder), except in the case of willful misconduct or fraud by such Holder.

(e) Unless otherwise superseded by an underwriting agreement entered into in connection with the underwritten public offering, the obligations of the Company and Holders under this Subsection 2.8 shall survive the completion of any offering of Registrable Securities in a registration under this Section 2, and otherwise shall survive the termination of this Agreement.

2.9 Reports Under Exchange Act. With a view to making available to the Holders the benefits of SEC Rule 144 and any other rule or regulation of the SEC that may at any time permit a Holder to sell securities of the Company to the public without registration or pursuant to a registration on Form S-3, the Company shall:

(a) make and keep available adequate current public information, as those terms are understood and defined in SEC Rule 144, at all times after the effective date of the registration statement filed by the Company for the IPO;

(b) use commercially reasonable efforts to file with the SEC in a timely manner all reports and other documents required of the Company under the Securities Act and the Exchange Act (at any time after the Company has become subject to such reporting requirements); and

(c) furnish to any Holder, so long as the Holder owns any Registrable Securities, forthwith upon request (i) to the extent accurate, a written statement by the Company that it has complied with the reporting requirements of SEC Rule 144 (at any time after ninety (90) days after the effective date of the registration statement filed by the Company for the IPO),

the Securities Act, and the Exchange Act (at any time after the Company has become subject to such reporting requirements), or that it qualifies as a registrant whose securities may be resold pursuant to Form S-3 (at any time after the Company so qualifies); (ii) a copy of the most recent annual or quarterly report of the Company and such other reports and documents so filed by the Company; and (iii) such other information as may be reasonably requested in availing any Holder of any rule or regulation of the SEC that permits the selling of any such securities without registration (at any time after the Company has become subject to the reporting requirements under the Exchange Act) or pursuant to Form S-3 (at any time after the Company so qualifies to use such form).

2.10 Limitations on Subsequent Registration Rights. From and after the date of this Agreement, the Company shall not, without the prior written consent of the Holders of a majority of the Registrable Securities then outstanding, enter into any agreement with any holder or prospective holder of any securities of the Company (i) to include such securities in any registration unless, under the terms of such agreement, such holder or prospective holder may include such securities in any such registration only to the extent that the inclusion of such securities will not reduce the number of the Registrable Securities of the Holders that are included; or (ii) that allows such holder or prospective holder to initiate a demand for registration of any securities held by such holder or prospective holder.

2.11 "Market Stand-off" Agreement. Each Holder hereby agrees that it will not, without the prior written consent of the managing underwriter, during the period commencing on the date of the final prospectus relating to the registration by the Company of its Common Stock or any other equity securities and ending on the date specified by the Company and the managing underwriter (such period not to exceed one hundred eighty (180) days in the case of the IPO, (i) lend; offer; pledge; sell; contract to sell; sell any option or contract to purchase; purchase any option or contract to sell; grant any option, right, or warrant to purchase; or otherwise transfer or dispose of, directly or indirectly, any Common Stock or any securities convertible into or exercisable or exchangeable (directly or indirectly) for Common Stock held immediately before the effective date of the registration statement for such offering or (ii) enter into any swap or other arrangement that transfers to another, in whole or in part, any of the economic consequences of ownership of such securities, whether any such transaction described in clause (i) or (ii) above is to be settled by delivery of Common Stock or other securities, in cash, or otherwise. The foregoing provisions of this Subsection 2.11 shall apply only to the IPO, shall not apply to the sale of any shares to an underwriter pursuant to an underwriting agreement and shall be applicable to the Holders only if all officers and directors are subject to the same restrictions and the Company uses commercially reasonable efforts to obtain a similar agreement from all shareholders individually owning more than one percent (1%) of the Company's issued Common Stock (after giving effect to conversion into Common Stock of all issued Preferred Stock). The underwriters in connection with such registration are intended third-party beneficiaries of this Subsection 2.11 and shall have the right, power and authority to enforce the provisions hereof as though they were a party hereto. Each Holder further agrees to execute such agreements as may be reasonably requested by the underwriters in connection with such registration that are consistent with this Subsection 2.11 or that are necessary to give further effect thereto. Any discretionary waiver or termination of the restrictions of any or all of such agreements by the Company or the underwriters shall apply *pro rata* to all Company shareholders subject to such agreements, based on the number of shares subject to such agreements.

2.12 Restrictions on Transfer.

(a) The Preferred Stock and the Registrable Securities shall not be sold, pledged, or otherwise transferred, and the Company shall not recognize and shall issue stop-transfer instructions to its transfer agent with respect to any such sale, pledge, or transfer, except upon the conditions specified in this Agreement, which conditions are intended to ensure compliance with the provisions of the Securities Act. A transferring Holder will cause any proposed purchaser, pledgee, or transferee of the Preferred Stock and the Registrable Securities held by such Holder to agree to take and hold such securities subject to the provisions and upon the conditions specified in this Agreement.

(b) Each share certificate and entry in the register members of the Company representing (i) the Preferred Stock, (ii) the Registrable Securities, and (iii) any other securities issued in respect of the securities referenced in clauses (i) and (ii), upon any share split, share dividend, recapitalization, merger, consolidation, or similar event, shall (unless otherwise permitted by the provisions of Subsection 2.12(c)) be notated with a legend substantially in the following form:

THE SECURITIES REPRESENTED HEREBY HAVE BEEN ACQUIRED FOR INVESTMENT AND HAVE NOT BEEN REGISTERED UNDER THE SECURITIES ACT OF 1933. SUCH SHARES MAY NOT BE SOLD, PLEDGED, OR TRANSFERRED IN THE ABSENCE OF SUCH REGISTRATION OR A VALID EXEMPTION FROM THE REGISTRATION AND PROSPECTUS DELIVERY REQUIREMENTS OF SAID ACT.

THE SECURITIES REPRESENTED HEREBY MAY BE TRANSFERRED ONLY IN ACCORDANCE WITH THE TERMS OF AN AGREEMENT BETWEEN THE COMPANY AND THE SHAREHOLDER, A COPY OF WHICH IS ON FILE WITH THE SECRETARY OF THE COMPANY.

The Holders consent to the Company making a notation in its records and giving instructions to any transfer agent of the Restricted Securities in order to implement the restrictions on transfer set forth in this Subsection 2.12.

(c) The holder of such Restricted Securities, by acceptance of ownership thereof, agrees to comply in all respects with the provisions of this Section 2. Before any proposed sale, pledge, or transfer of any Restricted Securities, unless there is in effect a registration statement under the Securities Act covering the proposed transaction, the Holder thereof shall give notice to the Company of such Holder's intention to effect such sale, pledge, or transfer. Each such notice shall describe the manner and circumstances of the proposed sale, pledge, or transfer in sufficient detail and, if reasonably requested by the Company, shall be accompanied at such Holder's expense by either (i) a written opinion of legal counsel who shall, and whose legal opinion shall, be reasonably satisfactory to the Company, addressed to the

Company, to the effect that the proposed transaction may be effected without registration under the Securities Act; (ii) a “no action” letter from the SEC to the effect that the proposed sale, pledge, or transfer of such Restricted Securities without registration will not result in a recommendation by the staff of the SEC that action be taken with respect thereto; or (iii) any other evidence reasonably satisfactory to counsel to the Company to the effect that the proposed sale, pledge, or transfer of the Restricted Securities may be effected without registration under the Securities Act, whereupon the Holder of such Restricted Securities shall be entitled to sell, pledge, or transfer such Restricted Securities in accordance with the terms of the notice given by the Holder to the Company. The Company will not require such a legal opinion or “no action” letter (x) in any transaction in compliance with SEC Rule 144; or (y) in any transaction in which such Holder distributes Restricted Securities to an Affiliate of such Holder for no consideration; provided that each transferee agrees in writing to be subject to the terms of this Subsection 2.12. Each certificate, instrument, or book entry representing the Restricted Securities transferred as above provided shall be notated with, except if such transfer is made pursuant to SEC Rule 144, the appropriate restrictive legend set forth in Subsection 2.12(b), except that such certificate instrument, or book entry shall not be notated with such restrictive legend if, in the opinion of counsel for such Holder and the Company, such legend is not required in order to establish compliance with any provisions of the Securities Act.

2.13 Termination of Registration Rights. The right of any Holder to request registration or inclusion of Registrable Securities in any registration pursuant to Subsections 2.1 or 2.2 shall terminate upon the earliest to occur of:

(a) the closing of a Deemed Liquidation Event (as such term is defined in the Company’s Certificate of Incorporation, as amended from time to time (the “**Certificate of Incorporation**”));

(b) such time as SEC Rule 144 or another similar exemption under the Securities Act is available for the sale of all of such Holder’s shares without limitation during a three-month period without registration; and

(c) the fifth anniversary of the Qualified IPO.

3. Information Rights.

3.1 Delivery of Financial Statements. The Company shall deliver to each Investor who holds at least 10,000,000 shares of Preferred Stock (a “Qualified Investor”):

(a) as soon as practicable, but in any event within one hundred twenty (120) days after the end of each fiscal year of the Company (i) an unaudited balance sheet as of the end of such year, (ii) unaudited statements of income and of cash flows for such year, and (iii) an unaudited statement of shareholders’ equity as of the end of such year;

(b) as soon as practicable, but in any event within forty-five (45) days after the end of each of the first three (3) quarters of each fiscal year of the Company: (i) unaudited statements of income and cash flows for such fiscal quarter and for the current fiscal year to date; (ii) an unaudited balance sheet and a statement of shareholders' equity as of the end of such fiscal quarter and for the current fiscal year to date, all prepared in accordance with GAAP (except that such financial statements may (i) be subject to normal year-end audit adjustments; and (ii) not contain all notes thereto that may be required in accordance with GAAP); and (iii) a comparison of the foregoing financial statements against the Budget (as defined below) and a current capitalization table for the Company;

(c) at such time as the Company delivers the financial statements required under Sections 3.1(a) and 3.1(b), a statement showing, as of the end of the period for such financial statement, the number of shares of each class and series of capital stock and securities convertible into or exercisable for shares of capital stock outstanding at the end of the period, the Common Stock issuable upon conversion or exercise of any outstanding securities convertible or exercisable for Common Stock and the exchange ratio or exercise price applicable thereto, and the number of shares of issued stock options and stock options not yet issued but reserved for issuance, if any, all in sufficient detail as to permit the Qualified Investors to calculate their respective percentage equity ownership in the Company, and certified by the chief financial officer or chief executive officer of the Company as being true, complete, and correct;

(d) as soon as practicable, but in any event thirty (30) days before the end of each fiscal year, a budget and business plan for the next fiscal year (collectively, the "**Budget**"), approved by the Board of Directors and prepared on a monthly basis, including balance sheets, income statements, and statements of cash flow for such months and, promptly after prepared, any other budgets or revised budgets prepared by the Company;

(e) with respect to the financial statements called for in Subsection 3.1(a), Subsection 3.1(b) and Subsection 3.1(c), an instrument executed by the chief financial officer and chief executive officer of the Company certifying that such financial statements were prepared in accordance with GAAP consistently applied with prior practice for earlier periods (except as otherwise set forth in Subsection 3.1(b) and Subsection 3.1(d)) and fairly present the financial condition of the Company and its results of operation for the periods specified therein;

(f) such other information relating to the financial condition, business, prospects, or corporate affairs of the Company as any Qualified Investor may from time to time reasonably request; provided, however, that the Company shall not be obligated under this Subsection 3.1 to provide information (i) that the Company reasonably determines in good faith to be a trade secret or confidential information (unless covered by an enforceable confidentiality agreement, in a form acceptable to the Company); or (ii) the disclosure of which would adversely affect the attorney-client privilege between the Company and its counsel.

If, for any period, the Company has any subsidiary whose accounts are consolidated with those of the Company, then in respect of such period the financial statements delivered pursuant to the foregoing sections shall be the consolidated and consolidating financial statements of the Company and all such consolidated subsidiaries.

Notwithstanding anything else in this Subsection 3.1 to the contrary, the Company may cease providing the information set forth in this Subsection 3.1 during the period starting with the date thirty (30) days before the Company's good-faith estimate of the date of filing of a registration statement if it reasonably concludes it must do so to comply with the SEC rules applicable to such registration statement and related offering; provided that the Company's covenants under this Subsection 3.1 shall be reinstated at such time as the Company is no longer actively employing its commercially reasonable efforts to cause such registration statement to become effective.

3.2 Inspection. The Company shall permit each Qualified Investor, at such Qualified Investor's expense, to visit and inspect the Company's properties; examine its books of account and records; and discuss the Company's affairs, finances, and accounts with its officers, during normal business hours of the Company as may be reasonably requested by the Qualified Investor; provided, however, that the Company shall not be obligated pursuant to this Subsection 3.2 to provide access to any information that it reasonably and in good faith considers to be a trade secret or confidential information (unless covered by an enforceable confidentiality agreement, in form acceptable to the Company) or the disclosure of which would adversely affect the attorney-client privilege between the Company and its counsel.

3.3 Termination of Information. The covenants set forth in Subsection 3.1 and Subsection 3.2 shall terminate and be of no further force or effect (i) immediately before the consummation of the IPO, (ii) when the Company first becomes subject to the periodic reporting requirements of Section 12(g) or 15(d) of the Exchange Act or (iii) upon the consummation of any voluntary or involuntary liquidations, dissolution or winding up of the Company or Deemed Liquidation Event (as defined in the Certificate of Incorporation), whichever event occurs first.

3.4 Confidentiality. Each Investor severally agrees that such Investor will keep confidential and will not disclose, divulge, or use for any purpose (other than to monitor its investment in the Company) any confidential information obtained from the Company pursuant to the terms of this Agreement (including notice of the Company's intention to file a registration statement), unless such confidential information (a) is known or becomes known to the public in general (other than as a result of a breach of this Subsection 3.4 by such Investor), (b) is or has been independently developed or conceived by the Investor without use of the Company's confidential information, or (c) is or has been made known or disclosed to the Investor by a third party without a breach of any obligation of confidentiality such third party may have to the Company; provided, however, that an Investor may disclose confidential information (i) to its attorneys, accountants, consultants, and other professionals to the extent necessary to obtain their services in connection with monitoring its investment in the Company; (ii) to any prospective purchaser of any Registrable Securities from such Investor, if such prospective purchaser agrees to be bound by the provisions of this Subsection 3.4; (iii) to any existing or prospective Affiliate, partner, member, shareholder, or wholly owned subsidiary of such Investor in the ordinary course of business, provided that such Investor informs such Person that such information is confidential and directs such Person to maintain the confidentiality of such information; or (iv) as may otherwise be required by law, provided that the Investor promptly notifies the Company of such disclosure and takes reasonable steps to minimize the extent of any such required disclosure.

4. Rights to Future Share Issuances.

4.1 Right of First Offer.

(a) Subject to the terms and conditions of this Subsection 4.1 and applicable securities laws, if the Company proposes to offer or sell any New Securities, the Company shall first offer such New Securities to each Investor. An Investor shall be entitled to apportion the right of first offer hereby granted to it, in such proportions as it deems appropriate, among (i) itself, (ii) its Affiliates and (iii) its beneficial interest holders, such as limited partners, members or any other Person having “beneficial ownership,” as such term is defined in Rule 13d-3 promulgated under the Exchange Act, of such Investor (“**Investor Beneficial Owners**”).

(b) The Company shall give written notice (the “**Offer Notice**”) to each Investor, stating:

(i) its bona fide intention to offer such New Securities;

(ii) the number of such New Securities to be offered;

(iii) the price and terms, if any, upon which it proposes to offer such New Securities; and

(iv) such other documents and information as the Investors may reasonably request for the purpose of making an investment decision or verifying the number of shares it is entitled to purchase in such offering.

(c) By written notification to the Company within fifteen (15) days after the Offer Notice is given, each Investor may elect to purchase or otherwise acquire, at the price and on the terms specified in the Offer Notice, up to its *pro rata* share of such New Securities. At the expiration of such fifteen (15) day period, the Company shall promptly notify each Investor that elects to purchase or acquire all the shares available to it (each, a “**Fully Exercising Investor**”) of any other holder’s failure to do likewise. During the ten (10) day period commencing after the Company has given such notice, each Fully Exercising Investor may, by giving notice to the Company, elect to purchase or acquire, in addition to the number of shares specified above, its *pro rata* share of the non-purchasing Investors’ portion. An Investor’s *pro rata* share, for purposes of this right of first offer, is equal to the ratio of (i) the number of shares of Common Stock (assuming full conversion of the Preferred Stock into Common Stock but excluding any Common Stock issuable upon exercise or conversion of Derivative Securities (other than Preferred Stock)) owned by such Investor immediately prior to the issuance of New Securities to (ii) the total number of shares of Common Stock outstanding immediately prior to the issuance of New Securities (assuming full conversion of the Preferred Stock into Common Stock but excluding any Common Stock issuable upon exercise or conversion of Derivative Securities (other than Preferred Stock)). The closing of any sale pursuant to this Subsection 4.1(c) shall occur within ninety (90) days of the date that the Offer Notice is given.

(d) If all New Securities referred to in the Offer Notice are not elected to be purchased or acquired as provided in Subsection 4.1(c), the Company may, during the ninety (90) day period following the expiration of the periods provided in Subsection 4.1(c), offer and sell the remaining unsubscribed portion of such New Securities to any Person or Persons at a price not less than, and upon terms no more favorable to the offeree than, those specified in the Offer Notice. If the Company does not enter into an agreement for the sale of the New Securities within such period, or if such agreement is not consummated within thirty (30) days of the execution thereof, the right provided hereunder shall be deemed to be revived and such New Securities shall not be offered unless first reoffered to the Investors in accordance with this Subsection 4.1.

(e) The right of first offer in this Subsection 4.1 shall not be applicable to (i) Exempted Securities (as such term is defined in the Certificate of Incorporation); and (ii) the issuance of Common Stock and Preferred Stock in the Reorganization pursuant to that certain Stock Purchase Agreement dated as of the date hereof.

(f) The right of first offer set forth in this Subsection 4.1 shall terminate with respect to any Investor who fails to purchase in an offering of New Securities subject to this Subsection 4.1 at least twenty-five percent (25%) of such holder's pro rata amount of the New Securities allocated (or, if less than such holder's pro rata amount is offered by the Company, such lesser amount so offered) to such holder pursuant to this Subsection 4.1. Following any such termination, such Investor shall no longer be deemed an Investor for any purpose of this Subsection 4.1.

4.2 Termination. The covenants set forth in Subsection 4.1 shall terminate and be of no further force or effect: (i) immediately prior to the consummation of the IPO; (ii) upon the conversion of all Preferred Stock into Common Stock; or (iii) upon the consummation of any voluntary or involuntary liquidations, dissolution or winding up of the Company or Deemed Liquidation Event (as defined in the Certificate of Incorporation); provided that for the purpose of subpart (iii) if the Company, together with its Affiliates, has annual worldwide gross sales of prescription pharmaceutical products of at least one billion dollars (\$1,000,000,000) as reported on their most recent financial statements, such Deemed Liquidation Event must include the part of the Company's business that exercises all rights granted under the Stanford License.

5. Additional Covenants.

5.1 Insurance. The Company will purchase, within ninety (90) days of the date hereof, and maintain in full force and effect from financially sound and reputable insurers (a) key-man life insurance upon the life of the Company's CEO in the amount of \$1,000,000 with the Company named as beneficiary thereunder, and (b) director and officers liability insurance with coverage limits that are customary for similarly situated companies and upon terms acceptable to the Board of Directors, including a majority of the Preferred Directors. The Company shall not discontinue such insurance policies without the approval of the Board of Directors, including the approval of a majority of the Preferred Directors.

5.2 Employee Agreements. The Company will cause each person now or hereafter employed by it or by any subsidiary (or engaged by the Company or any subsidiary as a consultant/independent contractor) with access to confidential information and/or trade secrets to enter into a nondisclosure and proprietary rights assignment agreement. In addition, the Company shall not amend, modify, terminate, waive, or otherwise alter, in whole or in part, any of the above-referenced agreements or any restricted share agreement between the Company and any employee, without the consent of a majority of the Preferred Directors.

5.3 Employee Shares. Unless otherwise approved by the Board of Directors, including a majority of the Preferred Directors, all future employees and consultants of the Company who purchase, receive options to purchase, or receive awards of shares of the Company's capital stock after the date hereof shall be required to execute restricted share or option agreements, as applicable, providing for (i) vesting of shares over a four (4) year period, with the first twenty-five percent (25%) of such shares vesting following twelve (12) months of continued employment or service, and the remaining shares vesting in equal monthly installments over the following thirty-six (36) months, and (ii) a market stand-off provision substantially similar to that in Subsection 2.11. In addition, unless otherwise approved by the Board of Directors, including a majority of the Preferred Directors, the Company shall retain a "right of first refusal" on employee transfers until the Company's IPO and shall have the right to repurchase unvested shares at par value upon termination of employment of a holder of restricted shares.

5.4 Matters Requiring Preferred Director Approval. So long as the holders of Preferred Stock are entitled to designate at least one Preferred Director pursuant to the Voting Agreement, the Company hereby covenants and agrees with each of the Investors that it shall not, without approval of the Board of Directors, which approval must include the affirmative vote of the majority of the Preferred Directors:

(a) authorize, create, incur any obligation to issue or issue any shares of any class or series of stock of the Company;

(b) effect a liquidation of the Company or effect a Deemed Liquidation Event;

(c) issue Common Stock or increase the authorized number of Common Stock, including for the purposes of (i) issuing shares upon exercise of outstanding options to purchase Common Stock or warrants for the purchase of Common Stock; (ii) issuing shares upon the conversion of Preferred Stock; or (iii) issuing shares in connection with a share split, share dividend or other recapitalization;

(d) (A) pay or declare any dividends or other distributions on the Common Stock or redeem or repurchase (other than pursuant to clause (B)) any shares of the Company's capital stock or options to purchase capital stock, including payment of dividends on Preferred Stock, or (B) the repurchase of capital stock from employees of the Company upon a termination of employment pursuant to agreements to repurchase such capital stock;

(e) amend, terminate or waive any provision of the Certificate of Incorporation;

(f) make any changes or additions to the Board of Directors other than changes to the Preferred Directors, which changes shall be solely the right of the appointer of such Preferred Director;

(g) make, or permit any subsidiary to make, any loan or advance to, or own any stock or other securities of, any subsidiary or other corporation, partnership, or other entity unless it is wholly owned by the Company;

(h) make, or permit any subsidiary to make, any loan or advance to any person, including, any employee or director of the Company or any subsidiary, except advances and similar expenditures in the ordinary course of business or under the terms of the existing stock option plan or any new equity incentive plan approved by the Board of Directors;

(i) guarantee, directly or indirectly, or permit any subsidiary to guarantee, directly or indirectly, any indebtedness except for trade accounts of the Company or any subsidiary arising in the ordinary course of business;

(j) make any investment inconsistent with any investment policy approved by the Board of Directors;

(k) incur any aggregate indebtedness in excess of \$500,000 that is not already included in a Board of Directors-approved budget or is incurred in the ordinary course of business;

(l) enter into or be a party to any transaction with any director, officer or employee of the Company or any subsidiary or any “associate” (as defined in Rule 12b-2 promulgated under the Exchange Act) of any such person, except for transactions made in the ordinary course of business and pursuant to reasonable requirements of the Company’s business and upon fair and reasonable terms that are approved by a majority of the Board of Directors (including a majority of the Preferred Directors);

(m) hire, fire, or change the compensation of any executive officer of the Company, including approving any option grants;

(n) change the principal line of business of the Company or any subsidiary;

(o) sell, assign, license, pledge or encumber material technology or intellectual property, other than licenses granted in the ordinary course of business; or

(p) enter into any corporate strategic relationship involving the payment contribution or assignment by the Company (or any subsidiary) or to the Company (or any subsidiary) of assets greater than \$500,000.

5.5 **Board Matters.** Unless otherwise determined by the vote of a majority of the directors then in office, including the vote of a majority of the Preferred Directors, the Board of Directors shall meet at least quarterly in accordance with an agreed-upon schedule. The Company shall reimburse the nonemployee directors for all reasonable out-of-pocket travel expenses incurred (consistent with the Company's travel policy) in connection with (i) attending meetings of the Board of Directors (or committees thereof) (ii) attending other functions on behalf of the Company, or (iii) the performance of their duties as directors.

5.6 **Successor Indemnification.** If the Company or any of its successors or assignees consolidates with or merges into any other Person and is not the continuing or surviving corporation or entity of such consolidation or merger, then to the extent necessary, proper provision shall be made so that the successors and assignees of the Company assume the obligations of the Company with respect to indemnification of members of the Board of Directors as in effect immediately before such transaction, whether such obligations are contained in the Certificate of Incorporation, or elsewhere, as the case may be.

5.7 **Indemnification Matters.** The Company hereby acknowledges that one (1) or more of the directors nominated to serve on the Board of Directors by the Investors (each a "**Fund Director**") may have certain rights to indemnification, advancement of expenses and/or insurance provided by one or more of the Investors and certain of their affiliates (collectively, the "**Fund Indemnitors**"). The Company hereby agrees (a) that the Company (pursuant to and in accordance with its Certificate of Incorporation and any indemnification agreement entered into between the Company and the Fund Director) and its subsidiary ALX Oncology Inc. ("**AOI**") (pursuant to and in accordance with any indemnification agreement entered into between AOI and the Fund Director) are the indemnitors of first resort (*i.e.*, their obligations to any such Fund Director are primary and any obligation of the Fund Indemnitors to advance expenses or to provide indemnification for the same expenses or liabilities incurred by such Fund Director are secondary), (b) that the Company and/or AOI (in each case, to the extent permitted by law) shall be required to advance the full amount of expenses incurred by such Fund Director and shall be liable for the full amount of all expenses, judgments, penalties, fines and amounts paid in settlement by or on behalf of any such Fund Director to the extent legally permitted and as required or permitted by the Certificate of Incorporation (or any agreement between the Company, AOI or any other subsidiary of the Company and such Fund Director), without regard to any rights such Fund Director may have against the Fund Indemnitors, and (c) that the Company and AOI irrevocably waive, relinquish and release the Fund Indemnitors from any and all claims against the Fund Indemnitors for contribution, subrogation or any other recovery of any kind in respect thereof. The Company and AOI further agree that no advancement or payment by the Fund Indemnitors on behalf of any such Fund Director with respect to any claim for which such Fund Director has sought indemnification from the Company and/or AOI shall affect the foregoing and the Fund Indemnitors shall have a right of contribution and/or be subrogated to the extent of such advancement or payment to all of the rights of recovery of such Fund Director against the Company and/or AOI.

5.8 **Expenses of Counsel.** In the event of a transaction which is a Deemed Liquidation Event (as defined in the Certificate of Incorporation), the reasonable fees and disbursements, not to exceed \$50,000, of one counsel for the Investors ("**Investor Counsel**"), in their capacities as shareholders, shall be borne and paid by the Company. At the outset of considering a transaction which, if consummated would constitute a Deemed Liquidation Event, the Company shall obtain the ability to share with the Investor Counsel (and such counsel's

clients) and shall share the confidential information (including, without limitation, the initial and all subsequent drafts of memoranda of understanding, letters of intent and other transaction documents and related noncompete, employment, consulting and other compensation agreements and plans) pertaining to and memorializing any of the transactions which, individually or when aggregated with others would constitute the Deemed Liquidation Event. The Company shall be obligated to share (and cause the Company's counsel and investment bankers to share) such materials when distributed to the Company's executives and/or any one or more of the other parties to such transaction(s). In the event that Investor Counsel deems it appropriate, in its reasonable discretion, to enter into a joint defense agreement or other arrangement to enhance the ability of the parties to protect their communications and other reviewed materials under the attorney client privilege, the Company shall, and shall direct its counsel to, execute and deliver to Investor Counsel and its clients such an agreement in form and substance reasonably acceptable to Investor Counsel. In the event that one or more of the other party or parties to such transactions require the clients of Investor Counsel to enter into a confidentiality agreement and/or joint defense agreement in order to receive such information, then the Company shall share whatever information can be shared without entry into such agreement and shall, at the same time, in good faith work expeditiously to enable Investor Counsel and its clients to negotiate and enter into the appropriate agreement(s) without undue burden to the clients of Investor Counsel.

5.9 Foreign Corrupt Practices Act. None of the Company and any of its directors, officers, employees or, to the Company's knowledge, agents of the Company acting on its behalf, has (a) directly or indirectly given, agreed, offered or promised to give any illegal gift, contribution, payment, bribe, kickback or similar benefit to any supplier, customer, governmental official or employee, political party, candidate for public office or other person or entity who was, is or may be in a position to help or hinder the Company, or has made or agreed to make an illegal contribution, or to reimburse any illegal political gift or contribution made by any other person or entity, to any candidate for federal, state, local or foreign public office or to a political party, or (b) established or maintained any unrecorded fund or asset or made any false, incomplete or misleading entries on any books or records for any purpose in any case, which could have resulted in a violation or liability pursuant to the U.S. Foreign Corrupt Practices Act or any other anti-corruption laws in any jurisdiction.

5.10 Termination of Covenants. The covenants set forth in this Section 5, except for Subsections 5.6, 5.7 and 5.8, shall terminate and be of no further force or effect (i) immediately before the consummation of the IPO or (ii) upon a Deemed Liquidation Event, whichever event occurs first.

6. Miscellaneous.

6.1 Successors and Assigns. The rights under this Agreement may be assigned (but only with all related obligations) by a Holder to a transferee of Registrable Securities that (i) is an Affiliate of a Holder; (ii) is a Holder's Immediate Family Member or trust for the benefit of an individual Holder or one or more of such Holder's Immediate Family Members; or (iii) after such transfer, holds at least a majority of the Registrable Securities held by the Holder immediately prior to such transfer (subject to appropriate adjustment for share

splits, share dividends, combinations, and other recapitalizations); provided, however, that (x) the Company is, within a reasonable time after such transfer, furnished with written notice of the name and address of such transferee and the Registrable Securities with respect to which such rights are being transferred; and (y) such transferee agrees in a written instrument delivered to the Company to be bound by and subject to the terms and conditions of this Agreement, including the provisions of Subsection 2.11. For the purposes of determining the number of Registrable Securities held by a transferee, the holdings of a transferee (1) that is an Affiliate or shareholder of a Holder; (2) who is a Holder's Immediate Family Member; or (3) that is a trust for the benefit of an individual Holder or such Holder's Immediate Family Member shall be aggregated together and with those of the transferring Holder; provided further that all transferees who would not qualify individually for assignment of rights shall have a single attorney-in-fact for the purpose of exercising any rights, receiving notices, or taking any action under this Agreement. The terms and conditions of this Agreement inure to the benefit of and are binding upon the respective successors and permitted assignees of the parties. Nothing in this Agreement, express or implied, is intended to confer upon any party other than the parties hereto or their respective successors and permitted assignees any rights, remedies, obligations or liabilities under or by reason of this Agreement, except as expressly provided herein.

6.2 Governing Law. This Agreement shall be governed by and construed in accordance with the laws of the State of Delaware, without regard to its principles of conflicts of laws.

6.3 Counterparts. This Agreement may be executed in two (2) or more counterparts, each of which shall be deemed an original, but all of which together shall constitute one and the same instrument. Counterparts may be delivered via facsimile, electronic mail (including pdf or any electronic signature complying with the U.S. federal ESIGN Act of 2000, *e.g.*, www.docusign.com) or other transmission method and any counterpart so delivered shall be deemed to have been duly and validly delivered and be valid and effective for all purposes.

6.4 Titles and Subtitles. The titles and subtitles used in this Agreement are for convenience only and are not to be considered in construing or interpreting this Agreement.

6.5 Notices. All notices and other communications given or made pursuant to this Agreement shall be in writing and shall be deemed effectively given upon the earlier of actual receipt or (i) personal delivery to the party to be notified; (ii) when sent, if sent by electronic mail or facsimile during the recipient's normal business hours, and if not sent during normal business hours, then on the recipient's next business day; (iii) five (5) days after having been sent by registered or certified mail, return receipt requested, postage prepaid; or (iv) one (1) business day after the business day of deposit with a nationally recognized overnight courier, freight prepaid, specifying next-day delivery, with written verification of receipt. All communications shall be sent to the respective parties at their addresses as set forth on Schedule A hereto, or to the principal office of the Company and to the attention of the Chief Executive Officer, in the case of the Company, or to such email address, facsimile number, or address as subsequently modified by written notice given in accordance with this Subsection 6.5.

6.6 Amendments and Waivers. Any term of this Agreement may be amended, modified or terminated and the observance of any term of this Agreement may be waived (either generally or in a particular instance, and either retroactively or prospectively) only with the written consent of the Company and the holders of at least two-thirds (2/3rds) of the Registrable Securities then outstanding; provided that the Company may in its sole discretion waive compliance with Subsection 2.12(c) (and the Company's failure to object promptly in writing after notification of a proposed assignment allegedly in violation of Subsection 2.12(c) shall be deemed to be a waiver); provided further that any provision hereof may be waived by any waiving party on such party's own behalf, without the consent of any other party; and provided further, Subsection 1.20(iv) may not be amended or waived without the written consent of Stanford. Notwithstanding the foregoing, this Agreement may not be amended, modified or terminated and the observance of any term hereof may not be waived with respect to any Investor without the written consent of such Investor, unless such amendment, modification, termination, or waiver applies to all Investors in the same fashion (it being agreed that a waiver of the provisions of Section 4 with respect to a particular transaction shall be deemed to apply to all Investors in the same fashion if such waiver does so by its terms, notwithstanding the fact that certain Investors may nonetheless, by agreement with the Company, purchase securities in such transaction). Any amendment, modification, termination, or waiver effected in accordance with this Subsection 6.6 shall be binding on all parties hereto, regardless of whether any such party has consented thereto. No waivers of or exceptions to any term, condition, or provision of this Agreement, in any one or more instances, shall be deemed to be or construed as a further or continuing waiver of any such term, condition, or provision.

6.7 Severability. In case any one or more of the provisions contained in this Agreement is for any reason held to be invalid, illegal or unenforceable in any respect, such invalidity, illegality, or unenforceability shall not affect any other provision of this Agreement, and such invalid, illegal, or unenforceable provision shall be reformed and construed so that it will be valid, legal, and enforceable to the maximum extent permitted by law.

6.8 Aggregation of Shares. All Registrable Securities held or acquired by Affiliates shall be aggregated together for the purpose of determining the availability of any rights under this Agreement and such Affiliated persons may apportion such rights as among themselves in any manner they deem appropriate.

6.9 Entire Agreement. This Agreement (including any Schedules and Exhibits hereto) constitutes the full and entire understanding and agreement among the parties with respect to the subject matter hereof, and any other written or oral agreement relating to the subject matter hereof existing between the parties, including without limitation the Prior Agreement, is expressly canceled.

6.10 Dispute Resolution. The parties (a) hereby irrevocably and unconditionally submit to the jurisdiction of the state courts of California and to the jurisdiction of the United States District Court for the Northern District of California for the purpose of any suit, action or other proceeding arising out of or based upon this Agreement, (b) agree not to commence any suit, action or other proceeding arising out of or based upon this Agreement except in the state courts of California or the United States District Court for the Northern

District of California, and (c) hereby waive, and agree not to assert, by way of motion, as a defense, or otherwise, in any such suit, action or proceeding, any claim that it is not subject personally to the jurisdiction of the above-named courts, that its property is exempt or immune from attachment or execution, that the suit, action or proceeding is brought in an inconvenient forum, that the venue of the suit, action or proceeding is improper or that this Agreement or the subject matter hereof may not be enforced in or by such court.

WAIVER OF JURY TRIAL: EACH PARTY HEREBY WAIVES ITS RIGHTS TO A JURY TRIAL OF ANY CLAIM OR CAUSE OF ACTION BASED UPON OR ARISING OUT OF THIS AGREEMENT, THE OTHER TRANSACTION DOCUMENTS, THE SECURITIES OR THE SUBJECT MATTER HEREOF OR THEREOF. THE SCOPE OF THIS WAIVER IS INTENDED TO BE ALL-ENCOMPASSING OF ANY AND ALL DISPUTES THAT MAY BE FILED IN ANY COURT AND THAT RELATE TO THE SUBJECT MATTER OF THIS TRANSACTION, INCLUDING, WITHOUT LIMITATION, CONTRACT CLAIMS, TORT CLAIMS (INCLUDING NEGLIGENCE), BREACH OF DUTY CLAIMS, AND ALL OTHER COMMON LAW AND STATUTORY CLAIMS. THIS SECTION HAS BEEN FULLY DISCUSSED BY EACH OF THE PARTIES HERETO AND THESE PROVISIONS WILL NOT BE SUBJECT TO ANY EXCEPTIONS. EACH PARTY HERETO HEREBY FURTHER WARRANTS AND REPRESENTS THAT SUCH PARTY HAS REVIEWED THIS WAIVER WITH ITS LEGAL COUNSEL, AND THAT SUCH PARTY KNOWINGLY AND VOLUNTARILY WAIVES ITS JURY TRIAL RIGHTS FOLLOWING CONSULTATION WITH LEGAL COUNSEL.

The prevailing party shall be entitled to reasonable attorney's fees, costs, and necessary disbursements in addition to any other relief to which such party may be entitled. Each of the parties to this Agreement consents to personal jurisdiction for any equitable action sought in the U.S. District Court for the Northern District of California or any court of the State of California having subject matter jurisdiction.

6.11 Delays or Omissions. No delay or omission to exercise any right, power, or remedy accruing to any party under this Agreement, upon any breach or default of any other party under this Agreement, shall impair any such right, power, or remedy of such nonbreaching or nondefaulting party, nor shall it be construed to be a waiver of or acquiescence to any such breach or default, or to any similar breach or default thereafter occurring, nor shall any waiver of any single breach or default be deemed a waiver of any other breach or default theretofore or thereafter occurring. All remedies, whether under this Agreement or by law or otherwise afforded to any party, shall be cumulative and not alternative.

6.12 Acknowledgment. The Company acknowledges that the Investors are in the business of venture capital investing and therefore review the business plans and related proprietary information of many enterprises, including enterprises which may have products or services which compete directly or indirectly with those of the Company. Nothing in this Agreement shall preclude or in any way restrict the Investors from investing or participating in any particular enterprise whether or not such enterprise has products or services which compete with those of the Company.

6.13 **Conflicts.** If there is any conflict between the provisions of this Agreement and any provision of the Certificate of Incorporation, as may be amended from time to time, the parties hereto shall use their reasonable best efforts to resolve such conflict so that the provisions of this Agreement shall apply to the maximum extent possible, including (without limitation) by amendment of such conflicting documents, as shall be necessary to carry out the provisions of this Agreement; provided that in all such cases the terms and provisions of this Agreement shall control.

[Remainder of Page Intentionally Left Blank]

IN WITNESS WHEREOF, the parties have executed this Amended and Restated Investors' Rights Agreement as of the date first written above.

COMPANY:

ALX ONCOLOGY HOLDINGS INC.

By: /s/ Jaume Pons

Jaume Pons

Chief Executive Officer

SIGNATURE PAGE TO AMENDED AND RESTATED INVESTOR RIGHTS AGREEMENT

IN WITNESS WHEREOF, the parties have executed this Amended and Restated Investors' Rights Agreement as of the date first written above.

ALX:

ALX ONCOLOGY LIMITED

By: /s/ Jaume Pons

Jaume Pons

Director

SIGNATURE PAGE TO AMENDED AND RESTATED INVESTOR RIGHTS AGREEMENT

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INVESTORS:

ALEXANDRIA VENTURE INVESTMENTS, LLC

By: Alexandria Real Estate Equities, Inc., its managing member

By: /s/ Aaron Jacobson

Name: Aaron Jacobson

Title: SVP – Venture Counsel

BIOTECHNOLOGY VALUE FUND, L.P.

By: /s/ Mark Lampert

Name: Mark Lampert

Title: Chief Executive Officer of BVF I GP LLC, itself General Partner of Biotechnology Value Fund, L.P.

BIOTECHNOLOGY VALUE FUND II, L.P.

By: /s/ Mark Lampert

Name: Mark Lampert

Title: Chief Executive Officer of BVF II GP LLC, itself General Partner of Biotechnology Value Fund II, L.P.

BIOTECHNOLOGY VALUE TRADING FUND OS, L.P.

By: /s/ Mark Lampert

Name: Mark Lampert

Title: President of BVF Inc., General Partner of BVF Partners L.P., itself sole member of BVF Partners OS Ltd., itself GP of Biotechnology Value Trading Fund OS, L.P.

SIGNATURE PAGE TO AMENDED AND RESTATED INVESTOR RIGHTS AGREEMENT

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INVESTORS:

MSI BVF SPV LLC

By: /s/ Mark Lampert
Name: Mark Lampert
Title: President of BVF Inc., General Partner of BVF Partners L.P., itself attorney-in-fact for MSI BVF SPV, L.L.C

CORMORANT PRIVATE HEALTHCARE FUND II, LP
By: Cormorant Private Healthcare GP II, LLC

By: /s/ Bihua Chen
Bihua Chen, Managing Member

CORMORANT GLOBAL HEALTHCARE MASTER FUND, LP

By: Cormorant Global Healthcare GP, LLC

By: /s/ Bihua Chen
Bihua Chen, Managing Member

CRMA SPV, LP

By: Cormorant Asset Management, LP

By: /s/ Bihua Chen
Bihua Chen, Chief Executive Officer and Managing Member

FORESITE CAPITAL FUND IV, L.P.

By: Foresite Capital Management IV, LLC its General Partner

By: /s/ Dennis Ryan
Dennis Ryan, Chief Financial Officer

SIGNATURE PAGE TO AMENDED AND RESTATED INVESTOR RIGHTS AGREEMENT

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INVESTORS:

EMALDI CORPORATION

By: /s/ Corey Goodman

Name: Corey Goodman

Title: Director

GOODMAN BARINAGA TRUST

By: /s/ Corey Goodman

Name: Corey Goodman

Title: Trustee

HBM Healthcare Investments (Cayman) Ltd.

By: /s/ Jean-Marc Lesieur

Name: Jean-Marc Lesieur

Title: Managing Director

SIGNATURE PAGE TO AMENDED AND RESTATED INVESTOR RIGHTS AGREEMENT

above. IN WITNESS WHEREOF, the parties have executed this Amended and Restated Investors' Rights Agreement as of the date first written

INVESTORS:

JANUS HENDERSON GLOBAL LIFE SCIENCES FUND

BY: JANUS CAPITAL MANAGEMENT, LLC, ITS ADVISOR

By: /s/ Andrew Acker
Name: Andrew Acker
Title: Portfolio Manager and Authorized Signatory

JANUS HENDERSON CAPITAL FUNDS PLC ON BEHALF OF ITS SERIES

JANUS HENDERSON GLOBAL LIFE SCIENCES FUND

BY: JANUS CAPITAL MANAGEMENT, LLC, ITS ADVISOR

By: /s/ Andrew Acker
Name: Andrew Acker
Title: Portfolio Manager and Authorized Signatory

JANUS HENDERSON HORIZON FUND – BIOTECHNOLOGY FUND

BY: JANUS CAPITAL MANAGEMENT, LLC, ITS ADVISOR

By: /s/ Andrew Acker
Name: Andrew Acker
Title: Portfolio Manager and Authorized Signatory

JANUS HENDERSON BIOTECH INNOVATION MASTER FUND LIMITED

BY: JANUS CAPITAL MANAGEMENT, LLC, ITS ADVISOR

By: /s/ Andrew Acker
Name: Andrew Acker
Title: Portfolio Manager and Authorized Signatory

SIGNATURE PAGE TO AMENDED AND RESTATED INVESTOR RIGHTS AGREEMENT

above. IN WITNESS WHEREOF, the parties have executed this Amended and Restated Investors' Rights Agreement as of the date first written

INVESTORS:

JAUME PONS

/s/ Jaume Pons

JOAQUIM TRIAS REVOCABLE TRUST DTD 08/26/05

By: /s/ Joaquim Trias

Name: Joaquim Trias

Title: Trustee

KWAUK AND WAN FAMILY TRUST

By: /s/ Hong Wan

Name: Hong Wan

Title: Trustee

LOGOS OPPORTUNITIES FUND I, L.P.

By: Logos Opportunities GP, LLC
its General Partner

By: /s/ Graham Walmsley

Graham Walmsley, Manager

SIGNATURE PAGE TO AMENDED AND RESTATED INVESTOR RIGHTS AGREEMENT

above. IN WITNESS WHEREOF, the parties have executed this Amended and Restated Investors' Rights Agreement as of the date first written

INVESTORS:

LIGHTSTONE VENTURES, LP

By: its general partner LSV Associates, LLC.

By: /s/ Jason Lettmann

Jason Lettmann
General Partner

LIGHTSTONE VENTURES (A), LP

By: its general partner LSV Associates, LLC.

By: /s/ Jason Lettmann

Jason Lettmann
General Partner

LIGHTSTONE VENTURES II, LP

By: its general partner LSV Associates II, LLC

By: /s/ Jason Lettmann

Jason Lettmann
General Partner

LIGHTSTONE VENTURES II (A), LP

By: its general partner LSV Associates II, LLC

By: /s/ Jason Lettmann

Jason Lettmann
General Partner

JASON LETTMANN

/s/ Jason Lettmann

SIGNATURE PAGE TO AMENDED AND RESTATED INVESTOR RIGHTS AGREEMENT

IN WITNESS WHEREOF, the parties have executed this Amended and Restated Investors' Rights Agreement as of the date first written above.

INVESTORS:

**LONGEVITY FUNDS 2 LLC for
LONGEVITY FUND 2 LP**

By: /s/ Laura Deming

Name: Laura Deming

Title: Partner

**LONGEVITY FUNDS LLC for
LONGEVITY FUND 1 LP**

By: /s/Laura Deming

Name: Laura Deming

Title: Partner

MICHAEL CHANG

/s/ Michael Chang

PAUL AND DEBRA JENSEN LIVING TRUST

By: /s/ Paul Jensen

Name: Paul Jensen

Title: Trustee

R. RANDOLPH SCOTT

/s/ R. Randolph Scott

RICH HEYMAN

/s/ Rich Heyman

SIGNATURE PAGE TO AMENDED AND RESTATED INVESTOR RIGHTS AGREEMENT

IN WITNESS WHEREOF, the parties have executed this Amended and Restated Investors' Rights Agreement as of the date first written above.

INVESTORS:

ROBERT ADELMAN

/s/ Robert Adelman

**THE BOARD OF TRUSTEES OF THE LELAND
STANFORD JUNIOR UNIVERSITY**

**THE BOARD OF TRUSTEES OF THE LELAND
STANFORD JUNIOR UNIVERSITY (PVF)**

By: /s/ Sabrina Liang

Sabrina Liang, Authorized Signatory on behalf of
The Board of Trustees of the Leland Stanford Junior
University (PVF) & The Board of Trustees of the
Leland Stanford Junior University

TRESSA NOEHREN

/s/ Tressa Noehren

SIGNATURE PAGE TO AMENDED AND RESTATED INVESTOR RIGHTS AGREEMENT

IN WITNESS WHEREOF, the parties have executed this Amended and Restated Investors' Rights Agreement as of the date first written above.

INVESTORS:

VENBIO GLOBAL STRATEGIC FUND, L.P.

By: venBio Global Strategic GP, L.P., its general partner

By: venBio Global Strategic GP, Ltd., its general partner

By: /s/ Corey Goodman

Corey Goodman

Director

VENBIO GLOBAL STRATEGIC FUND II, L.P.

By: venBio Global Strategic GP II, L.P., its general partner

By: venBio Global Strategic GP II, Ltd., its general partner

By: /s/ Corey Goodman

Corey Goodman

Director

VIVO CAPITAL FUND IX, L.P.

By: Vivo Capital IX, LLC, General Partner

By: /s/ Albert Cha

Name: Albert Cha

Title: Managing Member

SIGNATURE PAGE TO AMENDED AND RESTATED INVESTOR RIGHTS AGREEMENT

SCHEDULE A

Investors

Alexandria Venture Investments, LLC
Biotechnology Value Fund, L.P.
Biotechnology Value Fund II, L.P.
Biotechnology Value Fund Trading Fund OS, L.P.
MSI BVF SPV LLC
Goodman Barinaga Trust (Corey Goodman, Trustee)
Cormorant Private Healthcare Fund II, L.P.
Cormorant Global Healthcare Master Fund L.P.
CRMA SPV, L.P.
Foresite Capital Fund IV, L.P.
Emaldi Corporation
HBM Healthcare Investments (Cayman) Ltd
Janus Henderson Global Life Sciences Fund
Janus Henderson Capital Funds plc—Janus Henderson Global Life Sciences Fund
Janus Henderson Horizon Fund—Biotechnology Fund
Janus Henderson Biotech Innovation Master Fund Limited
Jason Lettmann
Jaume Pons
Joaquim Trias Revocable Trust dtd 08/26/05 (Joaquim Trias, Trustee)
Kwauk and Wan Family Trust (Hong Wan, Trustee)
Lightstone Ventures (A), L.P.
Lightstone Ventures, L.P.
Lightstone Ventures II (A), L.P.
Lightstone Ventures II, L.P.
Logos Opportunities Fund I, L.P.
Longevity Fund 1 L.P.
Longevity Fund 2 L.P.
Michael Chang
Paul and Debra Jensen Living Trust (Paul Jensen, Trustee)
R. Randolph Scott
Rich Heyman
Robert Adelman
The Board of Trustees of the Leland Stanford Junior University (PVF)
Tressa Noehren
VenBio Global Strategic Fund, L.P.
VenBio Global Strategic Fund II, L.P.
Vivo Capital Fund IX, L.P.

SUBSIDIARIES OF ALX ONCOLOGY HOLDINGS INC.

<u>Name of Subsidiary</u>	<u>Jurisdiction of Incorporation or Organization</u>
ALX Oncology Limited	Ireland
ALX Oncology Incorporated	Delaware
Alexo Holding Limited	Malta
Alexo Therapeutics International	Cayman Islands
Sirpant Therapeutics	Cayman Islands