

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

**Amendment No. 1
FORM S-1
REGISTRATION STATEMENT
UNDER
THE SECURITIES ACT OF 1933**

G1 THERAPEUTICS, 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)

26-3648180
(I.R.S. Employer
Identification Number)

**79 T.W. Alexander Drive
4501 Research Commons, Suite 100
Research Triangle Park, NC 27709
(919) 213-9835**

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

**Mark A. Velleca, M.D., Ph.D.
President and Chief Executive Officer
G1 Therapeutics, Inc.
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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 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, or a smaller reporting company. See the definitions of "large accelerated filer," "accelerated filer" and "smaller reporting company" in Rule 12b-2 of the Exchange Act.

Large accelerated filer

Non-accelerated filer (Do not check if a smaller reporting company)

Accelerated filer

Smaller reporting company

Emerging growth company

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

CALCULATION OF REGISTRATION FEE

	Proposed maximum aggregate offering price(1)	Amount of registration fee(2)
Title of each class of securities to be registered		

Common stock, \$0.0001 par value per share	\$115,000,000	\$13,328.50(3)
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(1) Includes initial public offering price of shares that the underwriters have the option to purchase to cover overallocments, if any. Estimated solely for the purpose of calculating the amount of the registration fee pursuant to Rule 457(o) under the Securities Act of 1933, as amended.

(2) Calculated pursuant to Rule 457(o) based on an estimate of the proposed maximum aggregate initial public offering price.

(3) Previously paid.

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 or until this registration statement shall become effective on such date as the Securities and Exchange 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 nor does it seek an offer to buy these securities in any jurisdiction where the offer or sale is not permitted.

Subject to completion, dated April 26, 2017

Prospectus

shares



Common stock

This is an initial public offering of common stock by G1 Therapeutics, Inc. We are selling _____ shares of our common stock. The estimated initial public offering price is between \$ _____ and \$ _____ per share.

Prior to this offering, there has been no public market for our common stock. We have applied to list our common stock on The NASDAQ Global Market under the symbol "GTHX."

We are an "emerging growth company" under applicable Securities and Exchange Commission rules and will be subject to reduced public company reporting requirements.

	Per share	Total
Initial public offering price	\$ _____	\$ _____
Underwriting discounts and commissions(1)	\$ _____	\$ _____
Proceeds to G1 Therapeutics, Inc., before expenses	\$ _____	\$ _____

(1) We refer you to "Underwriting" on page 154 of this prospectus for additional information regarding total underwriter compensation.

We have granted the underwriters an option for a period of 30 days to purchase up to _____ additional shares of common stock.

Investing in our common stock involves a high degree of risk. See "[Risk factors](#)" beginning on page 12.

Neither the Securities and Exchange Commission nor any state securities commission has approved or disapproved of these securities or passed on the adequacy or accuracy of this prospectus. Any representation to the contrary is a criminal offense.

The underwriters expect to deliver the shares of common stock to investors on or about _____, 2017.

J.P. Morgan

Needham & Company

, 2017

Cowen and Company

Wedbush PacGrow

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We have not authorized anyone to provide any information or to make any representations other than those contained in this prospectus or in any free writing prospectuses we have prepared. We take no responsibility for, and can provide no assurance as to the reliability of, any other information that others may give you. This prospectus is an offer to sell only the shares offered hereby, but only under circumstances and in jurisdictions where it is lawful to do so. The information contained in this prospectus is current only as of its 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 does not contain all of the information that you should consider in making your investment decision. Before investing in our common stock, you should carefully read this entire prospectus, including our financial statements and the related notes thereto and the information set forth under the "Risk Factors" and "Management's Discussion and Analysis of Financial Condition and Results of Operations" sections of this prospectus. Unless the context otherwise requires, we use the terms "G1," "G1 Therapeutics," "Company," "we," "us" and "our" in this prospectus to refer to G1 Therapeutics, Inc.

Overview

We are a clinical-stage biopharmaceutical company focused on the discovery and development of novel therapeutics for the treatment of cancer. Our two clinical assets are based on our core understanding of cyclin-dependent kinases, or CDKs, a family of proteins that play an important role in the growth and proliferation of all human cells. Two particular CDKs, CDK4 and CDK6, collectively known as CDK4/6, represent a validated and promising class of targets for anti-cancer therapeutics. We have leveraged our deep expertise in CDK4/6 biology to discover and develop two highly potent and selective CDK4/6 inhibitors that may have broad applicability across multiple cancer indications. We believe we are the only company with two distinct clinical-stage CDK4/6 inhibitors, trilaciclib and G1T38, each of which has the potential to be the backbone therapy of multiple combination regimens.

CDK4/6 is required for growth and proliferation in certain normal cell types, such as hematopoietic stem and progenitor cells, or HSPCs. HSPCs reside in the bone marrow and are the "reservoir" from which all blood and immune system cells are formed. Additionally, CDK4/6 plays an integral role in the growth and proliferation of certain types of tumors. Tumors that rely on CDK4/6 to grow and proliferate are referred to as CDK4/6-dependent tumors, and include the most common kinds of prostate and breast cancer. Alternatively, some tumors can grow and proliferate without CDK4/6 activity and are referred to as CDK4/6-independent. CDK4/6 independent tumors include small cell lung cancer, or SCLC, and triple-negative breast cancer, or TNBC. Our two CDK4/6 inhibitors were rationally designed to treat distinct patient populations with different combination regimens. Trilaciclib is in development in combination with chemotherapy for the treatment of patients with CDK4/6-independent tumors. G1T38 is in development in combination with targeted therapies for the treatment of patients with CDK4/6-dependent tumors.

Product candidates

Trilaciclib, our most advanced candidate, is a potential first-in-class intravenous CDK4/6 inhibitor we rationally designed to preserve HSPCs and enhance immune system function during chemotherapy. Chemotherapy has significant clinical utility and continues to be the most effective treatment for many cancers. However, it also damages HSPCs (myelosuppression) and the immune system (immunosuppression), leading to severe adverse effects and limiting anti-tumor activity. We believe that if the beneficial effects of chemotherapy (i.e. potent tumor cell killing) could be maximized, while minimizing the deleterious side-effects of myelosuppression and immunosuppression, patient outcomes would be significantly improved.

In the open-label Phase 1b parts of two Phase 1b/2a trials of trilaciclib and chemotherapy in SCLC, response rates and tolerability have compared favorably to historical chemotherapy-only trials. For example, in 17 evaluable patients in the Phase 1b part of the trial in first-line SCLC patients, we have seen an 88% response rate (including one complete response, or CR) and a clinical benefit rate of 94%. In historical chemotherapy-

only trials, the response rates are approximately 50% and the CR rates are less than 1%. In the Phase 1b parts of these two trials, we have treated 51 patients with over 250 cycles of trilaciclib and chemotherapy, and have not had a single episode of febrile neutropenia – one of the most common adverse consequences of these chemotherapy regimens. Based on these compelling results, we initiated the randomized, placebo-controlled Phase 2a parts of these SCLC trials, as well as a randomized Phase 2 trial in patients with TNBC. Initial data from these trials are expected to be released in 2018.

To our knowledge, we are the only company developing a CDK4/6 inhibitor specifically for use with chemotherapy. We believe that trilaciclib has the potential to transform the chemotherapy treatment paradigm and significantly benefit patient outcomes. Additionally, based upon robust preclinical data, we believe that trilaciclib has the potential to significantly enhance the efficacy of checkpoint inhibitor/chemotherapy combinations. In December 2016, we entered into a non-exclusive collaboration with Genentech to evaluate trilaciclib in combination with Genentech's checkpoint inhibitor Tecentriq to realize this potential.

G1T38, our second clinical-stage candidate, is a potential best-in-class oral CDK4/6 inhibitor being developed to be used in combination with other targeted therapies to treat multiple cancers. We rationally designed G1T38 to improve upon and address the shortcomings of the approved CDK4/6 inhibitors Ibrance and Kisqali and others in development. Our preclinical data and early clinical data indicate the potential for continuous daily dosing and improved antitumor activity and tolerability. A Phase 1 trial of G1T38 in 75 healthy volunteers showed a favorable safety profile leading to the initiation of a Phase 1/2 trial in ER+, HER2- breast cancer (in combination with Faslodex) in January 2017. Preliminary results from the first six patients enrolled in the Phase 1/2 trial suggest that G1T38 may be able to address the shortcomings of the other CDK4/6 inhibitors. Our plans for G1T38 include combinations in other cancers, such as non-small cell lung cancer, or NSCLC, where we expect to begin a Phase 2 trial in 2018 in combination with an EGFR inhibitor. We believe that G1T38 has the potential to be the backbone therapy of multiple proprietary combination regimens.

As shown in the table below, we designed two distinct CDK4/6 inhibitors, trilaciclib and G1T38, with unique properties for different uses:

Two distinct CDK4/6 inhibitors, rationally designed and optimized by G1 Therapeutics

Drug	CDK4/6 tumor type	MOA	Dosing	Combination	Initial indications
Trilaciclib	Independent	Preserves HSPCs, enhances immune system function	IV, intermittent	Chemotherapy and/or checkpoint inhibitor	SCLC, TNBC
G1T38	Dependent	Stops tumor cell proliferation	Oral, daily	Targeted therapies (e.g. SERD, EGFRi)	ER+, HER2- breast cancer, NSCLC

As part of our strategy to develop wholly owned proprietary combinations that complement our CDK4/6 portfolio, we have exclusively in-licensed G1T48, a potential first/best-in-class oral selective estrogen receptor degrader, or SERD. We expect to initially develop G1T48 to be used in combination with G1T38 for the treatment of ER+, HER2- breast cancer. Based on compelling preclinical efficacy and safety data, we expect to file an investigational new drug application, or IND, or clinical trial authorization application, or CTA, for G1T48 in the fourth quarter of 2017. With an oral SERD (G1T48) and an oral CDK4/6 inhibitor (G1T38), we believe we are in a unique position as the only emerging biopharmaceutical company with a wholly owned or exclusively licensed, proprietary combination for this validated regimen in ER+, HER2- breast cancer. We plan to continue to leverage our proprietary assets and knowledge of CDK4/6 biology to explore additional combination treatments and to build a fully integrated oncology company.

Background on cancer treatments

Cancer is the second leading cause of death in the United States with approximately 1.7 million new cases and 600,000 deaths in 2016. We estimate that more than one million patients in the United States receive chemotherapy annually and that approximately 300,000 of these patients have CDK4/6-independent tumors where treatment with trilaciclib may provide significant benefit. Other cancers, such as many types of breast, prostate, colon, lung and brain cancers, as well as various hematologic malignancies, are CDK4/6-dependent. We estimate that at least 300,000 patients are diagnosed with late-stage CDK4/6-dependent tumors per year in the United States and could potentially benefit from G1T38. There are also approximately 160,000 women in the United States with late-stage ER+, HER2- breast cancer who could potentially benefit from G1T38 and G1T48.

Broadly speaking, the treatment of cancer can be divided into three major therapeutic categories: chemotherapy, immunotherapy/checkpoint inhibitors, and targeted agents. Nearly all patients diagnosed with cancer get treated with one or more or a combination of these treatment modalities during the course of their disease. We believe that oncology has entered a new treatment paradigm involving combination therapies to attack multiple underlying mechanisms of cancer cell growth and survival.

These therapeutics, while efficacious, have considerable challenges and limitations, as outlined below:

- **Chemotherapy:** Chemotherapy-induced myelosuppression causes abnormally low numbers of red blood cells, neutrophils, and/or platelets, putting patients at an increased risk for infection and bleeding, requiring hospitalizations, antibiotics, transfusions, and growth factor administrations. Moreover, dose reductions and delays are often needed to manage these side effects, limiting efficacy.
- **Cancer immunotherapy:** Despite impressive durability, less than 30% of patients respond to checkpoint inhibitors. One approach to increase response rate is the use of chemotherapy at the time of checkpoint inhibitor administration. While chemo-induced tumor cell death is immunogenic, chemotherapy also causes immunosuppression that can dampen the generation of a sustained anti-tumor response.
- **Targeted therapies:** Targeted therapies block critical receptors or enzymes that transduce signals for tumor cells to proliferate. Because cancer cells can become resistant to single-agent targeted therapies, combination regimens are being utilized more frequently. Each component of these combination regimens must be well tolerated to limit potential additive toxicities.

G1 Therapeutics' approach in addressing the challenges

Trilaciclib has been developed to maximize the beneficial effects of chemotherapy (i.e. potent tumor cell killing), while minimizing the deleterious side-effects of myelosuppression and immunosuppression, with the potential for significant improvements in patient outcomes. Trilaciclib aims to achieve these outcomes by preserving HSPCs and enhancing immune system function during chemotherapy. To our knowledge, we are the only company developing a CDK4/6 inhibitor in this way, and we believe that trilaciclib has the potential to transform the chemotherapy treatment paradigm and significantly benefit patient outcomes. We also believe that trilaciclib has the potential to become an essential component of checkpoint inhibitor/chemotherapy combination regimens.

G1T38 is a potential best-in-class oral CDK4/6 inhibitor with broad applicability to multiple cancers. We rationally designed G1T38 to improve upon and address the shortcomings of the approved CDK4/6 inhibitors Ibrance and Kisqali and others in development. In 2015, Ibrance became the first FDA-approved CDK4/6 inhibitor for use as a combination therapy for the treatment of ER+, HER2- breast cancer. Despite a favorable efficacy/tolerability profile, patients on Ibrance must be monitored for abnormally low numbers of neutrophils,

or neutropenia, and can only be given the drug on a 21 day-on/7 day-off schedule. Even with this dosing holiday, dose-delays and dose reductions due to persistent neutropenia are common. Despite these shortcomings, since its launch in the United States, Ibrance has been prescribed by more than 9,000 physicians to approximately 45,000 patients. Worldwide sales of Ibrance in 2016 were approximately \$2.1 billion and analysts estimate peak annual worldwide sales exceeding \$7 billion. Other CDK4/6 inhibitors in development have reported cardiovascular and liver side effects or gastrointestinal tolerability issues. We believe that G1T38 has the potential for continuous daily dosing and may be able to be given in combination with several targeted therapies that are on the market or in development. Moreover, our oral SERD, G1T48, gives us the opportunity to develop a wholly owned proprietary combination therapy, G1T38 + G1T48, for patients with ER+, HER2- breast cancer.

Pipeline overview

We believe that our CDK4/6 inhibitor candidates have the potential to treat nearly all forms of cancer and be administered in combination with most conventional and emerging cancer therapies. Both trilaciclib and G1T38 were designed and synthesized by us, and we hold an exclusive license to G1T48. We own or exclusively license and control the worldwide commercial rights to each of our product candidates, and own or hold exclusive rights to over 120 U.S. and international patents and pending patent applications covering our product development programs.

Program	Initial indications	Phase	Expected milestones	Additional potential indications	Worldwide commercial rights
trilaciclib (IV CDK4/6 inhibitor)	1st-line SCLC	1b/2a	Phase 1b complete. Report initial Phase 2a data in 2018	NSCLC, bladder, head and neck cancer	
	2nd/3rd-line SCLC	1b/2a	Phase 1b complete. Report initial Phase 2a data in 2018		
	metastatic TNBC	2	Report initial data in 2018		
	1st-line SCLC plus Tecentriq	—	Initiate Phase 2 in 2Q17		
G1T38 (oral CDK4/6 inhibitor)	ER+, HER2-breast cancer (plus Faslodex)	1/2	Initiate Phase 2 in 2018	CRPC, Heme malignancies	
	NSCLC (plus EGFRi)	—	Initiate Phase 2 in 2018		
G1T48 (oral SERD)	ER+, HER2-breast cancer	Preclinical	File IND/CTA in 4Q17		

Our strategy

Our goal is to be a leader in the discovery and development of CDK4/6 inhibitor-based treatments for cancer. Our strategy includes the following key components:

- Develop trilaciclib in combination with chemotherapy across multiple indications
- Develop trilaciclib in combination with immune checkpoint inhibitors
- Develop G1T38 as a best-in-class treatment across multiple CDK4/6-dependent cancers

- Rapidly advance G1T48 into clinical trials in combination with G1T38
- Pursue global development of combination therapies
- Build a fully integrated oncology company

Risks associated with our business

Our business is subject to a number of risks of which you should be aware before making an investment decision. These risks are discussed more fully in the “Risk Factors” section of this prospectus immediately following this prospectus summary. These risks include the following:

- We have incurred significant operating losses since our inception. We expect to incur losses for the foreseeable future and may never achieve or maintain profitability.
- Even if this offering is successful, we will need substantial additional funding. If we are unable to raise capital when needed, we would be compelled to delay, reduce or eliminate our product development programs or commercialization efforts.
- Our independent registered public accounting firm has expressed substantial doubt about our ability to continue as a going concern.
- Initial success in our ongoing clinical trials may not be indicative of results obtained when these trials are completed or in later stage trials.
- We are very early in our development efforts. If we are unable to successfully develop and commercialize our product candidates or experience significant delays in doing so, our business will be materially harmed.
- Our development of a CDK4/6 inhibitor to treat CDK4/6-independent tumors is novel, unproven and rapidly evolving and may never lead to a marketable product.
- Clinical drug development involves a lengthy and expensive process, with an uncertain outcome. We may incur additional costs or experience delays in completing, or ultimately be unable to complete, the development and commercialization of our product candidates.
- If we are not able to obtain, or if there are delays in obtaining, required marketing approvals, we will not be able to commercialize our product candidates, and our ability to generate revenue will be materially impaired.
- If we experience delays or difficulties in the enrollment of patients in clinical trials, development of our product candidates may be delayed or prevented, which could have a material adverse effect on our business.
- Our product candidates may cause undesirable side effects that could delay or prevent their marketing approval, limit the commercial profile of an approved label, or result in significant negative consequences following marketing approval, if any.
- We rely on, and expect to continue to rely on, third parties to conduct our clinical trials for our product candidates. If these third parties do not successfully carry out their contractual duties, comply with regulatory requirements or meet expected deadlines, we may not be able to obtain marketing approval for or commercialize our product candidates, and our business could be substantially harmed.

- If we are unable to obtain and maintain intellectual property protection for our technology and products, or if the scope of the intellectual property protection obtained is not sufficiently broad, our competitors could commercialize technology and products similar or identical to ours, and our ability to successfully commercialize our technology and products may be impaired.
- If we infringe or are asserted to infringe patents of third parties in the United States or foreign countries in the course of making, using or selling our products, we may be subject to expensive litigation which is time consuming for company employees, and which we may lose. We could be required to settle or pay damages to a third party company for patent infringement if a court determines that we infringe a patent right of a third party, or we could be precluded from making, using, selling or offering to sell our products.

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 earlier of (1) the last day of the fiscal year following the fifth anniversary of the completion of this offering, (2) the last day of the fiscal year in which we have total annual gross revenue of at least \$1.0 billion, (3) the last day of the fiscal year in which we are deemed to be a "large accelerated filer" as defined in Rule 12b-2 under the Securities Exchange Act of 1934, as amended, or the Exchange Act, which would occur if the market value of our common stock held by non-affiliates exceeded \$700.0 million as of the last business day of the second fiscal quarter of such fiscal year or (4) the date on which we have issued more than \$1.0 billion in non-convertible debt securities during the prior three-year period. An emerging growth company may take advantage of specified reduced reporting requirements and is relieved of certain other significant requirements that are otherwise generally applicable to public companies. As an emerging growth company,

- we may present only two years of audited financial statements, plus unaudited condensed financial statements for any interim period, and related management's discussion and analysis of financial condition and results of operations in our initial registration statement;
- we may avail ourselves of the exemption from the requirement to obtain an attestation and report from our auditors on the assessment of our internal control over financial reporting pursuant to the Sarbanes-Oxley Act of 2002, or Sarbanes-Oxley;
- we may provide reduced disclosure about our executive compensation arrangements; and
- we may not require stockholder non-binding advisory votes on executive compensation or golden parachute arrangements.

We have chosen to opt out of the extended transition periods available to emerging growth companies under the JOBS Act for complying with new or revised accounting standards. Section 107 of the JOBS Act provides that our decision to opt out of the extended transition periods for complying with new or revised accounting standards is irrevocable.

Our corporate information

We were incorporated under the laws of the State of Delaware in May 2008 under the name "G-Zero Therapeutics, Inc." In September 2012, we changed our name to "G1 Therapeutics, Inc." Our principal executive offices are located at 79 T.W. Alexander Drive, 4501 Research Commons, Suite 100, Research Triangle Park, NC 27709, and our telephone number is (919) 213-9835. Our website address is www.g1therapeutics.com. The information contained on, or that can be accessed through, our website is not and shall not be deemed to be

part of this prospectus. We have included our website address in this prospectus solely as an inactive textual reference. Investors should not rely on any such information in deciding whether to purchase our common stock.

“G1 Therapeutics” and our logo are our trademarks. All other service marks, trademarks and trade names appearing in this prospectus are the property of their respective owners. We do not intend our use or display of other companies’ trade names, trademarks or service marks to imply a relationship with, or endorsement or sponsorship of us by, these other companies.

The offering

Common stock offered by us shares

Common stock to be outstanding after this offering shares

Option to purchase additional shares The underwriters have an option within 30 days of the date of this prospectus to purchase up to additional shares of our common stock to cover overallocments, if any.

Use of proceeds We estimate the net proceeds from this offering will be approximately \$ million (or \$ million if the underwriters exercise their option to purchase additional shares in full), assuming an initial public offering price of \$ per share, which is the midpoint of the estimated price range set forth on the cover page of this prospectus, after deducting estimated underwriting discounts and commissions and estimated offering expenses payable by us.

We intend to use the net proceeds from the offering to fund development of trilaciclib, G1T38 and G1T48, and for working capital and other general corporate purposes. See the "Use of Proceeds" section for additional information.

Risk factors You should read the "Risk Factors" section of this prospectus beginning on page 11 and other information included in this prospectus for a discussion of factors to consider carefully before deciding to invest in shares of our common stock.

Proposed NASDAQ Global Market symbol "GTHX"

The number of shares of our common stock to be outstanding after this offering is based on 61,241,607 shares of our common stock outstanding as of March 31, 2017, and excludes the following:

- 11,207,814 shares of common stock issuable upon the exercise of outstanding stock options as of March 31, 2017, having a weighted-average exercise price of \$0.73 per share;
- 126,334 shares of common stock issuable upon the exercise of outstanding warrants as of March 31, 2017, having a weighted-average exercise price of \$0.25 per share; and
- 385,600 shares of common stock reserved for issuance pursuant to future awards under our 2011 Equity Incentive Plan; and
- shares of common stock reserved for issuance pursuant to future awards under our 2017 Employee, Director and Consultant Equity Plan, as well as any automatic increases in the number of shares of our common stock reserved for future issuance under this plan, which will become effective upon the closing of this offering.

Except as otherwise indicated, all information contained in this prospectus assumes or gives effect to:

- the automatic conversion of all of our outstanding shares of preferred stock into an aggregate of 56,799,234 shares of common stock upon the completion of this offering;

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- the conversion of a warrant to purchase 65,934 shares of our Series 1 Preferred Stock into a warrant to purchase 65,934 shares of our common stock;
- no exercise by the underwriters of their option purchase up to an additional shares of our common stock in this offering;
- the adoption of our amended and restated certificate of incorporation and amended and restated by-laws prior to the closing of this offering; and
- a one-for- reverse stock split of our common stock to be effected prior to the closing of this offering.

Summary financial data

You should read the following summary financial data together with our financial statements and the related notes appearing at the end of this prospectus and the "Selected Financial Data" and "Management's Discussion and Analysis of Financial Condition and Results of Operations" sections of this prospectus. We have derived the statement of operations data for the years ended December 31, 2015 and 2016 and the balance sheet data as of December 31, 2016 from our audited financial statements included elsewhere in this prospectus. The statement of operations data for the three months ended March 31, 2016 and 2017, and the balance sheet data as of March 31, 2017, are derived from our unaudited interim financial statements included elsewhere in this prospectus. Our historical results are not necessarily indicative of results that should be expected in the future.

	Year ended December 31,		Three months ended March 31,	
	2015	2016	2016	2017
			(unaudited)	(unaudited)
Statements of Operations Data:				
Grant revenue	\$ 522,431	\$ —	\$ —	\$ —
Operating expenses:				
Research and development	12,730,335	25,161,300	3,871,476	11,084,252
General and administrative	3,215,803	5,229,640	2,074,877	1,294,097
Total operating expenses	15,946,138	30,390,940	5,946,353	12,378,349
Operating loss	(15,423,707)	(30,390,940)	(5,946,353)	(12,378,349)
Other income (expenses):				
Other income	17,781	182,372	11,789	73,875
Change in fair value of warrant liability	(84,998)	(82,231)	(19,522)	(40,890)
Change in fair value of Series B purchase option liability	(4,772,509)	—	—	—
Total other income (expense), net	(4,839,726)	100,141	(7,733)	32,985
Net loss and comprehensive loss	(20,263,433)	(30,290,799)	(5,954,086)	(12,345,364)
Accretion of redeemable convertible preferred stock(1)	(1,426,740)	(4,405,007)	(1,009,135)	(4,468,032)
Net loss attributable to common shareholders	\$(21,690,173)	\$(34,695,806)	\$(6,963,221)	\$(16,813,396)
Basic and diluted net loss per share(2)	\$ (5.38)	\$ (7.78)	\$ (1.57)	\$ (3.75)
Weighted average shares outstanding, basic and diluted(2)	4,033,772	4,460,986	4,431,687	4,489,039
Pro forma basic and diluted net loss per share (unaudited)(2)(3)		\$ (0.54)		\$ (0.20)
Pro forma weighted-average basic and diluted shares outstanding (unaudited)(2)(3)		55,647,597		61,288,273

	As of March 31, 2017 (unaudited)		
	Actual	Pro forma(3)	Pro forma as adjusted(4)(5)
Balance Sheet Data:			
Cash, cash equivalents and short term investments	\$ 37,726,520	\$37,726,520	
Working capital(6)	30,478,441	30,686,560	
Total assets	39,293,819	39,293,819	
Redeemable convertible preferred stock	112,048,181	—	
Total stockholders' (deficit) equity	(81,258,183)	30,998,117	

(1) See Note 7 to our financial statements appearing elsewhere in this prospectus for further details on the calculation of accretion of redeemable convertible preferred stock.

(2) See Note 9 to our financial statements appearing elsewhere in this prospectus for further details on the calculation of basic and diluted net loss per share and pro forma basic and diluted net loss per share applicable to common stockholders.

(3) Pro forma balance sheet data give effect to the automatic conversion of all outstanding shares of our preferred stock into an aggregate of 56,799,234 shares of our common stock upon the completion of this offering and the conversion of a warrant to purchase 65,934 shares of our Series 1 Preferred Stock into a warrant to purchase 65,934 shares of our common stock upon the completion of this offering.

(4) Pro forma as adjusted to reflect the pro forma adjustments described in (3) above, and to further reflect the sale of shares of our common stock offered in this offering, assuming an initial public offering price of \$ per share, the midpoint of the estimated price range set forth on the cover page of this prospectus, after deducting the estimated underwriting discounts and commissions and estimated offering expenses payable by us.

(5) The pro forma as adjusted information presented above is illustrative only and will change based on the actual initial public offering price and the other terms of this offering determined at pricing. A \$1.00 increase (decrease) in the assumed initial public offering price of \$ per share, the midpoint of the estimated price range set forth on the cover page of this prospectus, would increase (decrease) the pro forma as adjusted amount of each of cash and cash equivalents, working capital, total assets and total stockholders' (deficit) equity 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 estimated underwriting discounts and commissions and estimated offering expenses payable by us. We may also increase or decrease the number of shares we are offering. A 1,000,000 share increase (decrease) in the number of shares offered by us would increase (decrease) the pro forma as adjusted amount of each of cash and cash equivalents, and total stockholders' (deficit) equity by approximately \$ million, assuming an initial public offering price of \$ per share, the midpoint of the estimated price range set forth on the cover page of this prospectus.

(6) We define working capital as current assets less current liabilities.

Risk factors

Investing in our common stock involves a high degree of risk. You should carefully consider the risks and uncertainties described below, together with all of the other information in this prospectus, including our financial statements and related notes, before investing in our common stock. The risks and uncertainties described below are not the only ones we face. Additional risks and uncertainties that we are unaware of, or that we currently believe are not material, may also become important factors that affect us. If any of the following risks occur, our business, operating results and prospects could be materially harmed. In that event, the price of our common stock could decline, and you could lose part or all of your investment.

Risks related to our financial position and need for additional capital

We have incurred significant operating losses since our inception. We expect to incur losses for the foreseeable future and may never achieve or maintain profitability.

We have incurred significant operating losses since our inception. We incurred net losses of \$20.3 million for the year ended December 31, 2015, \$30.3 million for the year ended December 31, 2016, and \$12.3 million for the three months ended March 31, 2017. As of March 31, 2017, we had an accumulated deficit of \$81.3 million. Our most advanced clinical-stage product candidate, trilaciclib, is currently in three clinical trials, two Phase 1b/2a trials and a Phase 2 trial. Our other clinical-stage product candidate, G1T38, is currently in a Phase 1/2 clinical trial. It may be several years, if ever, before we have a product candidate ready for commercialization. To date, we have financed our operations primarily through private placements of our preferred stock. 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. We anticipate that our expenses will increase substantially if and as we:

- continue development of our product candidates, including initiating additional clinical trials of trilaciclib and G1T38 and completing preclinical studies and potentially initiating clinical trials of our preclinical-stage product candidate, G1T48;
- identify and develop new product candidates;
- seek marketing approvals for our product candidates that successfully complete clinical trials;
- establish a sales, marketing and distribution infrastructure to commercialize any products for which we may obtain marketing approval;
- achieve market acceptance of our product candidates in the medical community and with third-party payors;
- maintain, expand and protect our intellectual property portfolio;
- hire additional personnel;
- enter into collaboration arrangements, if any, for the development of our product candidates or in-license other products and technologies;
- achieve milestones requiring payment under our in-licensing programs;
- add operational, financial and management information systems and personnel, including personnel to support our product development and planned future commercialization efforts; and
- incur increased costs as a result of operating as a public company.

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Because of the numerous risks and uncertainties associated with developing pharmaceutical drugs, we are unable to predict the extent of any future losses or when we will become profitable, if at all. In addition, our expenses could increase beyond expectations if we are required by the Food and Drug Administration, or FDA, or foreign regulatory agencies, to perform studies and clinical trials in addition to those that we currently anticipate, or if there are any delays in our or our partners completing clinical trials or the development of any of our product candidates.

To become and remain profitable, we must develop and eventually commercialize a product or products with significant market potential. This will require us to be successful in a range of challenging activities, including the following:

- completing clinical trials of our product candidates that meet their clinical endpoints;
- obtaining marketing approval for our product candidates;
- manufacturing, marketing and selling those products for which we may obtain marketing approval; and
- achieving market acceptance of our product candidates in the medical community and with third-party payors.

We may never succeed in these activities and, even if we do, may never generate revenues that are 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 the company and could impair our ability to raise capital, maintain our discovery and preclinical development efforts, expand our business or continue our operations and may require us to raise additional capital that may dilute your ownership interest. A decline in the value of our company could also cause you to lose all or part of your investment.

Our limited operating history may make it difficult for you to evaluate the success of our business to date and to assess our future viability.

We are an early-stage biopharmaceutical company. Biopharmaceutical drug development is a highly speculative 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, developing our technology, identifying potential product candidates, undertaking preclinical studies, and conducting clinical trials of trilaciclib and G1T38. We have not yet demonstrated our ability to successfully complete large-scale, pivotal clinical trials, obtain marketing approvals, manufacture a commercial scale product, or arrange for a third party to do so on our behalf, or conduct sales and marketing activities necessary for successful product commercialization. Typically, it takes several years to develop one new drug from the time it is discovered to when it is available for treating patients. In addition, as a new business, we may encounter unforeseen expenses, difficulties, complications, delays and other known and unknown factors. We will need to transition from a company with a research focus to a company capable of supporting commercial activities. We may not be successful in such a transition.

Even if this offering is successful, we will need substantial additional funding. If we are unable to raise capital when needed, we would be compelled to delay, reduce or eliminate our product development programs or commercialization efforts.

The development of pharmaceutical drugs is capital-intensive. We expect our expenses to increase in parallel with our ongoing activities, particularly as we conduct larger-scale clinical trials of, and seek marketing approval for, our product candidates. In addition, if we obtain marketing approval for any of our product candidates, we expect to incur significant commercialization expenses related to product sales, marketing,

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manufacturing and distribution. We may also need to raise additional funds sooner if we choose to pursue additional indications and/or geographies for our product candidates or otherwise expand more rapidly than we presently anticipate. Furthermore, upon the closing of this offering, we expect to incur additional costs associated with operating as a public company. Accordingly, we will need to obtain substantial additional funding in connection with our continuing operations. If we are unable to raise capital when needed or on attractive terms, we would be forced to delay, reduce or eliminate our clinical programs, development efforts or any future commercialization efforts.

As of March 31, 2017, we had \$37.7 million in cash and cash equivalents. We believe that, based upon our current operating plan, our existing capital resources, together with the net proceeds from this offering, will be sufficient to fund our anticipated operations for at least 24 months. Our future capital requirements and the period for which we expect our existing resources to support our operations may vary significantly from what we expect. Our monthly spending levels vary based on new and ongoing research and development and other corporate activities. Because the length of time and activities associated with successful research and development of our product candidates is highly uncertain, we are unable to estimate the actual funds we will require for development and any approved marketing and commercialization activities. In addition, our future capital requirements will depend on many factors, and could increase significantly as a result of many factors, including:

- the scope, progress, results and costs of preclinical development, laboratory testing and clinical trials for our product candidates;
- the scope, prioritization and number of our research and development programs;
- the costs, timing and outcome of regulatory review of our product candidates;
- the extent to which we enter into non-exclusive, jointly funded clinical research collaboration arrangements, if any, for the development of our product candidates in combination with other companies' products;
- our ability to establish collaboration arrangements for the development of our product candidates on favorable terms, if at all;
- the achievement of milestones or occurrence of other developments that trigger payments under our license agreement and any collaboration agreements into which we may enter, if any;
- the extent to which we are obligated to reimburse, or entitled to reimbursement of, clinical trial costs under future collaboration agreements, if any;
- the extent to which we acquire or in-license product candidates and technologies, such as G1T48, and the terms of such in-licenses;
- the costs of future commercialization activities, including product sales, marketing, manufacturing and distribution, for any of our product candidates for which we receive marketing approval;
- revenue, if any, received from commercial sales of our product candidates, should any of our product candidates receive marketing approval; and
- the costs of preparing, filing and prosecuting patent applications, maintaining and enforcing our intellectual property rights and defending intellectual property-related claims.

Conducting preclinical studies and clinical trials is a time-consuming, expensive and uncertain process that can take years to complete, and we may never generate the necessary data or results required to obtain marketing approval and achieve product sales. In addition, our product candidates, if approved, may not achieve

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commercial success. Our commercial revenues, if any, will be derived from sales of products that may not be commercially available for several years, if ever. Accordingly, we will need to continue to rely on additional financing to achieve our business objectives.

Any additional fundraising efforts may divert our management from their day-to-day activities, which may adversely affect our ability to develop and commercialize our product candidates. Volatility in the financial markets have generally made equity and debt financing more difficult to obtain, and may have a material adverse effect on our ability to meet our fundraising needs. We cannot guarantee that future financing will be available in sufficient amounts or on terms acceptable to us, if at all. Moreover, the terms of any financing may adversely affect the holdings or the rights of our stockholders and the issuance of additional securities, whether equity or debt, by us, or the possibility of such issuance, may cause the market price of our shares to decline.

If we are unable to obtain funding on a timely basis, we may be required to significantly curtail, delay or discontinue one or more of our research or development programs or the commercialization of any product candidate or be unable to expand our operations or otherwise capitalize on our business opportunities, as desired, which could materially affect our business, financial condition and results of operations.

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

Until such time, if ever, as we can generate substantial product revenues, we expect to finance our cash needs through a combination of private and public equity financings, debt financings, collaborations, strategic alliances and licensing arrangements. The sale of additional equity or convertible debt securities would dilute all of our stockholders, including purchasers of common stock in this offering. The incurrence of indebtedness would result in increased fixed payment obligations, and we may be required to agree to certain restrictive covenants, such as limitations on our ability to incur additional debt, limitations on our ability to acquire, sell or license intellectual property rights, limitations on declaring dividends and other operating restrictions that could adversely impact our ability to conduct our business. We could also be required to seek funds through collaborations, strategic alliances or licensing arrangements with third parties, and we could be required to do so at an earlier stage than otherwise would be desirable. In connection with any such collaborations, strategic alliances or licensing arrangements, we may be required to relinquish valuable rights to our intellectual property, future revenue streams, research programs or product candidates, grant rights to develop and market product candidates that we would otherwise prefer to develop and market ourselves, or otherwise agree to terms unfavorable to us, any of which may have a material adverse effect on our business, operating results and prospects.

Our net losses and significant cash used in operating activities have raised substantial doubt regarding our ability to continue as a going concern.

We have a limited operating history and have experienced net losses and significant cash used in operating activities in each period since inception. We expect to continue to incur net losses and have significant cash outflows for at least the next few years prior to commercialization of our product candidates, and we have an accumulated deficit of \$81.3 million as of March 31, 2017. These conditions raise substantial doubt about our ability to continue as a going concern. As a result, our independent registered public accounting firm included an explanatory paragraph in its report on our financial statements as of and for the year ended December 31, 2016 with respect to this uncertainty. Our ability to continue as a going concern could materially limit our ability to raise additional funds through the issuance of new debt or equity securities or generate revenues from collaborative partnerships. Future reports on our financial statements may include an explanatory paragraph with respect to our ability to continue as a going concern. We have not been profitable since inception, and it is possible we will never achieve profitability. None of our product candidates can be

marketed until regulatory approvals have been obtained. Accordingly, there is no substantial source of revenues to sustain our present activities, and no substantial revenues will likely be available until, and unless, our product candidates are approved by the FDA or comparable regulatory agencies in other countries and successfully marketed, either by us or a partner, an outcome which may not occur. We will require significant additional cash resources to launch new development phases of existing projects in our pipeline. If we cannot continue as a viable entity, our stockholders may lose some or all of their investment in us.

Risks related to development of our product candidates

Initial success in our ongoing clinical trials may not be indicative of results obtained when these trials are completed or in later stage trials.

We are currently evaluating trilaciclib in three clinical trials: two Phase 1b/2a trials in patients with small cell lung cancer, or SCLC, and one Phase 2 trial in patients with triple-negative breast cancer, or TNBC. While trilaciclib has shown compelling response rates and favorable tolerability in early-stage trials, including the completed Phase 1b parts of the two Phase 1b/2a trials in SCLC, these trials are not complete, and we may not see such favorable data in these ongoing or in future clinical trials involving trilaciclib. Similarly, favorable results obtained from early-stage trials of G1T38 may not be replicated in the ongoing Phase 1/2 trial in ER+, HER2- breast cancer or in any future clinical trials. Furthermore, there can be no assurance that any of our clinical trials will ultimately be successful or support further clinical development of any of our product candidates. There is a high failure rate for drugs and biologics proceeding through clinical trials. A number of companies in the pharmaceutical and biotechnology industries have suffered significant setbacks in clinical development even after achieving promising results in earlier studies, and any such setbacks in our clinical development could have a material adverse effect on our business and operating results.

Preliminary and interim data from our clinical studies, including the Phase 1b parts of our Phase 1b/2a trials of trilaciclib, may change as more patient data become available.

Preliminary or interim data from our clinical studies, including those from the Phase 1b parts of our Phase 1b/2a trials of trilaciclib, are not necessarily predictive of final results. Preliminary and interim data are subject to the risk that one or more of the clinical outcomes may materially change as patient enrollment continues, more patient data become available and we issue our final clinical study report. As a result, preliminary and interim data should be viewed with caution until the final data are available. Material adverse changes in the final data compared to the interim data could significantly harm our business prospects.

We are very early in our development efforts. If we are unable to successfully develop and commercialize our product candidates or experience significant delays in doing so, our business will be materially harmed.

We currently do not have any products that have gained marketing approval. We have invested substantially all of our efforts and financial resources identifying and developing our CDK4/6 inhibitor product candidates, trilaciclib and G1T38, and our oral SERD product candidate, G1T48. Our ability to generate product revenues, which may not occur for several years, if ever, will depend on the successful development and eventual commercialization of trilaciclib, for which two Phase 1b/2a clinical trials and one Phase 2 trial are ongoing, G1T38, for which one Phase 1/2 trial is ongoing, and G1T48, which is currently in preclinical development. We currently generate no revenues from sales of any drugs, and we may never be able to develop or commercialize a marketable drug. Each of our product candidates will require development, management of development and manufacturing activities, marketing approval in multiple jurisdictions, obtaining manufacturing supply, building of a commercial organization, substantial investment and significant marketing efforts before we generate any revenues from drug sales.

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We have not yet demonstrated an ability to successfully overcome many of the risks and uncertainties frequently encountered by companies in new and rapidly evolving fields, particularly in the biopharmaceutical area. For example, to execute our business plan, we will need to successfully:

- execute development activities for our product candidates, including successful enrollment in and completion of clinical trials;
- obtain required marketing approvals for the development and commercialization of our product candidates;
- obtain and maintain patent and trade secret protection and regulatory exclusivity for our product candidates and ensure that we do not infringe the valid patent rights of third parties;
- protect, leverage and expand our intellectual property portfolio;
- establish and maintain clinical and commercial manufacturing capabilities or make arrangements with third-party manufacturers for clinical and commercial manufacturing;
- build and maintain robust sales, distribution and marketing capabilities, either on our own or in collaboration with strategic partners, if our product candidates are approved;
- gain acceptance for our product candidates, if approved, by patients, the medical community and third-party payors;
- compete effectively with other therapies;
- obtain and maintain healthcare coverage and adequate reimbursement;
- maintain a continued acceptable safety profile for our product candidates following approval, if approved;
- develop and maintain any strategic relationships we elect to enter into, if any;
- enforce and defend intellectual property rights and claims; and
- manage our spending as costs and expenses increase due to preclinical development, clinical trials, marketing approvals and commercialization.

If we do not achieve one or more of these factors in a timely manner or at all, we could experience significant delays or an inability to successfully commercialize our product candidates, which would materially harm our business. If we do not receive marketing approvals for our product candidates, we may not be able to continue our operations.

Our development of a CDK4/6 inhibitor to treat CDK4/6-independent tumors is novel, unproven and rapidly evolving and may never lead to a marketable product.

Our clinical-stage product candidate, trilaciclib, is a potent and selective CDK4/6 inhibitor we are developing to initially target patients with CDK4/6-independent tumors. The use of a CDK4/6 inhibitor in combination with chemotherapy to treat patients with CDK4/6-independent tumors is a novel approach to the treatment of cancer, and we believe that we are the only company currently developing a CDK4/6 inhibitor for this patient population. The scientific evidence to support the feasibility of developing this product candidate is both preliminary and limited. Even though trilaciclib has demonstrated positive results in preclinical studies and early-stage clinical trials, we may not succeed in demonstrating safety and efficacy of trilaciclib in larger-scale clinical trials.

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Advancing this novel therapy creates significant challenges for us, including:

- obtaining marketing approval, as the FDA and other regulatory authorities have limited experience with commercial development of CDK4/6 inhibitor therapies for cancer;
- educating medical personnel regarding the potential safety benefits, as well as the challenges, of incorporating our product candidates, if approved, into their treatment regimens; and
- establishing sales and marketing capabilities upon obtaining any marketing approval to gain market acceptance of a novel therapy.

If we experience delays or difficulties in the enrollment of patients in clinical trials, development of our product candidates may be delayed or prevented, which would have a material adverse effect on our business.

Identifying and qualifying patients to participate in clinical trials for our product candidates is critical to our success. In particular, because we are initially focused on patients with diseases with genetically defined tumors, our ability to enroll eligible patients may be limited or may result in slower enrollment than we anticipate. 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. Patient enrollment may be affected by many factors including:

- the severity of the disease under investigation;
- the eligibility criteria for the clinical trial in question;
- the perceived risks and benefits of the product candidate under study;
- the efforts to facilitate timely enrollment in clinical trials;
- the patient referral practices of physicians;
- the availability of competing therapies and clinical trials; and
- the proximity and availability of clinical trial sites for prospective patients.

If we experience delays or difficulties in the enrollment of patients in clinical trials, our clinical trials may be delayed or terminated. Any delays in completing our clinical trials will increase our costs, delay or prevent our product candidate development and approval process, and jeopardize our ability to commence product sales and generate revenue. Any of these occurrences may harm our business, financial condition and prospects significantly.

Clinical drug development involves a lengthy and expensive process, with an uncertain outcome. We may incur additional costs or experience delays in completing, or ultimately be unable to complete, the development and may experience delays in obtaining, or ultimately be unable to obtain, the approval of our product candidates.

The risk of failure in drug development is high. Trilaciclib is currently being studied in two Phase 1b/2a clinical trials and one Phase 2 clinical trial, G1T38 is currently being studied in one Phase 1/2 clinical trial and G1T48 is in preclinical development. Before obtaining marketing approval from regulatory authorities for the sale of any product candidate, we must complete preclinical development and conduct extensive clinical trials to demonstrate the safety and efficacy of our product candidates in humans. Clinical trials are expensive, difficult to design and implement and can take several years to complete, and its outcome is inherently uncertain. Failure can occur at any time during the clinical trial process. Further, the results of preclinical studies and early clinical trials of our product candidates may not be predictive of the results of later-stage clinical trials,

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and interim results of a clinical trial do not necessarily predict final results. Moreover, preclinical and clinical data are often susceptible to varying interpretations and analyses, and many companies that have believed their product candidates performed satisfactorily in preclinical studies and clinical trials have nonetheless failed to obtain marketing approval of their products. It is impossible to predict when or if any of our product candidates will prove effective or safe in humans or will receive marketing approval.

We may experience numerous unforeseen events during, or as a result of, clinical trials that could delay or prevent our ability to receive marketing approval or commercialize our product candidates. Clinical trials may be delayed, suspended or prematurely terminated because costs are greater than we anticipate or for a variety of reasons, such as:

- delay or failure in reaching agreement with the FDA or a comparable foreign regulatory authority on a trial design that we are able to execute;
- delay or failure in obtaining authorization to commence a trial or inability to comply with conditions imposed by a regulatory authority regarding the scope or design of a clinical trial;
- delays in reaching, or failure to reach, agreement on acceptable terms with prospective trial sites and prospective contract research organizations, or CROs, the terms of which can be subject to extensive negotiation and may vary significantly among different CROs and trial sites;
- inability, delay, or failure in identifying and maintaining a sufficient number of trial sites, many of which may already be engaged in other clinical programs;
- delay or failure in recruiting and enrolling suitable subjects to participate in a trial;
- delay or failure in having subjects complete a trial or return for post-treatment follow-up;
- clinical sites and investigators deviating from the clinical protocol, failing to conduct the trial in accordance with regulatory requirements, or dropping out of a trial;
- failure to initiate or delay of or failure to complete a clinical trial as a result of an Investigational New Drug Application, or IND, being placed on clinical hold by the FDA, or for other reasons;
- lack of adequate funding to continue a clinical trial, including unforeseen costs due to enrollment delays, requirements to conduct additional clinical trials and increased expenses associated with the services of our CROs and other third parties;
- clinical trials of our product candidates may produce negative or inconclusive results, and we may decide, or regulators may require us, to conduct additional clinical trials or abandon product development programs;
- the number of patients required for clinical trials of our product candidates may be larger than we anticipate, enrollment in these clinical trials may be slower than we anticipate or participants may drop out of these clinical trials at a higher rate than we anticipate;
- our third-party contractors may fail to comply with regulatory requirements or meet their contractual obligations to us in a timely manner, or at all;
- regulators, or a Data Safety Monitoring Board, or DSMB, if one is used for our clinical trials, may require that we suspend or terminate our clinical trials for various reasons, including noncompliance with regulatory requirements, unforeseen safety issues or adverse side effects, failure to demonstrate a benefit from using a drug, or a finding that the participants are being exposed to unacceptable health risks;
- the supply or quality of our product candidates or other materials necessary to conduct clinical trials of our product candidates may be insufficient;

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- the FDA or other regulatory authorities may require us to submit additional data or impose other requirements before permitting us to initiate a clinical trial; or
- there may be changes in governmental regulations or administrative actions.

Many of the factors that cause, or lead to, a delay in the commencement or completion of clinical trials may also ultimately lead to the denial of marketing approval for our product candidates. Further, the FDA may disagree with our clinical trial design and our interpretation of data from clinical trials, or may change the requirements for approval even after it has reviewed and commented on the design for our clinical trials.

If we are required to conduct additional clinical trials or other studies of our product candidates beyond those that we currently contemplate, if we are unable to successfully complete clinical trials of our product candidates or other studies, if the results of these trials or tests are not positive or are only modestly positive or if there are safety concerns, we may:

- be delayed in obtaining marketing approval for our product candidates;
- not obtain marketing approval for our product candidates at all;
- obtain approval for indications or patient populations that are not as broad as intended or desired;
- obtain approval with labeling that includes significant use or distribution restrictions or safety warnings that would reduce the potential market for our products or inhibit our ability to successfully commercialize our products;
- be subject to additional post-marketing restrictions and/or requirements; or
- have the product removed from the market after obtaining marketing approval.

Our product development costs will also increase if we experience delays in preclinical and clinical development or receiving the requisite marketing approvals. We do not know whether any of our preclinical studies or clinical trials will need to be restructured or will be completed on schedule, or at all. Significant preclinical or clinical trial delays also could shorten any periods during which we may have the exclusive right to commercialize our product candidates or allow our competitors to bring products to market before we do and impair our ability to successfully commercialize our product candidates and may harm our business and results of operations.

Risks related to marketing approval of our product candidates

If we are not able to obtain, or if there are delays in obtaining, required marketing approvals, we will not be able to commercialize our product candidates, and our ability to generate revenue will be materially impaired.

Our product candidates and the activities associated with their development and commercialization, including their design, testing, manufacture, safety, efficacy, recordkeeping, labeling, storage, approval, advertising, promotion, sale, distribution, import and export are subject to comprehensive regulation by the FDA and other regulatory agencies in the United States and by comparable authorities in other countries. These requirements include submissions of safety and other post-marketing information and reports, registration and listing requirements, current good manufacturing practice, or cGMP, requirements relating to manufacturing, quality control, quality assurance and corresponding maintenance of records and documents, including periodic inspections by FDA and other regulatory authorities, requirements regarding the distribution of samples to physicians and recordkeeping. Before we can commercialize any of our product candidates, each such product candidate must be approved by the FDA pursuant to a new drug application, or NDA, in the United States, by the European Medicines Agency, or EMA, pursuant to a marketing authorization application, or MAA, in the European Union, and by similar regulatory authorities outside the United States prior to commercialization.

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The process of obtaining marketing approvals, both in the United States and abroad, is expensive and takes several years, if approval is obtained at all, and can vary substantially based upon a variety of factors, including the type, complexity and novelty of the product candidates involved. Failure to obtain marketing approval for a product candidate will prevent us from commercializing the product candidate. We have not received approval to market any of our product candidates from regulatory authorities in any jurisdiction. We have limited experience in planning and conducting the clinical trials required for marketing approvals, and we expect to rely on third-party contract research organizations, or CROs, to assist us in this process. Obtaining marketing approval requires the submission of extensive preclinical and clinical data and supporting information to regulatory authorities for each therapeutic indication to establish the product candidate's safety and efficacy. Securing marketing approval also requires the submission of information about the product manufacturing process, and in many cases the inspection of manufacturing facilities by the regulatory authorities. Our product candidates may not be effective, may be only moderately effective or may prove to have undesirable or unintended side effects, toxicities or other characteristics that may preclude our obtaining marketing approval or prevent or limit commercial use. 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 studies or clinical trials. Our product candidates could be delayed in receiving, or fail to receive, marketing approval for many reasons, including the following:

- the FDA or comparable foreign regulatory authorities may disagree with the design or implementation of our clinical trials;
- we may be unable to demonstrate to the satisfaction of the FDA or comparable foreign regulatory authorities that a product candidate is safe and effective for its proposed indication;
- the results of clinical trials may not meet the level of statistical significance required by the FDA or comparable foreign regulatory authorities for approval;
- we may be unable to demonstrate that a product candidate's clinical and other benefits outweigh its safety risks;
- the FDA or comparable foreign regulatory authorities may disagree with our interpretation of data from preclinical studies or clinical trials;
- the data collected from clinical trials of our product candidates may not be sufficient to support the submission of an NDA or other submission to obtain marketing approval in the United States or elsewhere;
- third-party manufacturers or our clinical or commercial product candidates may be unable to meet the FDA's cGMP requirements or similar requirements of foreign regulatory authorities; and
- the approval requirements or policies of the FDA or comparable foreign regulatory authorities may significantly change in a manner rendering our clinical data insufficient for approval.

In addition, even if we were to obtain approval, regulatory authorities may approve our product candidates for fewer or more limited indications than we request, may grant approval contingent on the performance of costly post-marketing clinical trials, or may approve a product candidate with a label that does not include the labeling claims necessary or desirable for the successful commercialization of that product candidate. Any of the foregoing scenarios could materially harm the commercial prospects for our product candidates.

If we experience delays in obtaining approval or if we fail to obtain approval of our product candidates, the commercial prospects for our product candidates may be harmed and our ability to generate revenues will be materially impaired.

Our product candidates may cause undesirable side effects that could delay or prevent their marketing approval, limit the commercial profile of an approved label, or result in significant negative consequences following marketing approval, if any.

Undesirable side effects caused by our product candidates could cause us or the FDA or other regulatory authorities to interrupt, delay or halt our clinical trials and could result in more restrictive labels or the delay or denial of marketing approval by the FDA or other regulatory authorities of our product candidates. Results of our clinical trials could reveal a high and unacceptable severity and prevalence of these or other side effects. In such an event, our trials could be suspended or terminated and the FDA or comparable foreign regulatory authorities could order us to cease further development of or deny approval of our product candidates for any or all targeted indications. In addition to this, the drug-related side effects could affect patient recruitment or the ability of enrolled patients to complete the trial or result in potential product liability claims. Any of these occurrences may harm our business, financial condition and prospects significantly.

Further, clinical trials by their nature utilize a sample of the potential patient population. With a limited number of patients, rare and severe side effects of our product candidates may only be uncovered with a significantly larger number of patients exposed to the product candidate. If our product candidates receive marketing approval and we or others identify undesirable side effects caused by such product candidates (or any other similar drugs) after such approval, a number of potentially significant negative consequences could result, including:

- regulatory authorities may withdraw or limit their approval of such product candidates;
- regulatory authorities may require the addition of labeling statements, such as a “boxed” warning or a contraindication;
- we may be required to create a medication guide outlining the risks of such side effects for distribution to patients;
- we may be required to change the way such product candidates are distributed or administered, conduct additional clinical trials or change the labeling of the product candidates;
- regulatory authorities may require a Risk Evaluation and Mitigation Strategy plan to mitigate risks, which 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;
- we may be subject to regulatory investigations and government enforcement actions;
- we may decide to remove such product candidates from the marketplace after they are approved;
- we could be sued and held liable for injury caused to individuals exposed to or taking our product candidates; and
- our reputation may suffer.

We believe that any of these events could prevent us from achieving or maintaining market acceptance of the affected product candidates and could substantially increase the costs of commercializing our product candidates, if approved, and significantly impact our ability to successfully commercialize our product candidates and generate revenues.

A Breakthrough Therapy Designation by the FDA, even if granted for any of our product candidates, may not lead to a faster development or regulatory review or approval process, and does not increase the likelihood that our product candidates will receive marketing approval.

We do not currently have Breakthrough Therapy Designation for any of our product candidates but may seek such designation. A Breakthrough Therapy Designation may be granted to a drug that is intended, alone or in combination with one or more other drugs, to treat a serious or life-threatening disease or condition, and for which preliminary clinical evidence indicates that the drug may demonstrate substantial improvement over existing therapies on one or more clinically significant endpoints, such as substantial treatment effects observed early in clinical development. For drugs that have been designated as Breakthrough Therapies, interaction and communication between the FDA and the sponsor can help to identify the most efficient path for development. Drugs designated as Breakthrough Therapies are also eligible for accelerated approval.

Designation as a Breakthrough Therapy is within the discretion of the FDA. Accordingly, even if we believe, after completing early clinical trials, that one of our product candidates meets the criteria for designation as a Breakthrough Therapy, the FDA may disagree and instead determine not to grant such designation. In any event, the receipt of a Breakthrough Therapy designation by itself for a product candidate may not result in a faster development process, review or approval compared to drugs considered for approval under conventional FDA procedures and does not assure ultimate approval by the FDA. In addition, even if one or more of our product candidates qualify as a Breakthrough Therapy, the FDA may later decide that such product candidates no longer meet the conditions for qualification.

A Fast Track Designation by the FDA, even if granted for any of our product candidates, may not lead to a faster development or regulatory review or approval process and does not increase the likelihood that our product candidates will receive marketing approval.

We do not currently have Fast Track Designation for any of our product candidates but may seek such designation. If a drug is intended for the treatment of a serious or life-threatening condition and the drug demonstrates the potential to address unmet medical needs for this condition, the drug sponsor may apply for FDA Fast Track Designation. The FDA has broad discretion whether to grant this designation. Even if we believe a particular product candidate is eligible for this designation, we cannot assure you that the FDA would decide to grant it. Even if we do receive Fast Track Designation, we may not experience a faster development process, review or approval compared to conventional FDA procedures. The FDA may withdraw Fast Track Designation if it believes that the designation is no longer supported by data from our clinical development program. Many drugs that have received Fast Track Designation have failed to obtain drug approval.

Any product candidate for which we obtain marketing approval will be subject to extensive post-marketing regulatory requirements and could be subject to post-marketing restrictions or withdrawal from the market, and we may be subject to penalties if we fail to comply with regulatory requirements or if we experience unanticipated problems with our products, when and if any of them are approved.

If the FDA or a comparable foreign regulatory authority approves any of our product candidates, activities such as the manufacturing processes, labeling, packaging, distribution, adverse event reporting, storage, advertising, promotion and recordkeeping for the product will be subject to extensive and ongoing regulatory requirements. The FDA or a comparable foreign regulatory authority may also impose requirements for costly post-marketing preclinical studies or clinical trials and surveillance to monitor the safety or efficacy of the product. The FDA closely regulates the post-approval marketing and promotion of drugs to ensure drugs are marketed only for the approved indications and in accordance with the provisions of the approved labeling. The FDA imposes stringent restrictions on manufacturers' communications regarding use of their products, and if

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we promote our products beyond their approved indications, we may be subject to enforcement actions or prosecution arising from that off-label promotion. Violations of the Federal Food, Drug, and Cosmetic Act relating to the promotion of prescription drugs may lead to investigations alleging violations of federal and state healthcare fraud and abuse and other laws, as well as state consumer protection laws.

In addition, later discovery of previously unknown adverse events or other problems with our products, manufacturers or manufacturing processes, or failure to comply with regulatory requirements, may yield various results, including:

- restrictions on such products, manufacturers or manufacturing processes;
- restrictions on the labeling or marketing of a product;
- restrictions on product distribution or use;
- requirements to conduct post-marketing studies or clinical trials;
- warning or untitled letters;
- withdrawal of the products from the market;
- refusal to approve pending applications or supplements to approved applications that we submit;
- recall of products;
- fines, restitution or disgorgement of profits or revenues;
- suspension or withdrawal of marketing approvals;
- refusal to permit the import or export of our products;
- product seizure; or
- injunctions or the imposition of civil or criminal penalties.

Non-compliance with European Union requirements regarding safety monitoring or pharmacovigilance can also result in significant financial penalties. Similarly, failure to comply with the European Union's requirements regarding the protection of personal information can also lead to significant penalties and sanctions.

The FDA's policies may change and additional government regulations may be enacted that could prevent, limit or delay marketing approval of our product candidates. 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 achieve or sustain profitability.

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

Although we do not currently have any drugs on the market, once we begin commercializing our product candidates, we will be subject to additional healthcare statutory and regulatory requirements and enforcement by federal government and the states and foreign governments in the jurisdictions in which we conduct our business. Healthcare providers, physicians and third-party payors will play a primary role in the recommendation and prescription of any product candidates for which we obtain marketing approval. Our future arrangements with third-party payors and customers may expose us to broadly applicable fraud and

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abuse and other healthcare laws and regulations that may constrain the business or financial arrangements and relationships through which we market, sell and distribute any products for which we obtain marketing approval. Restrictions under applicable federal and state healthcare laws and regulations include the following:

- the federal Anti-Kickback Statute prohibits, among other things, persons from knowingly and willfully soliciting, offering, receiving or paying remuneration, directly or indirectly, in cash or in kind, to induce or reward, or in return for, either the referral of an individual for, or the purchase, order or recommendation of, any good or service, for which payment may be made under a federal healthcare program such as Medicare and Medicaid; 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;
- the federal false claims laws impose criminal and civil penalties, including civil whistleblower or *qui tam* actions, against individuals or entities for 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; in addition, the government may assert that a claim including items and services resulting from a violation of the federal Anti-Kickback Statute constitutes a false or fraudulent claim for purposes of the False Claims Act;
- the federal Health Insurance Portability and Accountability Act of 1996, or HIPAA, imposes criminal and civil liability for executing 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 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;
- the federal physician payment transparency requirements, sometimes referred to as the “Sunshine Act” under the Patient Protection and Affordable Care Act, as amended by the Health Care and Education Reconciliation Act of 2010, or collectively the ACA, require manufacturers of drugs, devices, biologics and medical supplies that are reimbursable under Medicare, Medicaid, or the Children’s Health Insurance Program to report to the Centers for Medicare & Medicaid Services, or CMS, information related to payments and other transfers of value to physicians and teaching hospitals and the ownership and investment interests of physicians and their immediate family members in such manufacturers;
- HIPAA, as amended by the Health Information Technology for Economic and Clinical Health Act and its implementing regulations, which also imposes obligations on certain covered entity healthcare providers, health plans, and healthcare clearinghouses as well as their business associates that perform certain services involving the use or disclosure of individually identifiable health information, including mandatory contractual terms, with respect to safeguarding the privacy, security and transmission of individually identifiable health information;
- analogous state and foreign laws and regulations, such as state anti-kickback and false claims laws, may apply to sales or marketing arrangements and claims involving healthcare items or services reimbursed by non-governmental third-party payors, including private insurers;
- some state laws require pharmaceutical companies to comply with the pharmaceutical industry’s voluntary compliance guidelines and the relevant compliance guidance promulgated by the federal government and may require drug manufacturers to report information related to payments and other transfers of value to physicians and other healthcare providers or marketing expenditures; and
- state and foreign laws also govern 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.

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Efforts to ensure that our business arrangements with third parties will comply with applicable healthcare laws and regulations will involve substantial costs. It is possible that governmental authorities will conclude that our business practices may not comply with current or future statutes, regulations or case law involving applicable fraud and abuse or other healthcare laws and regulations. If our operations are found to be in violation of any of these laws or any other governmental regulations that may apply to us, we may be subject to significant civil, criminal and administrative penalties, damages, fines, imprisonment, exclusion of products from government funded healthcare programs, such as Medicare and Medicaid, and the curtailment or restructuring of our operations. If any of the physicians or other healthcare providers or entities with whom we expect to do business is found to be not in compliance with applicable laws, they may be subject to criminal, civil or administrative sanctions, including exclusions from government funded healthcare programs.

Current and future legislation may increase the difficulty and cost for us to obtain marketing approval of and commercialize our product candidates and affect the prices we may obtain.

In the United States and some foreign jurisdictions, there have been a number of legislative and regulatory changes and proposed changes regarding the healthcare system that could prevent or delay marketing approval of our product candidates, restrict or regulate post-approval activities and affect our ability to profitably sell any product candidates for which we obtain marketing approval.

In the United States, the Medicare Prescription Drug, Improvement, and Modernization Act of 2003, or the MMA, changed the way Medicare covers and pays for pharmaceutical products. The legislation expanded Medicare coverage for drug purchases by the elderly and certain disabled people and introduced a reimbursement methodology based on average sales prices for physician-administered drugs. In addition, this law provided authority for limiting the number of drugs that will be covered in any therapeutic class. Cost reduction initiatives and other provisions of this law and future laws could decrease the coverage and price that we will receive for any approved products. While the MMA only applies to drug benefits for Medicare beneficiaries, private payors often follow Medicare coverage policy and payment limitations in setting their own payment rates. Therefore, any limitations in reimbursement that results from the MMA may result in reductions in payments from private payors.

In March 2010, the ACA became law. The ACA is a sweeping law intended to broaden access to health insurance, reduce or constrain the growth of healthcare spending, enhance remedies against fraud and abuse, add new transparency requirements for the healthcare and health insurance industries, impose new taxes and fees on the health industry and impose additional health policy reforms.

Among the provisions of the ACA of importance to our potential product candidates are the following:

- an annual, nondeductible fee on any entity that manufactures or imports specified branded prescription drugs and biologic products;
- an increase in the statutory minimum rebates a manufacturer must pay under the Medicaid Drug Rebate Program;
- expansion of healthcare fraud and abuse laws, including the False Claims Act and the Anti-Kickback Statute, new government investigative powers, and enhanced penalties for noncompliance;
- a new Medicare Part D coverage gap discount program, in which manufacturers must agree to offer 50% point-of-sale discounts off negotiated prices;
- extension of manufacturers' Medicaid rebate liability;
- expansion of eligibility criteria for Medicaid programs;

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- expansion of the entities eligible for discounts under the Public Health Service Act's pharmaceutical pricing program;
- new requirements to report financial arrangements with physicians and teaching hospitals;
- a new requirement to annually report drug samples that manufacturers and distributors provide to physicians; and
- a new Patient-Centered Outcomes Research Institute to oversee, identify priorities in, and conduct comparative clinical effectiveness research, along with funding for such research.

The current administration supports a repeal of the ACA and an Executive Order has been signed commanding federal agencies to try to waive or delay requirements of the ACA that impose economic or regulatory burdens on states, families, the health-care industry and others. The Executive Order also declares that the administration will seek the "prompt repeal" of the law and that the government should prepare to "afford the States more flexibility and control to create a more free and open healthcare market." At this time, the immediate impact of the Executive Order is not clear. In addition, other legislative changes have been proposed and adopted since the ACA was enacted. These new laws may result in additional reductions in Medicare and other healthcare funding.

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

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

Our future growth may depend, in part, on our ability to penetrate foreign markets, where we would be subject to additional regulatory burdens and other risks and uncertainties.

Our future profitability may depend, in part, on our ability to commercialize our product candidates in foreign markets. In order to market and sell our products in the European Union and many other jurisdictions, we or our third-party collaborators must obtain separate marketing approvals and comply with numerous and varying regulatory requirements. The approval procedure varies among countries and economic areas and can involve additional testing. The time required to obtain approval may differ substantially from that required to obtain FDA approval. The marketing approval process outside the United States generally includes all of the risks associated with obtaining FDA approval. In addition, in many countries outside the United States, it is required that the product be approved for reimbursement before the product can be approved for sale in that country. We or these third parties may not obtain approvals from regulatory authorities outside the United States on a timely basis, if at all. Approval by FDA does not ensure approval by regulatory authorities in other countries or jurisdictions, and approval by one regulatory authority outside the United States does not ensure approval by regulatory authorities in other countries or jurisdictions or by FDA. Additionally, a failure or delay

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in obtaining marketing approval in one jurisdiction may have a negative effect on the marketing approval process in others. Approval procedures vary among jurisdictions and can involve requirements and administrative review periods different from, and greater than, those in the United States, including additional preclinical studies or clinical trials. Obtaining foreign marketing approvals and compliance with foreign regulatory requirements could result in significant delays, difficulties and costs for us and could delay or prevent the introduction of our products in certain countries. If we fail to comply with the regulatory requirements in international markets and/or receive applicable marketing approvals, our target market will be reduced and our ability to realize the full market potential of our product candidates will be harmed.

We may not be able to file for marketing approvals and may not receive necessary approvals to commercialize our products in any market. If we obtain approval of our product candidates and ultimately commercialize our product candidates in foreign markets, we would be subject to additional risks and uncertainties, including:

- our customers' ability to obtain reimbursement for our product candidates in foreign markets;
- our inability to directly control commercial activities because we are relying on third parties;
- the burden of complying with complex and changing foreign regulatory, tax, accounting and legal requirements;
- different medical practices and customs in foreign countries affecting acceptance in the marketplace;
- import or export licensing requirements;
- longer accounts receivable collection times;
- longer lead times for shipping;
- language barriers for technical training;
- reduced or no protection on pharmaceutical products or their use in some foreign countries;
- the unwillingness of courts in some foreign jurisdictions to enforce patents even when valid and infringed in that country;
- the possibility of pre-grant or post-grant review proceedings in certain foreign countries that allow a petitioner to hold up patent rights for an extended period or permanently by challenging the patent filing at the patent office of that country;
- the possibility of a compulsory license issued by a foreign country that allows a third party company or a government to manufacture, use or sell our products with a government-set low royalty to us;
- the existence of additional potentially relevant third-party intellectual property rights;
- foreign currency exchange rate fluctuations; and
- the interpretation of contractual provisions governed by foreign laws in the event of a contract dispute.

Foreign sales of our product candidates could also be adversely affected by the imposition of governmental controls, political and economic instability, trade restrictions and changes in tariffs.

Governments outside the United States tend to impose strict price controls, which may adversely affect our revenues, if any.

In some countries, particularly the countries of the European Union, the pricing of prescription pharmaceuticals is subject to governmental control. In these countries, pricing negotiations with governmental authorities can

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take considerable time after the receipt of marketing approval for a product. To obtain reimbursement or pricing approval in some countries, we may be required to conduct a clinical trial that compares the cost-effectiveness of our product candidate to other available therapies. If reimbursement of our products is unavailable or limited in scope or amount, or if pricing is set at unsatisfactory levels, our business could be harmed, possibly materially.

If we fail to comply with environmental, health and safety laws and regulations, we could become subject to fines or penalties or incur costs that could harm our business.

We are subject to numerous environmental, health and safety laws and regulations, including those governing laboratory procedures and the handling, use, storage, treatment and disposal of hazardous materials and wastes. Our operations involve the use of hazardous and flammable materials, including chemicals and biological materials. Our operations also produce hazardous waste products. We generally contract with third parties for the disposal of these materials and wastes. We cannot eliminate the risk of contamination or injury from these materials. In the event of contamination or injury resulting from our use of hazardous materials, we could be held liable for any resulting damages, and the amount of the liability could exceed our resources. We also could incur significant costs associated with civil or criminal fines and penalties for failure to comply with such laws and regulations.

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

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

Risks related to our dependence on third parties

We rely on, and expect to continue to rely on, third parties to conduct our clinical trials for our product candidates. If these third parties do not successfully carry out their contractual duties, comply with regulatory requirements or meet expected deadlines, we may not be able to obtain marketing approval for or commercialize our product candidates, and our business could be substantially harmed.

We do not have the ability to independently conduct clinical trials. We rely on medical institutions, clinical investigators, contract laboratories and other third parties, such as CROs, to conduct or otherwise support clinical trials for our product candidates. We expect to rely heavily on these parties for performance of clinical trials for our product candidates. Nevertheless, we will be responsible for ensuring that each of our clinical trials is conducted in accordance with the applicable protocol, legal and regulatory requirements and scientific standards.

We, our investigators, and our CROs will be required to comply with regulations, including good clinical practice, or GCP, and other related requirements for conducting, monitoring, recording and reporting the results of clinical trials to ensure that the data and results are scientifically credible and accurate, and that the trial patients are adequately informed of the potential risks of participating in clinical trials and their rights are protected. These regulations are enforced by the FDA, the Competent Authorities of the Member States of the

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European Economic Area and comparable foreign regulatory authorities for any drugs in clinical development. The FDA enforces GCPs through periodic inspections of clinical trial sponsors, principal investigators and trial sites. If we, our investigators or our CROs fail to comply with applicable GCPs, the clinical data generated in our clinical trials may be called into question and the FDA or comparable foreign regulatory authorities may require us to perform additional clinical trials before considering our marketing applications for approval. We cannot assure you that, upon inspection, the FDA will determine that any of our future clinical trials will comply with GCPs.

In addition, our clinical trials must be conducted with product candidates produced under cGMPs. Our failure or the failure of our investigators or CROs to comply with these requirements may require us to repeat clinical trials, which would delay the marketing approval process and could also subject us to enforcement action. We also are required to register certain clinical trials and post the results of such completed clinical trials involving product candidates for which we receive marketing approval on a government-sponsored database, ClinicalTrials.gov, within certain timeframes. Failure to do so can result in fines, adverse publicity and civil and criminal sanctions.

Although we intend to design the clinical trials for our product candidates, CROs will administer all of the clinical trials. As a result, many important aspects of our development programs, including their conduct and timing, will be outside of our direct control. Our reliance on third parties to conduct future clinical trials will also result in less direct control over the management of data developed through clinical trials than would be the case if we were relying entirely upon our own staff. Communicating with outside parties can also be challenging, potentially leading to mistakes as well as difficulties in coordinating activities. Outside parties may:

- have staffing difficulties;
- fail to comply with contractual obligations;
- experience regulatory compliance issues;
- undergo changes in priorities or become financially distressed;
- make errors in the design, management or retention of our data or data systems; and/or
- form relationships with other entities, some of which may be our competitors.

These factors may materially adversely affect the willingness or ability of third parties to conduct our clinical trials and may subject us to unexpected cost increases that are beyond our control. If the CROs do not perform clinical trials in a satisfactory manner, breach their obligations to us or fail to comply with regulatory requirements, the development, marketing approval and commercialization of our product candidates may be delayed, we may not be able to obtain marketing approval and commercialize our product candidates, or our development program may be materially and irreversibly harmed. If we are unable to rely on clinical data collected by our CROs, we could be required to repeat, extend the duration of, or increase the size of any clinical trials we conduct and this could significantly delay commercialization and require significantly greater expenditures.

If any of our relationships with these third-party CROs terminate, we may not be able to enter into arrangements with alternative CROs. If CROs do not successfully carry out their contractual duties or obligations or meet expected deadlines, if they need to be replaced or if the quality or accuracy of the clinical data they obtain is compromised due to the failure to adhere to our clinical protocols, regulatory requirements or for other reasons, any clinical trials such CROs are associated with may be extended, delayed or terminated, and we may not be able to obtain marketing approval for or successfully commercialize our product candidates. As a result, we believe that our financial results and the commercial prospects for our product candidates in the

subject indication would be harmed, our costs could increase and our ability to generate revenue could be delayed.

We contract with third parties for the manufacture of our product candidates for preclinical studies and clinical trials and 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, 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 studies and clinical trials, as well as for the commercial manufacture of our drugs if any of our product candidates receive marketing approval. 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.

The facilities used to manufacture our product candidates must be evaluated by the FDA pursuant to inspections that will be conducted after we submit our marketing applications to the FDA to ensure compliance with cGMP. 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 regulatory requirements of the FDA or others, we will not be able to use the products produced at 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 a comparable foreign regulatory authority finds that these facilities do not comply with cGMP, we may need to find alternative manufacturing facilities, which would significantly impact our ability to develop, obtain marketing approval for or market our product candidates, if approved. Further, our failure, or the failure of our third party manufacturers, to comply with these or other 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 product candidates or drugs, if approved, operating restrictions and criminal prosecutions, any of which could significantly and adversely affect our business and supplies of our product candidates.

We may be unable to establish any agreements with third-party manufacturers or do so on acceptable terms. Even if we are able to establish agreements with third party manufacturers, reliance on third party manufacturers entails additional risks, including:

- reliance on the third party for regulatory compliance and quality assurance;
- the possible breach of the manufacturing agreement by the third party;
- the possible misappropriation of our proprietary information, including our trade secrets and know-how; and
- the possible termination or nonrenewal of the agreement by the third party at a time that is costly or inconvenient for us.

Our product candidates and any other 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.

Any performance failure on the part of our existing or future manufacturers could delay clinical development or marketing approval. If our current contract manufacturers cannot perform as agreed, we may be required to

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replace such manufacturers. Although we believe that there are several potential alternative manufacturers who could manufacture our product candidates, we may incur added costs and delays in identifying and qualifying any such replacement.

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

We, or our third-party manufacturers, may be unable to successfully scale-up manufacturing of our product candidates in sufficient quality and quantity, which would delay or prevent us from developing our product candidates and commercializing approved products, if any.

In order to conduct large-scale clinical trials of our product candidates, we will need to manufacture them in large quantities. We, or any of our manufacturing partners, may be unable to successfully increase the manufacturing capacity for any of our product candidates in a timely or cost-effective manner, or at all. In addition, quality issues may arise during scale-up activities. If we, or any manufacturing partners, are unable to successfully scale up the manufacture of our product candidates in sufficient quality and quantity, the development, testing, and clinical trials of that product candidate may be delayed or infeasible, and regulatory approval or commercial launch of any resulting product may be delayed or not obtained, which could significantly harm our business.

The third parties upon which we rely for the supply of the active pharmaceutical ingredients, formulations, and drug products are our sole sources of supply and have limited capacity, and the loss of any of these suppliers could harm our business.

The active pharmaceutical ingredients, or API, formulations and drug products for our product candidates are supplied to us from single source suppliers with limited capacity. Our ability to successfully develop our product candidates, and to ultimately supply our commercial drugs in quantities sufficient to meet the market demand, depends in part on our ability to obtain the API, formulations and drug products in accordance with cGMP requirements and in sufficient quantities for commercialization and clinical trials. We do not currently have arrangements in place for a redundant or second-source supply of any such API, formulation or drug product in the event any of our current suppliers cease their operations for any reason.

We do not know whether our suppliers will be able to meet our demand, either because of the nature of our agreements with those suppliers, our limited experience with those suppliers or our relative importance as a customer to those suppliers. It may be difficult for us to assess their ability to timely meet our demand in the future based on past performance. While our suppliers have generally met our demand for their products on a timely basis in the past, they may subordinate our needs in the future to their other customers.

For all of our product candidates, we intend to identify and qualify additional manufacturers to provide API, formulations and drug products prior to submission of an NDA to the FDA and/or an MAA to the EMA. Establishing additional or replacement suppliers for the API, formulations and drug products for our product candidates, if required, may not be accomplished quickly. If we are able to find a replacement supplier, such replacement supplier would need to be qualified, or we may have to perform comparative studies comparing the drug product from a new manufacturer to the product used in any completed clinical trials. All of this may require additional marketing approval, which could result in further delay. While we seek to maintain adequate inventory of the API, formulations and drug products for our product candidates, any interruption or delay in the supply of components or materials, or our inability to obtain such API, formulation and drug product from alternate sources at acceptable prices in a timely manner could impede, delay, limit or prevent our development efforts, which could harm our business, results of operations, financial condition and prospects.

We may seek to establish additional collaborations, and, if we are not able to establish them on commercially reasonable terms, we may have to alter our development and commercialization plans.

Our drug development programs and the potential commercialization of our product candidates will require substantial additional cash to fund expenses. For some of our product candidates, we may decide to collaborate with pharmaceutical and biotechnology companies for the development and potential commercialization of those product candidates.

We face significant competition in seeking appropriate collaborators. Whether we reach a definitive agreement for a collaboration will depend, among other things, upon our assessment of the collaborator's resources and expertise, the terms and conditions of the proposed collaboration and the proposed collaborator's evaluation of a number of factors. Those factors may include the design or results of clinical trials, the likelihood of approval by the FDA or similar regulatory authorities outside the United States, the potential market for the subject product candidate, the costs and complexities of manufacturing and delivering such product candidate to patients, the potential of competing drugs 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. The terms of any collaborations or other arrangements that we may establish may not be favorable to us.

We may also be restricted under existing collaboration agreements from entering into future agreements on certain terms with potential collaborators. 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 collaborations on a timely basis, on acceptable terms, or at all. If we are unable to do so, we may have to curtail the development of the product candidate for which we are seeking to collaborate, 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. If we elect to increase our 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 drug revenue.

In addition, any collaboration that we enter into may not be successful. The success of our collaboration arrangements will depend heavily on the efforts and activities of our collaborators. Collaborators generally have significant discretion in determining the efforts and resources that they will apply to these collaborations. Any such collaboration may require us to incur non-recurring or other charges, increase our near- and long-term expenditures and pose significant integration or implementation challenges or disrupt our management or business. These transactions would entail numerous operational and financial risks, including exposure to unknown liabilities, disruption of our business and diversion of our management's time and attention in order to manage a collaboration, incurrence of substantial debt or dilutive issuances of equity securities to pay transaction consideration or costs, higher than expected collaboration or integration costs, write-down of assets or goodwill or impairment charges, increased amortization expenses and difficulty and cost in facilitating the collaboration.

Lastly, disagreements between parties to a collaboration arrangement regarding clinical development and commercialization matters can lead to delays in the development process or commercializing the applicable product candidate and, in some cases, termination of the collaboration arrangement. These disagreements can be difficult to resolve if neither of the parties has final decision-making authority. Collaborations with

pharmaceutical or biotechnology companies and other third parties often are terminated or allowed to expire by the other party. Any such termination or expiration would adversely affect us financially and could harm our business reputation.

Risks related to the commercialization of our product candidates

Even if any of our product candidates receives marketing approval, it may fail to achieve the degree of market acceptance by physicians, patients, third-party payors and others in the medical community necessary for commercial success.

If any of our product candidates receives marketing approval, it may nonetheless fail to gain sufficient market acceptance by physicians, patients, third-party payors and others in the medical community. If our product candidates do not achieve an adequate level of acceptance, we may not generate significant product revenues and we may not become profitable. The degree of market acceptance of our product candidates, if approved for commercial sale, will depend on a number of factors, including:

- the timing of our receipt of any marketing approvals;
- the terms of any approvals and the countries in which approvals are obtained;
- the efficacy and safety and potential advantages and disadvantages compared to alternative treatments;
- the prevalence and severity of any side effects associated with our products;
- the indications for which our products are approved;
- adverse publicity about our products or favorable publicity about competing products;
- the approval of other products for the same indications as our products;
- our ability to offer our products for sale at competitive prices;
- the convenience and ease of administration compared to alternative treatments;
- the willingness of the target patient population to try new therapies and of physicians to prescribe these therapies;
- the success of our physician education programs;
- the strength of our marketing and distribution support;
- the availability of third-party coverage and adequate reimbursement, including patient cost-sharing programs such as copays and deductibles; and
- any restrictions on the use of our products together with other medications.

If any product we commercialize fails to achieve market acceptance, it could have a material and adverse effect on our business, financial condition, results of operation and prospects.

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

The development and commercialization of new drug products is highly competitive. We face competition with respect to our current product candidates and will face competition with respect to any product candidates that

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we may seek to develop or commercialize in the future, from major pharmaceutical companies, specialty pharmaceutical companies and biotechnology companies worldwide. There are a number of large pharmaceutical and biotechnology companies that currently market and sell products or are pursuing the development of products for the treatment of the disease indications for which we are developing our product candidates. Some of these competitive products and therapies are based on scientific approaches that are the same as or similar to our approach, and others are based on entirely different approaches. 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.

Specifically, there are a large number of companies developing or marketing treatments for cancer, including many major pharmaceutical and biotechnology companies. If trilaciclib is approved, it would compete with (a) existing growth factor support treatments, (b) if approved, rovalpituzumab tesirine (Rova-T), an antibody drug conjugate currently being developed by Abbvie for the treatment of patients with SCLC, (c) if approved, the multiple immune checkpoint inhibitors in clinical trials for the treatment of patients with SCLC and TNBC, and (d) multiple approved drugs or drugs that may be approved in the future for indications for which we may develop trilaciclib. If G1T38 is approved, it would compete with (a) Pfizer's approved CDK4/6 inhibitor, Ibrance, (b) Novartis's approved CDK4/6 inhibitor, Kisqali, (c) if approved, the CDK4/6 inhibitor product candidate currently in clinical development by Eli Lilly, (d) if approved, other non-selective CDK4/6 inhibitor product candidates in clinical development, including product candidates being developed by FLX Bio and OncoMed Pharmaceuticals, and (e) multiple approved drugs or drugs that may be approved in the future for indications for which we may develop G1T38. If G1T48 is approved, it would compete with (a) the approved intramuscular SERD, Faslodex, being marketed by AstraZeneca, (b) if approved, other oral SERDs in development by Radius Health, Genentech, AstraZeneca and Novartis; and (c) multiple approved drugs or drugs that may be approved in the future for indications for which we may develop G1T48.

Our commercial opportunity could be reduced or eliminated 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 may develop. Our competitors also may obtain FDA or other marketing 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 and/or slow our marketing approval. Some of the important competitive factors affecting the success of all of our product candidates, if approved, are likely to be their efficacy, safety, convenience, price and the availability of reimbursement from government and other third-party payors.

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 studies, conducting clinical trials, obtaining marketing approvals and marketing approved products 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 and early-stage companies may also prove to be significant competitors, particularly through collaborative arrangements with large and established companies. These third parties compete with us in recruiting and retaining qualified scientific and management personnel, establishing clinical trial sites and patient registration for clinical trials, as well as in acquiring technologies complementary to, or necessary for, our programs.

Even if we are able to commercialize any product candidates, such drugs may become subject to unfavorable pricing regulations or third-party coverage and reimbursement policies, which would harm our business.

The regulations that govern marketing approvals, pricing and reimbursement for new drugs vary widely from country to country. Some countries require approval of the sale price of a drug before it can be marketed. In

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many countries, the pricing review period begins after marketing 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 price regulations that delay our commercial launch of the product candidate, possibly for lengthy time periods, and negatively impact the revenues we are able to generate from the sale of the product candidate in that country. Adverse pricing limitations may hinder our ability to recoup our investment in one or more product candidates, even if our product candidates obtain marketing approval.

Our ability to commercialize any product candidates successfully also will depend in part on the extent to which coverage and reimbursement for these product candidates and related treatments will be available from government authorities, private health insurers and other organizations. In the United States, the principal decisions about reimbursement for new medicines are typically made by the CMS, an agency within the U.S. Department of Health and Human Services, as CMS decides whether and to what extent a new medicine will be covered and reimbursed under Medicare. Private payors tend to follow CMS to a substantial degree. It is difficult to predict what CMS will decide with respect to reimbursement. Reimbursement agencies in Europe may be more conservative than CMS. For example, a number of cancer drugs are generally covered and paid for in the United States, but have not been approved for reimbursement in certain European countries. A primary trend in the U.S. healthcare industry and elsewhere is cost containment. Government authorities and third-party payors have attempted to control costs by limiting coverage and the amount of payments for particular drugs. Increasingly, third-party payors are requiring that drug companies provide them with predetermined discounts from list prices and are challenging the prices charged for drugs. We cannot be sure that coverage will be available for any product candidate that we commercialize and, if coverage is available, the level of payments. Reimbursement may impact the demand for, or the price of, any product candidate for which we obtain marketing approval. If reimbursement is not available or is available only to limited levels, we may not be able to successfully commercialize any product candidate for which we obtain marketing approval.

In addition to CMS and private payors, professional organizations such as the National Comprehensive Cancer Network and the American Society of Clinical Oncology can influence decisions about reimbursement for new medicines by determining standards of care. In addition, many private payors contract with commercial vendors who sell software that provide guidelines that attempt to limit utilization of, and therefore reimbursement for, certain products deemed to provide limited benefit to existing alternatives. Such organizations may set guidelines that limit reimbursement or utilization of our products.

There may be significant delays in obtaining reimbursement for newly approved drugs, and coverage may be more limited than the purposes for which the drug is approved by the FDA or similar regulatory authorities outside the United States. Moreover, eligibility for reimbursement does not imply that any drug will be paid for in all cases or at a rate that covers our costs, including research, development, manufacture, sale and distribution. Interim reimbursement levels for new drugs, if applicable, may also not be sufficient to cover our costs and may not be made permanent. Reimbursement rates may vary according to the use of the drug and the clinical setting in which it is used, may be based on reimbursement levels already set for lower cost drugs and may be incorporated into existing payments for other services. Net prices for drugs may be reduced by mandatory discounts or rebates required by government healthcare programs or private payors and by any future relaxation of laws that presently restrict imports of drugs from countries where they may be sold at lower prices than in the United States. Our inability to promptly obtain coverage and profitable payment rates from both government-funded and private payors for any approved drugs that we develop could have a material adverse effect on our operating results, our ability to raise capital needed to commercialize drugs and our overall financial condition.

We currently have no marketing and sales force. If we are unable to establish effective sales or marketing capabilities or enter into agreements with third parties to sell or market our product candidates, we may not be able to effectively sell or market our product candidates, if approved, or generate product revenues.

We do not currently have a sales or marketing infrastructure and have limited experience in the sale, marketing or distribution of drugs. To achieve commercial success for any approved product candidate for which we retain sales and marketing responsibilities, we must build our sales, marketing, managerial, and other non-technical capabilities or make arrangements with third parties to perform these services. There are risks involved with both establishing our own sales and marketing capabilities and entering into arrangements with third parties to perform these services. For example, recruiting and training a sales force is expensive and time consuming and could delay any drug launch. If the commercial launch of a product candidate for which we recruit a sales force and establish marketing capabilities is delayed or does not occur for any reason, we would have prematurely or unnecessarily incurred these commercialization expenses. This may be costly, and our investment would be lost if we cannot retain or reposition our sales and marketing personnel.

Factors that may inhibit our efforts to commercialize our product candidates on our own include:

- our inability to recruit and retain adequate numbers of effective sales and marketing personnel;
- the inability of sales personnel to obtain access to physicians or persuade adequate numbers of physicians to prescribe any future drugs;
- the lack of complementary drugs to be offered by sales personnel, which may put us at a competitive disadvantage relative to companies with more extensive product lines; and
- unforeseen costs and expenses associated with creating an independent sales and marketing organization.

If we enter into arrangements with third parties to perform sales, marketing and distribution services, our drug revenues or the profitability of these drug revenues to us are likely to be lower than if we were to market and sell any product candidates that we develop ourselves. In addition, we may not be successful in entering into arrangements with third parties to sell and market our product candidates or may be unable to do so when needed or on terms that are favorable to us. 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 product candidates effectively. If we do not establish sales and marketing capabilities successfully, either on our own or in collaboration with third parties, we will not be successful in commercializing our product candidates that receive marketing approval or any such commercialization may experience delays or limitations. If we are not successful in commercializing our product candidates, either on our own or through collaborations with one or more third parties, our business, results of operations, financial condition and prospects will be materially adversely affected.

Product liability lawsuits against us could cause us to incur substantial liabilities and to limit commercialization of any products that we may develop.

We face an inherent risk of product liability exposure related to the evaluation of our product candidates in human clinical trials and will face an even greater risk if we commercially sell any products that we may develop. If we cannot successfully defend ourselves against claims that our product candidates or products caused injuries, we will incur substantial liabilities. Regardless of merit or eventual outcome, liability claims may result in:

- decreased demand for any product candidates or products that we may develop;
- injury to our reputation and significant negative media attention;

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- withdrawal of clinical trial participants;
- significant costs to defend the related litigation;
- substantial monetary awards to trial participants or patients;
- loss of revenue;
- reduced resources of our management to pursue our business strategy; and
- the inability to successfully commercialize any products that we may develop.

We currently hold \$10.0 million in product liability insurance coverage in the aggregate, with a per incident limit of \$10.0 million, which may not be adequate to cover all liabilities that we may incur. We may need to increase our insurance coverage as we expand our clinical trials or if we commence commercialization of our product candidates. Insurance coverage is increasingly expensive. 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.

Risks related to our intellectual property

If we are unable to obtain and maintain intellectual property protection for our technology and products, or if the scope of the intellectual property protection obtained is not sufficiently broad, our competitors could commercialize technology and products similar or identical to ours, and our ability to successfully commercialize our technology and products may be impaired and, if we infringe the valid patent rights of others, we may be prevented from making, using or selling our products or may be subject to damages or penalties.

Our success depends in large part on our ability to obtain and maintain patents in the United States and other countries that adequately protect our proprietary technology and products. We seek to protect our proprietary position by filing patent applications in the United States and in foreign countries that cover our novel product candidates and their uses, pharmaceutical formulations and dosages, and processes for the manufacture of them. Our patent portfolio currently includes both patents and patent applications.

The patent prosecution process is expensive and time-consuming. We may not be able to file and prosecute all necessary or desirable patent applications at a reasonable cost or in a timely manner. We may choose not to seek patent protection for certain innovations and may choose not to pursue patent protection in certain jurisdictions. Under the laws of certain jurisdictions, patents or other intellectual property rights may be unavailable or limited in scope. It is also possible that we will fail to identify patentable aspects of our research and development before it is too late to obtain patent protection.

We currently solely own or exclusively license our patents and patent applications and we have the right to control the prosecution of the in-licensed patent applications. In the future, we may choose to in-license additional patents or patent applications from third parties that we conclude are useful or necessary for our business goals. We may not have the right to control the preparation, filing, prosecution or maintenance of such patent applications. Therefore, if we do license additional patents or patent applications in the future, these patents and applications may not be prosecuted and enforced in a manner consistent with the best interests of our business.

The patent position of biotechnology and pharmaceutical companies generally is highly uncertain, involves complex legal and factual questions and has in recent years been the subject of much litigation. Publications of discoveries in the scientific literature often lag behind the actual discoveries, and patent applications in the United States and other jurisdictions are typically not published until 18 months after filing, or in some cases

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not at all. Therefore, we cannot know with certainty whether we were the first to make the inventions claimed in our owned or licensed patents or pending patent applications, or that we were the first to file for patent protection of such inventions. As a result, the issuance, scope, validity, enforceability and commercial value of our patent rights are highly uncertain. Our pending and future patent applications may not result in patents being issued which protect our technology or products, in whole or in part, or which effectively prevent others from commercializing competitive technologies and products. Changes in either the patent laws or interpretation of the patent laws in the United States and other countries may diminish the value of our patents or narrow the scope of our patent protection.

Recent patent reform legislation could increase the uncertainties and costs surrounding the prosecution of our patent applications and the enforcement or defense of our issued patents. On September 16, 2011, the Leahy-Smith America Invents Act, or the Leahy-Smith Act, was signed into law. The Leahy-Smith Act includes a number of significant changes to U.S. patent law. These include provisions that affect the way patent applications are prosecuted and may also affect patent litigation. The U.S. Patent and Trademark Office, or U.S. PTO, recently developed new regulations and procedures to govern administration of the Leahy-Smith Act, and many of the substantive changes to patent law associated with the Leahy-Smith Act, and in particular, the first to file provisions, became effective on March 16, 2013. The Leahy-Smith Act also created certain new administrative adversarial proceedings, discussed below. It is not clear what, if any, impact the Leahy-Smith Act will have on the operation of our business. However, the Leahy-Smith Act and its implementation could increase the uncertainties and costs surrounding the prosecution of our patent applications and the enforcement or defense of our issued patents, all of which could have a material adverse effect on our business and financial condition.

The U.S. Supreme Court has issued opinions in patent cases in the last few years that many consider may weaken patent protection in the United States, either by narrowing the scope of patent protection available in certain circumstances, holding that certain kinds of innovations are not patentable or generally otherwise making it easier to invalidate patents in court. Additionally, there have been recent proposals for additional changes to the patent laws of the United States and other countries that, if adopted, could impact our ability to obtain patent protection for our proprietary technology or our ability to enforce our proprietary technology. Depending on future actions by the U.S. Congress, the U.S. courts, the U.S. PTO and the relevant law-making bodies in other countries, the laws and regulations governing patents could change in unpredictable ways that would weaken our ability to obtain new patents or to enforce our existing patents and patents that we might obtain in the future.

Even if our patent applications issue as patents, they may not issue in a form that will provide us with any meaningful protection, prevent competitors from competing with us or otherwise provide us with any competitive advantage. Our competitors may be able to circumvent our owned or licensed patents by developing similar or alternative technologies or products in a non-infringing manner.

The issuance of a patent is not conclusive as to its inventorship, scope, validity or enforceability, and our owned and licensed patents may be challenged in the courts or patent offices in the United States and in other countries. Such challenges may result in loss of exclusivity or in patent claims being narrowed, invalidated or held unenforceable, in whole or in part, which could limit our ability to stop others from using or commercializing similar or identical technology and products, or limit the duration of the patent protection of our technology and products. 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. Likewise, a court could uphold and enforce a third party patent that it rules we have infringed, which would subject us to damages or prevent us from making, using or selling our products.

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During patent prosecution in the United States and in most foreign countries, a third party can submit prior art or arguments to the reviewing patent office to attempt to prevent the issuance of a competitor's patent. For example, our pending patent applications may be subject to a third-party preissuance submission of prior art to the U.S. PTO or an Observation in Europe. Such submission may convince the receiving patent office not to issue the patent. In addition, if the breadth or strength of protection provided by our patents and patent applications is reduced by such third party submission, it could affect the value of our resulting patent or dissuade companies from collaborating with us to license, develop or commercialize current or future product candidates.

The risks described here pertaining to our patents and other intellectual property rights also apply to any intellectual property rights that we may license in the future, and any failure to obtain, maintain and enforce these rights could have a material adverse effect on our business. In some cases we may not have control over the prosecution, maintenance or enforcement of the patents that we license, and our licensors may fail to take the steps that we believe are necessary or desirable in order to obtain, maintain and enforce the licensed patents. Any inability on our part to adequately protect or defend our intellectual property may have a material adverse effect on our business, operating results and financial position.

Some intellectual property may have been discovered through government funded programs and thus may be subject to federal regulations such as "march-in" rights, certain reporting requirements and a preference for U.S.-based companies. Compliance with such regulations may limit our exclusive rights, and limit our ability to contract with non-U.S. manufacturers.

Many of our intellectual property rights were generated through the use of U.S. government funding and are therefore subject to certain federal regulations. As a result, the U.S. government may have certain rights to intellectual property embodied in our current or future product candidates pursuant to the Bayh-Dole Act of 1980, or Bayh-Dole Act. These U.S. government rights in certain inventions developed under a government-funded program include a non-exclusive, non-transferable, irrevocable worldwide license to use inventions for any governmental purpose. In addition, the U.S. government has the right, under certain limited circumstances, to require us to grant exclusive, partially exclusive, or non-exclusive licenses to any of these inventions to a third party if it determines that: (i) adequate steps have not been taken to commercialize the invention; (ii) government action is necessary to meet public health or safety needs; or (iii) government action is necessary to meet requirements for public use under federal regulations (also referred to as "march-in rights"). The U.S. government also has the right to take title to these inventions if we fail to disclose the invention to the government or fail to file an application to register the intellectual property within specified time limits. Intellectual property generated under a government funded program is also subject to certain reporting requirements, compliance with which may require us to expend substantial resources. In addition, the U.S. government requires that any products embodying the subject invention or produced through the use of the subject invention be manufactured substantially in the United States. The manufacturing preference requirement can be waived if the owner of the intellectual property can show that reasonable but unsuccessful efforts have been made to grant licenses on similar terms to potential licensees that would be likely to manufacture substantially in the United States or that under the circumstances domestic manufacture is not commercially feasible. This preference for U.S. manufacturers may limit our ability to contract with non-U.S. product manufacturers for products covered by such intellectual property. To the extent any of our current or future intellectual property is generated through the use of U.S. government funding, the provisions of the Bayh-Dole Act may similarly apply.

We may become involved in administrative adversarial proceedings in the U.S. PTO or in the patent offices of foreign countries brought by a third party to attempt to cancel or invalidate our patent rights, which could be expensive, time consuming and cause a loss of patent rights.

The Leahy-Smith Act created for the first time new procedures to challenge issued patents in the United States, including post-grant review and *inter partes* review proceedings, which some third parties have been using to cause the cancellation of selected or all claims of issued patents of competitors. For a patent with a priority date of March 16, 2013 or later, a petition for post-grant review can be filed by a third party in a nine month window from issuance of the patent. A petition for *inter partes* review can be filed immediately following the issuance of a patent if the patent was filed prior to March 16, 2013. A petition for *inter partes* review can be filed after the nine month period for filing a post-grant review petition has expired for a patent with a priority date of March 16, 2013 or later. Post-grant review proceedings can be brought on any ground of challenge, whereas *inter partes* review proceedings can only be brought to raise a challenge based on published prior art. These administrative adversarial actions at the U.S. PTO review patent claims without the presumption of validity afforded to U.S. patents in lawsuits in U.S. federal courts, use a lower burden of proof than used by U.S. federal courts, and interpret patent claims using a "broadest reasonable construction" instead of "plain and ordinary meaning," which is used in court litigation. Because of these differences between U.S. administrative and judicial adversarial patent proceedings, it is generally considered easier for a competitor or third party to have a U.S. patent cancelled in a patent office post-grant review or *inter partes* review proceeding than invalidated in a litigation in a U.S. federal court. If any of our patents are challenged by a third party in such a U.S. patent office proceeding, there is no guarantee that we will be successful in defending the patent, which would result in a loss of the challenged patent right to us.

Opposition or invalidation procedures are also available in most foreign countries. Many foreign authorities, such as the authorities at the European Patent Office, have only post-grant opposition proceedings, however, certain countries, such as India, have both pre-grant and post-grant opposition proceedings. These procedures have been used frequently against pharmaceutical patents in foreign countries. For example, in some foreign countries, these procedures are used by generic companies to hold up an innovator's patent rights as a means to allow the generic company to enter the market. This activity is particularly prevalent in India, China and South America and may become more prevalent in Africa and other parts of Asia as certain countries reach more established economies. If any of our patents are challenged in a foreign opposition or invalidation proceeding, we could face significant costs to defend our patents, and we may not be successful. Uncertainties resulting from the initiation, continuation or loss of such proceedings could have a material adverse effect on our ability to compete in the market place. Further, in many foreign jurisdictions, the losing party must pay the attorneys' fees of the winning party, which can be substantial.

We may have to file one or more lawsuits in court to prevent a third party from selling a product or using a product in a manner that infringes our patent, which could be expensive, time consuming and unsuccessful, and ultimately result in the loss of our proprietary market.

Because competition in our industry is intense, competitors may infringe or otherwise violate our issued patents, patents of our licensors or other intellectual property. To counter infringement or unauthorized use, we may be required to file infringement lawsuits, which can be expensive and time consuming. Any claims we assert against perceived infringers could provoke these parties to assert counterclaims against us alleging that we infringe their patents. In addition, in a patent infringement proceeding, a court may decide that a patent of ours is invalid or unenforceable, in whole or in part, construe the patent's claims narrowly or refuse to stop the other party from using the technology at issue on the grounds that our patents do not cover the technology in question. An adverse result in any litigation proceeding could put one or more of our patents at risk of being invalidated or interpreted narrowly. We may also elect to enter into license agreements in order to settle patent

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infringement claims or to resolve disputes prior to litigation, and any such license agreements may require us to pay royalties and other fees that could be significant. Furthermore, 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.

Because our CDK 4/6 inhibitor candidates are small molecules, after commercialization they will be subject to the patent litigation process of the Hatch Waxman Act, which allows a generic company to submit an Abbreviated New Drug Application, or ANDA, to the FDA to obtain approval to sell our drug using bioequivalence data only. Under the Hatch Waxman Act, since our candidates will be considered new chemical entities, we will have the opportunity to list all of our patents that cover our drug product or its method of use in the FDA's compendium of "Approved Drug Products with Therapeutic Equivalence Evaluation," sometimes referred to as the FDA's Orange Book. A generic company can submit an ANDA to the FDA four years after our drug approval. The submission of the ANDA by a generic company is considered a technical act of patent infringement. The generic company can certify that it will wait until the natural expiration date of our listed patents to sell a generic version of our product or can certify that one or more of our listed patents are invalid, unenforceable, or not infringed. If the latter, we will have 45 days to bring a patent infringement lawsuit against the generic company. This will initiate a challenge to one or more of our Orange Book listed patents based on arguments from the generic company that either our patent is invalid, unenforceable or not infringed. Under the Hatch Waxman Act, if a lawsuit is brought, the FDA is prevented from issuing a final approval on the generic drug until the earlier of seven-and-a-half years from our drug approval or a final decision of a court holding that our asserted patent claims are invalid, unenforceable or not infringed. If we do not properly list our relevant patents in the Orange Book, or timely file a lawsuit in response to a certification from a generic company under an ANDA, or if we do not prevail in the resulting patent litigation, we can lose our proprietary market, which can rapidly become generic. Further, even if we do correctly list our relevant patents in the Orange Book, bring a lawsuit in a timely manner and prevail in that lawsuit, it may be at a very significant cost to us of attorneys' fees and employee time and distraction over a long period. Further, it is common for more than one generic company to try to sell an innovator drug at the same time, and so we may be faced with the cost and distraction of multiple lawsuits. We may also determine it is necessary to settle the lawsuit in a manner that allows the generic company to enter our market prior to the expiration of our patent or otherwise in a manner that adversely affects the strength, validity or enforceability of our patent.

A number of pharmaceutical companies have been the subject of intense review by the U.S. Federal Trade Commission or a corresponding agency in another country based on how they have conducted or settled drug patent litigation, and certain reviews have led to an allegation of an anti-trust violation, sometimes resulting in a fine or loss of rights. We cannot be sure that we would not also be subject to such a review or that the result of the review would be favorable to us, which could result in a fine or penalty.

The U.S. Federal Trade Commission, or FTC, has brought a number of lawsuits in federal court in the past few years to challenge Hatch Waxman ANDA litigation settlements between innovator companies and generic companies as anti-competitive. The FTC has taken an aggressive position that anything of value is a payment, whether money is paid or not. Under their approach, if an innovator as part of a patent settlement agrees not to launch or delay launch of an authorized generic during the 180-day period granted to the first generic company to challenge an Orange Book listed patent covering an innovator drug, or negotiates a delay in entry without payment, the FTC may consider it an unacceptable reverse payment. The biopharmaceutical industry argues that such agreements are rational business decisions to dismiss risk and are immune from antitrust attack if the terms of the settlement are within the scope of the exclusionary potential of the patent. In 2013, the U.S. Supreme Court, in a five-to-three decision in *FTC v. Actavis, Inc.* rejected both the biopharmaceutical industry's and FTC's arguments with regard to so-called reverse payments, and held that whether a "reverse payment" settlement involving the exchange of consideration for a delay in entry is subject to an anticompetitive analysis

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depends on five considerations: (a) the potential for genuine adverse effects on competition; (b) the justification of payment; (c) the patentee's ability to bring about anticompetitive harm; (d) whether the size of the payment is a workable surrogate for the patent's weakness; and (e) that antitrust liability for large unjustified payments does not prevent litigating parties from settling their lawsuits, for example, by allowing the generic to enter the market before the patent expires without the patentee's paying the generic. Furthermore, whether a reverse payment is justified depends upon its size, its scale in relation to the patentee's anticipated future litigation costs, its independence from other services for which it might represent payment, as was the case in *Actavis*, and the lack of any other convincing justification. The Court held that reverse payment settlements can potentially violate antitrust laws and are subject to the standard antitrust rule-of-reason analysis, with the burden of proving that an agreement is unlawful on the FTC and leaving to lower courts the structuring of such rule of reason analysis. If we are faced with drug patent litigation, including Hatch Waxman litigation with a generic company, we could be faced with such an FTC challenge based on that activity, including how or whether we settle the case, and even if we strongly disagree with the FTC's position, we could face a significant expense or penalty.

Third parties may initiate legal proceedings alleging that we are infringing their intellectual property rights, the outcome of which would be uncertain and could have a material adverse effect on the success of our business.

We may become party to, or threatened with, future adversarial proceedings or litigation regarding intellectual property rights covering our products and technology, including interference or derivation proceedings before the U.S. PTO. Third parties may assert infringement claims against us based on existing patents or patents that may be granted in the future. If we are found to infringe a third party's intellectual property rights, we could be required to obtain a license from such third party to continue developing and marketing our products and technology. However, we may not be able to obtain any required license on commercially reasonable terms or at all. Even if we were able to obtain a license, it could be non-exclusive, thereby giving our competitors access to the same technologies licensed to us. We could be forced, including by court order, to cease commercializing the infringing technology or product. In addition, we could be found liable for monetary damages, including treble damages and attorneys' fees if we are found to have willfully infringed a patent. A finding of infringement could prevent us from commercializing our product candidates or force us to cease some of our business operations, which could materially harm our business. Claims that we have misappropriated the confidential information or trade secrets of third parties could have a similar negative impact on our business.

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

Filing, prosecuting and defending patents on our product candidates in all countries throughout the world would be prohibitively expensive, and therefore we only file for patent protection in selected countries. The requirements for patentability may differ in certain countries, particularly in developing countries. Moreover, our ability to protect and enforce our intellectual property rights may be adversely affected by unforeseen changes in foreign intellectual property laws.

The laws of foreign countries may not protect our rights to the same extent as the laws of the United States. For example, Europe, India, China and certain other countries do not allow patents for methods of treating the human body. Many companies have encountered significant problems in protecting and defending intellectual property rights in certain foreign jurisdictions that do not favor patent protection on drugs. This could make it difficult for us to stop the infringement of our patents or the misappropriation of our other intellectual property rights. Competitors may use our technologies in jurisdictions where we have not obtained patent protection to develop their own drugs and, further, may export otherwise infringing drugs to territories where we have patent protection, if our ability to enforce our patents to stop infringing activities is inadequate. These drugs

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may compete with our product candidates, and our patents or other intellectual property rights may not be effective or sufficient to prevent them from competing.

Proceedings to enforce our patent rights in foreign jurisdictions, whether or not successful, could result in substantial costs and divert our efforts and resources from other aspects of our business. Furthermore, while we intend to protect our intellectual property rights in the major markets for our product candidates, we cannot ensure that we will be able to initiate or maintain similar efforts in all jurisdictions in which we may wish to market our product candidates. Accordingly, our efforts to protect our intellectual property rights in such countries may be inadequate.

A number of foreign countries have stated that they are willing to issue compulsory licenses to patents held by innovator companies on approved drugs to allow the government or one or more third party companies to sell the approved drug without the permission of the innovator patentee where the foreign government concludes it is in the public interest. India, for example, has used such a procedure to allow domestic companies to make and sell patented drugs without innovator approval. There is no guarantee that patents covering any of our drugs will not be subject to a compulsory license in a foreign country, or that we will have any influence over if or how such a compulsory license is granted. Further, Brazil allows its regulatory agency ANVISA to participate in deciding whether to grant a drug patent in Brazil, and patent grant decisions are made based on several factors, including whether the patent meets the requirements for a patent and whether such a patent is deemed in the country's interest. In addition, several other countries have created laws that make it more difficult to enforce drug patents than patents on other kinds of technologies. Further, under the treaty on the Trade-Related Aspects of Intellectual Property, or TRIPS, as interpreted by the Doha Declaration, countries in which drugs are manufactured are required to allow exportation of the drug to a developing country that lacks adequate manufacturing capability. Therefore, our drug markets in the United States or foreign countries may be affected by the influence of current public policy on patent issuance, enforcement or involuntary licensing in the healthcare area.

In addition, in November 2015, members of the World Trade Organization, or the WTO, which administers TRIPS, voted to extend the exemption against enforcing pharmaceutical drug patents in least developed countries until 2033. We currently have no patent applications filed in least developed countries, and our current intent is not to file in these countries in the future, at least in part due to this WTO pharmaceutical patent exemption.

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

Periodic maintenance fees, renewal fees, annuity fees and various other governmental fees on patents and/or applications will be due to be paid to the U.S. PTO and various governmental patent agencies outside of the United States in several stages over the lifetime of the patents and/or applications. We have systems in place to remind us to pay these fees, and we employ an outside firm and rely on our outside counsel to pay these fees due to non-U.S. patent agencies. 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 the applicable rules. However, there are situations in which non-compliance 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. In such an event, our competitors might be able to enter the market and this circumstance would have a material adverse effect on our business.

Intellectual property litigation could cause us to spend substantial resources and distract our personnel from their normal responsibilities.

Litigation or other legal proceedings relating to intellectual property claims, with or without merit, is unpredictable and generally expensive and time consuming and is likely to divert significant resources from our core business, including distracting our technical and management personnel from their normal responsibilities. Furthermore, 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. In addition, there could be public announcements of the results of hearings, motions or other interim proceedings or developments and if securities analysts or investors perceive these results to be negative, it could have a substantial adverse effect on the price of our common stock. Such litigation or proceedings could substantially increase our operating losses and reduce the resources available for development activities or any future sales, marketing or distribution activities.

We may not have sufficient financial or other resources to adequately conduct such litigation or proceedings. Some of our competitors may be able to sustain the costs of such litigation or proceedings more effectively than we can because of their greater financial resources and more mature and developed intellectual property portfolios. Accordingly, despite our efforts, we may not be able to prevent third parties from infringing upon or misappropriating or from successfully challenging our intellectual property rights. Uncertainties resulting from the initiation and continuation of patent litigation or other proceedings could have a material adverse effect on our ability to compete in the marketplace.

If we fail to comply with our obligations under the license agreement with the University of Illinois, we could lose license rights that are necessary for developing and commercializing G1T48.

Our exclusive license with the University of Illinois, or UIC, for technology relating to G1T48 imposes various development, commercialization, royalty payment, diligence and other obligations on us. Specifically, we are required to:

- pay UIC a minimum annual fee and potential milestone payments;
- pay UIC low single-digit royalties on all net sales of products and a share of any sublicensing revenues;
- use commercially reasonable efforts to bring products to market;
- provide financial reports to UIC;
- file, prosecute, defend and maintain patent rights; and
- indemnify UIC against certain claims and maintain insurance coverage.

If we breach any of these obligations, UIC may have the right to terminate the license, which would result in our being unable to develop, manufacture and sell products that are covered by the licensed technology, including G1T48, or in a competitor's gaining access to the licensed technology.

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

Many of our employees were previously employed at universities or other biotechnology or pharmaceutical companies, including our competitors or potential competitors. Although we try to ensure that our employees do not use the proprietary information or know-how of others in their work for us, we may be subject to claims that these employees or we have used or disclosed intellectual property, including trade secrets or other proprietary information, of any such employee's former employer. Litigation may be necessary to defend against these claims.

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In addition, while it is our policy to require our employees and contractors who may be involved in the development of intellectual property to execute agreements assigning such intellectual property to us, we may be unsuccessful in executing such an agreement with each party who in fact develops intellectual property that we regard as our own. Our and their assignment agreements may not be self-executing or may be breached, and we may be forced to bring claims against third parties, or defend claims they may bring against us, to determine the ownership of what we regard as our intellectual property.

If we fail in prosecuting or defending any such claims, in addition to paying monetary damages, we may lose valuable intellectual property rights or personnel. Even if we are successful in prosecuting or defending against such claims, litigation could result in substantial costs and be a distraction to management.

If we are unable to protect the confidentiality of our trade secrets, our business and competitive position would be harmed.

In addition to seeking patents for some of our technology and product candidates, we also rely on trade secrets, including unpatented know-how, technology and other proprietary information, to maintain our competitive position. We seek to protect these trade secrets, in part, by entering into non-disclosure and confidentiality agreements with parties who have access to them, such as our employees, corporate collaborators, outside scientific collaborators, contract manufacturers, consultants, advisors and other third parties. We seek to protect our confidential proprietary information, in part, by entering into confidentiality and invention or patent assignment agreements with our employees and consultants, however, we cannot be certain that such agreements have been entered into with all relevant parties. Moreover, to the extent we enter into such agreements, any of these parties may breach the agreements and disclose our proprietary information, including our trade secrets, and we may not be able to obtain adequate remedies for such breaches. 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 inside and outside the United States are less willing or unwilling to protect trade secrets. If any of our trade secrets were to be lawfully obtained or independently developed by a competitor, we would have no right to prevent them, or those to whom they communicate it, 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, our competitive position would be harmed.

Risks related to employee matters, managing growth and other risks related to our business

We currently have a limited number of employees, and our future success depends on our ability to retain key executives and to attract, retain and motivate qualified personnel.

We are an early-stage clinical development company, and, as of March 31, 2017, had only 31 employees and five executive officers. We are highly dependent on the research and development, clinical and business development expertise of Mark A. Velleca, M.D., Ph.D., our President and Chief Executive Officer, Rajesh Malik, M.D., our Chief Medical Officer, Gregory Mossinghoff, our Chief Business Officer, Jay Strum, Ph.D., our Chief Scientific Officer, as well as the other principal members of our management, scientific and clinical team. Although we have entered into employment agreements with our executive officers, each of them may terminate their employment with us at any time. Other than for Dr. Velleca and Dr. Malik, we do not maintain "key person" insurance for any of our executives or other employees. In addition, we rely on consultants and advisors, including scientific and clinical advisors, to assist us in formulating our research and development and commercialization strategy. Our consultants and advisors may be employed by employers other than us and may have commitments under consulting or advisory contracts with other entities that may limit their

availability to us. If we are unable to continue to attract and retain high quality personnel, our ability to pursue our growth strategy will be limited.

Recruiting and retaining qualified scientific, clinical, manufacturing, sales and marketing personnel will also be critical to our success. The loss of the services of our executive officers or other key employees could impede the achievement of our research, development and commercialization objectives and seriously harm our ability to successfully implement our business strategy. Furthermore, replacing executive officers and key employees may be difficult and may take an extended period of time because of the limited number of individuals in our industry with the breadth of skills and experience required to successfully develop, obtain marketing approval of and commercialize products. Competition to hire from this limited pool is intense, and we may be unable to hire, train, retain or motivate these key personnel on acceptable terms given the competition among numerous pharmaceutical and biotechnology companies for similar personnel. We also experience competition for the hiring of scientific and clinical personnel from universities and research institutions. Failure to succeed in clinical trials may make it more challenging to recruit and retain qualified scientific personnel. If we are unable to continue to attract and retain high quality personnel, our ability to pursue our growth strategy will be limited.

We expect to expand our development and regulatory capabilities and potentially implement sales, marketing and distribution capabilities, and as a result, we may encounter difficulties in managing our growth, which could disrupt our operations.

To manage our anticipated development and expansion, we must continue to implement and improve our managerial, operational and financial systems, expand our facilities and continue to recruit and train additional qualified personnel. Also, our management may need to divert a disproportionate amount of its attention away from its day-to-day activities and devote a substantial amount of time to managing these development activities. Due to our limited resources, we may not be able to effectively manage the expansion of our operations or recruit and train additional qualified personnel. This may result in weaknesses in our infrastructure, give rise to operational mistakes, loss of business opportunities, loss of employees and reduced productivity among remaining employees. The physical expansion of our operations may lead to significant costs and may divert financial resources from other projects, such as the development of our product candidates. If our management is unable to effectively manage our expected development and expansion, our expenses may increase more than expected, our ability to generate or increase our revenue could be reduced and we may not be able to implement our business strategy. Our future financial performance and our ability to commercialize our product candidates, if approved, and compete effectively will depend, in part, on our ability to effectively manage the future development and expansion of our company.

Unfavorable global economic conditions could adversely affect our business, financial condition or results of operations.

Our results of operations could be adversely affected by general conditions in the global economy and in the global financial markets. The recent global financial crisis caused extreme volatility and disruptions in the capital and credit markets. A severe or prolonged economic downturn, such as the recent global financial crisis, could result in a variety of risks to our business, including our ability to raise additional capital when needed on acceptable terms, if at all. A weak or declining economy could also strain our suppliers, possibly resulting in supply disruption. Any of the foregoing could harm our business, and we cannot anticipate all of the ways in which the current economic climate and financial market conditions could adversely impact our business.

Our business and operations could suffer in the event of system failures.

Despite the implementation of security measures, our internal computer systems and those of our third-party CROs and other contractors and consultants are vulnerable to damage from computer viruses, unauthorized

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access, natural disasters, terrorism, war and telecommunication and electrical failures. Furthermore, we have little or no control over the security measures and computer systems of our third-party CROs and other contractors and consultants. While we have not experienced any such system failure, accident, or security breach to date, if such an event were to occur and cause interruptions in our operations, it could result in a material disruption of our programs. For example, the loss of clinical trial data for our product candidates could result in delays in our marketing approval efforts and significantly increase our costs to recover or reproduce the data. To the extent that any disruption or security breach results in a loss of or damage to our data or applications or other data or applications relating to our technology or product candidates, or inappropriate disclosure of confidential or proprietary information, we could incur liabilities and the further development of our product candidates could be delayed.

Our employees, principal investigators, CROs and consultants may engage in misconduct or other improper activities, including non-compliance with regulatory standards and requirements and insider trading.

We are exposed to the risk that our employees, principal investigators, CROs and consultants may engage in fraudulent conduct or other illegal activity. Misconduct by these parties could include intentional, reckless and/or negligent conduct or disclosure of unauthorized activities to us that violate the regulations of the FDA and other regulatory authorities, including those laws requiring the reporting of true, complete and accurate information to such authorities; healthcare fraud and abuse laws and regulations in the United States and abroad; or laws that require the reporting of financial information or data accurately. In particular, sales, marketing and business arrangements in the healthcare industry are subject to extensive laws and regulations intended to prevent fraud, misconduct, kickbacks, self-dealing and other abusive practices. These laws and regulations may restrict or prohibit a wide range of pricing, discounting, marketing and promotion, sales commission, customer incentive programs and other business arrangements. Activities subject to these laws also involve the improper use of information obtained in the course of clinical trials or creating fraudulent data in our preclinical studies or clinical trials, which could result in regulatory sanctions and cause serious harm to our reputation. We intend to adopt, prior to the completion of this offering, a code of conduct applicable to all of our employees, but it is not always possible to identify and deter misconduct by employees and other third parties, 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. Additionally, we are subject to the risk that a person could allege such fraud or other misconduct, even if none occurred. 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 civil, criminal and administrative penalties, damages, monetary fines, possible exclusion from participation in Medicare, Medicaid and other federal healthcare programs, contractual damages, reputational harm, diminished profits and future earnings, and curtailment of our operations, any of which could adversely affect our ability to operate our business and our results of operations.

We may expend our limited resources to pursue a particular product candidate and fail to capitalize on product candidates 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 specific product candidates. As a result, we may forgo or delay pursuit of opportunities with other product candidates that later prove to have greater commercial potential. Our resource allocation decisions may cause us to fail to capitalize on viable commercial products or profitable market opportunities. Our spending on current and future research and development programs and product candidates for specific indications may not yield any commercially viable product candidates. 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

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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.

We may acquire businesses or drugs, or form strategic alliances, in the future, and we may not realize the benefits of such acquisitions.

We may acquire additional businesses or drugs, form strategic alliances or create joint ventures with third parties that we believe will complement or augment our existing business. If we acquire businesses with promising markets or technologies, we may not be able to realize the benefit of acquiring such businesses if we are unable to successfully integrate them with our existing operations and company culture. We may encounter numerous difficulties in developing, manufacturing and marketing any new drugs resulting from a strategic alliance or acquisition that delay or prevent us from realizing their expected benefits or enhancing our business. We cannot assure you that, following any such acquisition, we will achieve the expected synergies to justify the transaction.

We or the third parties upon which we depend may be adversely affected by earthquakes or other natural disasters and our business continuity and disaster recovery plans may not adequately protect us from a serious disaster.

Earthquakes or other natural disasters could severely disrupt our operations and have a material adverse effect on our business, results of operations, financial condition and prospects. If a natural disaster, power outage or other event occurred that prevented us from using all or a significant portion of our headquarters, that damaged critical infrastructure, such as the manufacturing facilities of our third-party contract manufacturers, or that otherwise disrupted operations, it may be difficult or, in certain cases, impossible for us to continue our business for a substantial period of time. The disaster recovery and business continuity plans we have in place may prove inadequate in the event of a serious disaster or similar event. We may incur substantial expenses as a result of the limited nature of our disaster recovery and business continuity plans, which could have a material adverse effect on our business.

Risks related to our common stock and this offering

An active trading market for our common stock may not develop, and you may not be able to resell your shares at or above the initial public offering price.

Prior to this offering, there has been no public market for our common stock. Although we have applied to have our common stock approved for listing on The NASDAQ Global Market, 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 develop, it may be difficult for you to sell shares you purchase in this offering at or above the initial public offering price or at the time that you would like to sell, if at all.

The price of our common stock may be volatile and fluctuate substantially, which could result in substantial losses for purchasers of our common stock in this offering.

The initial public offering price for our shares has been determined by negotiations between us and the representatives of the underwriters and may not be indicative of prices that will prevail in the trading market. The market price of shares of our common stock could be subject to wide fluctuations in response to many risk factors listed in this section, and others beyond our control, including:

- results of preclinical and clinical trials of our product candidates, including trilaciclib, G1T38 and G1T48;

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- results of clinical trials of our competitors' products;
- regulatory actions with respect to our products or our competitors' products;
- actual or anticipated fluctuations in our financial condition and operating results;
- publication of research reports by securities analysts about us or our competitors or our industry;
- our failure or the failure of our competitors to meet analysts' projections or guidance that we or our competitors may give to the market;
- developments or disputes concerning patent applications, issued patents or other proprietary rights;
- additions and departures of key personnel;
- strategic decisions by us or our competitors, such as acquisitions, collaborations, divestitures, spin-offs, joint ventures, strategic investments or changes in business strategy;
- the passage of legislation or other regulatory developments in the United States and other countries affecting us or our industry;
- fluctuations in the valuation of companies perceived by investors to be comparable to us;
- sales of our common stock by us, our insiders or our other stockholders;
- speculation in the press or investment community;
- announcement or expectation of additional financing efforts;
- changes in accounting principles;
- changes in the structure of healthcare payment systems;
- terrorist acts, acts of war or periods of widespread civil unrest;
- natural disasters and other calamities;
- changes in market conditions for pharmaceutical and biopharmaceutical stocks;
- changes in general market, industry and economic conditions; and
- the other factors described in this "Risk Factors" section.

In addition, the stock market has experienced significant volatility, particularly with respect to pharmaceutical, biotechnology and other life sciences company stocks. The volatility of pharmaceutical, biotechnology and other life sciences company stocks often does not relate to the operating performance of the companies represented by the stock. In the past, securities class action litigation has often been initiated against companies following periods of volatility in their stock price. This type of litigation could result in substantial costs and divert our management's attention and resources, and could also require us to make substantial payments to satisfy judgments or to settle litigation.

After this offering, our executive officers, directors and principal stockholders and their affiliates, if they choose to act together, will continue to have the ability to exercise significant influence over all matters submitted to stockholders for approval, which will limit your ability to influence corporate matters and could delay or prevent a change in corporate control.

Upon the closing of this offering, our executive officers and directors, combined with our stockholders who owned more than 5% of our outstanding common stock before this offering and their respective affiliates, will,

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in the aggregate, beneficially own shares representing approximately % of our outstanding capital stock, assuming no exercise of the underwriters' option to acquire additional common stock in this offering and assuming we issue the number of shares of common stock as set forth on the cover page of this prospectus. As a result, if these stockholders were to choose to act together, they would be able to influence our management and affairs and the outcome of matters submitted to our stockholders for approval, including the election of directors and any sale, merger, consolidation, or sale of all or substantially all of our assets. These stockholders acquired their shares of common stock for substantially less than the price of the shares of common stock being acquired in this offering, and these stockholders may have interests, with respect to their common stock, that are different from those of investors in this offering and the concentration of voting power among these stockholders may have an adverse effect on the price of our common stock. This concentration of ownership control may adversely affect the market price of our common stock by:

- delaying, deferring or preventing a change in control;
- entrenching our management and the board of directors;
- impeding a merger, consolidation, takeover or other business combination involving us that other stockholders may desire; and/or
- discouraging a potential acquirer from making a tender offer or otherwise attempting to obtain control of us.

See the "Principal Stockholders" section of this prospectus for more information regarding the ownership of our outstanding common stock by our executive officers, directors, principal stockholders and their affiliates.

Provisions in our corporate charter documents and under Delaware law could make an acquisition of our company, which may be beneficial to our stockholders, more difficult and may prevent attempts by our stockholders to replace or remove our current management.

Provisions in our certificate of incorporation and our by-laws that will become effective upon the closing of this offering may discourage, delay or prevent a merger, acquisition or other change in control of our company that stockholders may consider favorable, including transactions in which you might otherwise receive a premium for your shares. These provisions could also limit the price that investors might be willing to pay in the future for shares of our common stock, thereby depressing the market price of our common stock. In addition, because our board of directors is responsible for appointing the members of our management team, these provisions may frustrate or prevent any attempts by our stockholders to replace or remove our current management by making it more difficult for stockholders to replace members of our board of directors. Although we believe these provisions collectively provide for an opportunity to obtain greater value for stockholders by requiring potential acquirers to negotiate with our board of directors, they would apply even if an offer rejected by our board of directors were considered beneficial by some stockholders. Among other things, these provisions:

- establish a classified board of directors such that only one of three classes of directors is elected each year;
- allow the authorized number of our directors to be changed only by resolution of our board of directors;
- limit the manner in which stockholders can remove directors from our board of directors;
- establish advance notice requirements for stockholder proposals that can be acted on at stockholder meetings and nominations to our board of directors;
- require that stockholder actions must be effected at a duly called stockholder meeting and prohibit actions by our stockholders by written consent;

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- limit who may call stockholder meetings;
- authorize our board of directors to issue preferred stock without stockholder approval, which could be used to institute a “poison pill” that would work to dilute the stock ownership of a potential hostile acquirer, effectively preventing acquisitions that have not been approved by our board of directors; and
- require the approval of the holders of at least two-thirds of the voting power of all of the then-outstanding shares of capital stock that would be entitled to vote generally in the election of directors to amend or repeal specified provisions of our certificate of incorporation or by-laws that will become effective upon the closing of this offering.

Moreover, because we are incorporated in Delaware, we are governed by the provisions of Section 203 of the Delaware General Corporation Law, which prohibits a person who owns in excess of 15% of our outstanding voting stock from merging or combining with us for a period of three years after the date of the transaction in which the person acquired in excess of 15% of our outstanding voting stock, unless the merger or combination is approved in a prescribed manner.

Our certificate of incorporation includes a forum selection clause, which could limit our stockholders’ ability to obtain a favorable judicial forum for disputes with us.

Our certificate of incorporation that will become effective upon the closing of this offering provides that, unless we consent in writing to the selection of an alternative forum, the Court of Chancery of the State of Delaware will be the sole and exclusive forum for any stockholder to bring (i) any derivative action or proceeding brought on our behalf, (ii) any action asserting a claim of breach of a fiduciary duty owed by any of our directors, officers, or employees to us or to our stockholders, (iii) any action asserting a claim arising pursuant to any provision of the Delaware General Corporation Law or our certificate of incorporation or by-laws, or (iv) any action asserting a claim governed by the internal affairs doctrine; in all cases subject to the court’s having personal jurisdiction over the indispensable parties named as defendants. Any person or entity purchasing or otherwise acquiring any interest in shares of our capital stock is deemed to have notice of and consented to the foregoing provisions. This forum selection provision in our certificate of incorporation may limit our stockholders’ ability to obtain a favorable judicial forum for disputes with us. It is also possible that, notwithstanding the forum selection clause included in our certificate of incorporation, a court could rule that such a provision is inapplicable or unenforceable.

If you purchase shares of common stock in this offering, you will suffer substantial and immediate dilution of your investment.

You will suffer immediate and substantial dilution in the net tangible book value of the common stock you purchase in this offering. The initial public offering price of our common stock will be substantially higher than the net tangible book value per share of our common stock. Therefore, if you purchase shares of our common stock in this offering, you will pay a price per share that substantially exceeds our net tangible book value per share after this offering. Based on an 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, you will experience immediate dilution of \$ _____ per share, representing the difference between our pro forma net tangible book value per share, after giving effect to this offering, and the assumed initial public offering price. In addition, investors purchasing common stock in this offering will contribute _____ % of the total amount invested by stockholders since inception but will only own _____ % of the shares of common stock outstanding, assuming no exercise of the underwriters’ option to acquire additional common stock in this offering and assuming we issue the number of shares of common stock as set forth on the cover page of this prospectus. In the past, we issued options and

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other securities to acquire common stock at prices significantly below the initial public offering price. To the extent these outstanding securities are ultimately exercised, investors purchasing common stock in this offering will sustain further dilution. See the "Dilution" section for a more detailed description of the dilution to new investors in the offering.

If securities or industry analysts do not publish research or reports about our business, or if they publish negative evaluations of our stock or negative reports about our business, our stock price and trading volume could decline.

The trading market for our common stock will depend in part 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 may never obtain research coverage by industry or financial analysts. If no or few analysts commence coverage of us, the trading price of our stock would likely decrease. Even if we do obtain analyst coverage, there can be no assurance that analysts will cover us or provide favorable coverage. If one or more of the analysts who covers us downgrades our stock or changes his or her opinion of our stock, our stock price would likely decline. If one or more of these analysts cease coverage of our company or fail to regularly publish reports on us, we could lose visibility in the financial markets, which could cause our stock price or trading volume to decline.

We have broad discretion in the use of the net proceeds from this offering and may not use them effectively, which could affect our results of operations and cause our stock price to decline.

Our management will have broad discretion in the application of the net proceeds from this offering, including for any of the purposes described in the "Use of Proceeds" section of this prospectus and you will not have the opportunity as part of your investment decision to assess whether the net proceeds are being used appropriately. Our management could spend the net proceeds from this offering in ways that do not improve our results of operations or enhance the value of our common stock. The failure by our management to apply these funds effectively could result in financial losses that could have a material adverse effect on our business, cause the price of our common stock to decline and delay the development of our product candidates. Pending their use, we may invest the net proceeds from this offering in a manner that does not produce income or that loses value.

A significant portion of our total outstanding shares are eligible to be sold into the market in the near future, which could cause the market price of our common stock to drop significantly, even if our business is doing well.

Sales of a substantial number of shares of our common stock in the public market could occur at any time after the expiration of the lock-up agreements described in the "Underwriting" section of this prospectus. These sales, or the market perception that the holders of a large number of shares intend to sell shares, could reduce the market price of our common stock. After this offering, we will have _____ shares of common stock outstanding. This includes the _____ shares that we are selling in this offering, which may be resold in the public market immediately. The remaining _____ shares, or _____ % of our outstanding shares after this offering, are currently restricted as a result of securities laws or lock-up agreements but will be able to be sold, subject to any applicable volume limitations under federal securities laws with respect to affiliate sales, in the near future.

In addition, as of _____, 2017, there were _____ shares subject to outstanding warrants, _____ shares subject to outstanding options and an additional _____ shares reserved for future issuance under our employee benefit plans that will become eligible for sale in the public market to the extent permitted by any applicable vesting requirements, the lock-up agreements and Rules 144 and 701 under the Securities Act of

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1933, as amended. Moreover, after this offering, holders of an aggregate of _____ shares of our common stock and holders of warrants to purchase _____ shares of our common stock will have rights, subject to some 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. If such holders, by exercising their registration rights, cause a large number of securities to be registered and sold into the public market, these sales could have an adverse effect on the market price for our common stock. We also intend to register all shares of common stock that we may issue under our employee benefit plans, including our 2017 Employee, Director and Consultant Equity Plan. Once we register these shares and they are issued in accordance with the terms of the plans, they can be freely sold in the public market upon issuance, subject to the lock-up agreements and the restrictions imposed on our affiliates under Rule 144. For more information, see the “Shares Eligible for Future Sale” section.

We are an “emerging growth company,” and the reduced disclosure requirements applicable to emerging growth companies may 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. We will remain an emerging growth company until the earlier of (i) the last day of the fiscal year in which we have total annual gross revenues of \$1 billion or more; (ii) the last day of the fiscal year following the fifth anniversary of the date of the completion of this offering; (iii) the date on which we have issued more than \$1 billion in nonconvertible debt during the previous three years; or (iv) the date on which we are deemed to be a large accelerated filer under the rules of the Securities and Exchange Commission, which means the market value of our common stock that is held by non-affiliates exceeds \$700 million as of the prior June 30th. For so long as we remain an emerging growth company, we are permitted and intend to rely on exemptions from certain disclosure requirements that are applicable to other public companies that are not emerging growth companies. These exemptions include:

- not being required to comply with the auditor attestation requirements of Section 404 of the Sarbanes-Oxley Act of 2002;
- not being required to comply with any requirement that may be adopted by the Public Company Accounting Oversight Board regarding mandatory audit firm rotation or a supplement to the auditor’s report providing additional information about the audit and the financial statements;
- providing only two years of audited financial statements in addition to any required unaudited interim financial statements and a correspondingly reduced “Management’s Discussion and Analysis of Financial Condition and Results of Operations” disclosure in our initial registration statement;
- reduced disclosure obligations regarding executive compensation; and
- exemptions from the requirements of holding a nonbinding advisory vote on executive compensation and shareholder approval of any golden parachute payments not previously approved.

We may choose to take advantage of some, but not all, of the available exemptions. We have taken advantage of reduced reporting burdens in this prospectus. In particular, we have provided only two years of audited financial statements and have not included all of the executive compensation information that would be required if we were not an emerging growth company. We cannot predict whether investors will find our common stock less attractive if we rely on these exemptions. If some investors find our common stock less attractive as a result, there may be a less active trading market for our common stock and our stock price may be more volatile.

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. This allows an emerging growth

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company to delay the adoption of certain accounting standards until those standards would otherwise apply to private companies. We have irrevocably elected not to avail ourselves of this exemption from new or revised accounting standards and, therefore, we will be subject to the same new or revised accounting standards as other public companies that are not emerging growth companies.

We will incur increased costs as a result of operating as a public company, and our management will be required to devote substantial time to new compliance initiatives and corporate governance practices.

As a public company, and particularly after we are no longer an emerging growth company, we will incur significant legal, accounting and other expenses that we did not incur as a private company. The Sarbanes-Oxley Act of 2002, the Dodd-Frank Wall Street Reform and Consumer Protection Act, the listing requirements of The NASDAQ Stock Market and other applicable securities rules and regulations impose various requirements on public companies, including establishment and maintenance of effective disclosure and financial controls and corporate governance practices. Our management and other personnel will need to devote a substantial amount of time to these compliance initiatives. Moreover, these rules and regulations will increase our legal and financial compliance costs and will make some activities more time-consuming and costly. For example, we expect that these rules and regulations may make it more difficult and more expensive for us to obtain director and officer liability insurance.

We are evaluating these rules and regulations, and cannot predict or estimate the amount of additional costs we may incur or the timing of such costs. These rules and regulations are often subject to varying interpretations, in many cases due to their lack of specificity, and, as a result, their application in practice may evolve over time as new guidance is provided by regulatory and governing bodies. This could result in continuing uncertainty regarding compliance matters and higher costs necessitated by ongoing revisions to disclosure and governance practices.

Pursuant to Section 404 of the Sarbanes-Oxley Act of 2002, or Section 404, we will first be required to furnish a report by our management on our internal control over financial reporting for the year ending December 31, 2017. However, while we remain an emerging growth company, we will not be required to include an attestation report on internal control over financial reporting issued by our independent registered public accounting firm. To achieve compliance with Section 404 within the prescribed period, we will be engaged 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 internal control over financial reporting, continue steps to improve control processes as appropriate, validate through testing that controls are functioning as documented and implement a continuous reporting and improvement process for internal control over financial reporting. Despite our efforts, there is a risk that we will not be able to conclude, within the prescribed timeframe or at all, that our internal control over financial reporting is effective as required by Section 404. If we identify one or more material weaknesses, it could result in an adverse reaction in the financial markets due to a loss of confidence in the reliability of our financial statements.

Our ability to use our net operating loss carryforwards and certain other tax attributes to offset future taxable income may be limited.

Under Sections 382 and 383 of the Internal Revenue Code of 1986, as amended, a corporation that undergoes an "ownership change," is subject to limitations on its ability to use its pre-change net operating loss carryforwards, or NOLs, and other pre-change tax attributes (such as research tax credits) to offset its post-change income or taxes. For these purposes, an ownership change generally occurs where the equity ownership of one or more stockholders or groups of stockholders who owns at least 5% of a corporation's stock increases

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its ownership by more than 50 percentage points over its lowest ownership percentage within a three year period. 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 the Company's control. These ownership changes may subject our existing NOLs or credits to substantial limitations under Sections 382 and 383. Accordingly, we may not be able to utilize a material portion of our NOLs or credits. As of December 31, 2016, we had federal NOLs of approximately \$46.8 million. Limitations on our ability to utilize those NOLs to offset U.S. federal taxable income could potentially result in increased future tax liability to us. In addition, at the state level, there may be periods during which the use of NOLs is suspended or otherwise limited, which could accelerate or permanently increase state taxes owed.

Because we do not anticipate paying any cash dividends on our capital stock in the foreseeable future, capital appreciation, if any, will be your sole source of gain.

We have never declared or paid cash dividends on our capital stock. We currently intend to retain all of our future earnings, if any, to finance the growth and development of our business. In addition, the terms of any future debt agreements may preclude us from paying dividends. As a result, capital appreciation, if any, of our common stock will be your sole source of gain for the foreseeable future.

Special note regarding forward-looking statements

This prospectus contains forward-looking statements that involve risks and uncertainties. All statements other than statements of historical facts contained in this prospectus are forward-looking statements. In some cases, you can identify forward-looking statements by words such as “anticipate,” “believe,” “contemplate,” “continue,” “could,” “estimate,” “expect,” “intend,” “may,” “plan,” “potential,” “predict,” “project,” “seek,” “should,” “target,” “will,” “would,” or the negative of these words or other comparable terminology. These forward-looking statements include, but are not limited to, statements about:

- our use of the net proceeds from this offering;
- the accuracy of our estimates regarding the number of patients with CDK4/6-independent or -dependent tumors, expenses, future revenues, capital requirements and our needs for additional financing;
- the initiation, timing, progress and results of our preclinical studies and clinical trials, and our research and development programs;
- our ability to retain the continued service of our key professionals and to identify, hire and retain additional qualified professionals;
- our ability to advance product candidates into, and successfully complete, clinical trials;
- the timing or likelihood of regulatory filing and approvals;
- the commercialization of our product candidates, if approved;
- the pricing and reimbursement of our product candidates, if approved;
- the implementation of our business model, strategic plans for our business, product candidates and technology;
- the scope of protection we are able to establish and maintain for intellectual property rights covering our product candidates and technology;
- our ability to enter into strategic arrangements and/or collaborations and the potential benefits of such arrangements;
- our financial performance; and
- developments relating to our competitors and our industry.

These forward-looking statements are subject to a number of risks, uncertainties and assumptions, including those described in the “Risk Factors” section and elsewhere in this prospectus. Moreover, we operate in a very competitive and rapidly changing environment, and new risks emerge from time to time. It is not possible for our management to predict all risks, nor can we assess the impact of all factors on our business or the extent to which any factor, or combination of factors, may cause actual results to differ materially from those contained in any forward-looking statements we may make. In light of these risks, uncertainties and assumptions, the forward-looking events and circumstances discussed in this prospectus may not occur and actual results could differ materially and adversely from those anticipated or implied in the forward-looking statements.

You should not rely upon forward-looking statements as predictions of future events. Although we believe that the expectations reflected in the forward-looking statements are reasonable, we cannot guarantee that the future results, levels of activity, performance or events and circumstances reflected in the forward-looking statements will be achieved or occur. We undertake no obligation to update publicly any forward-looking statements for any reason after the date of this prospectus to conform these statements to new information, actual results or to changes in our expectations, except as required by law.

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You should read this prospectus and the documents that we reference in this prospectus and have filed with the Securities and Exchange Commission, or SEC, as exhibits to the registration statement of which this prospectus is a part with the understanding that our actual future results, levels of activity, performance, and events and circumstances may be materially different from what we expect.

This prospectus includes statistical and other industry and market data that we obtained from industry publications and research, surveys and studies conducted by third parties. Industry publications and third-party research, surveys and studies generally indicate that their information has been obtained from sources believed to be reliable, although they do not guarantee the accuracy or completeness of such information.

Use of proceeds

We estimate that we will receive net proceeds of approximately \$ _____ million from the sale of the shares of common stock offered in this offering, or approximately \$ _____ million, if the underwriters exercise their option to purchase additional shares in full, based on an assumed initial public offering price of \$ _____ per share, the midpoint of the estimated price range set forth on the cover page of this prospectus, and after deducting the estimated underwriting discounts and commissions and estimated offering expenses payable by us.

Each \$1.00 increase (decrease) in the assumed initial public offering price of \$ _____ per share, the midpoint of the estimated price range set forth on the cover page of this prospectus, would increase (decrease) the net proceeds to us from this offering, after deducting the estimated underwriting discounts and commissions and estimated offering expenses payable by us, 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. We may also increase or decrease the number of shares we are offering. An increase (decrease) of 1,000,000 in the number of shares we are offering would increase (decrease) the net proceeds to us from this offering, after deducting the estimated underwriting discounts and commissions and estimated offering expenses payable by us, by approximately \$ _____ million, assuming the initial public offering price stays the same.

The principal purposes of this offering are to increase our financial flexibility, create a public market for our common stock and to facilitate our access to the public equity markets. We intend to use the net proceeds from this offering as follows:

- approximately \$ _____ million to advance development of trilaciclib;
- approximately \$ _____ million to advance development of G1T38;
- approximately \$ _____ million to advance development of G1T48; and
- the balance for working capital and general corporate purposes.

The timing and costs associated with obtaining regulatory approval for a product candidate are highly uncertain and are dependent upon many factors that are beyond our control. Accordingly, we do not believe it is possible at this time to accurately project to what stage of clinical development the proceeds of this offering will allow us to advance our product candidates.

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

Although we currently anticipate that we will use the net proceeds from this offering as described above, there may be circumstances where a reallocation of funds is necessary. Due to the uncertainties inherent in the product development process, it is difficult to estimate with certainty the exact amounts of the net proceeds from this offering that may be used for the above purposes. The amounts and timing of our actual expenditures will depend upon numerous factors, including our sales and marketing and commercialization efforts, demand for our drugs, our operating costs and the other factors described under the "Risk Factors" section of this prospectus. Accordingly, our management will have flexibility in applying the net proceeds from this offering. An investor will not have the opportunity to evaluate the economic, financial or other information on which we base our decisions on how to use the proceeds.

Pending their use as described above, we plan to invest the net proceeds in short-term, interest-bearing obligations, investment-grade instruments, certificates of deposit or guaranteed obligations of the U.S. government.

Dividend policy

We have never declared or paid cash dividends on our capital stock. We currently intend to retain all available funds and future earnings, if any, for use in the operation of our business and do not anticipate paying any cash dividends on our common stock in the foreseeable future. Any future determination to declare and pay dividends will be made at the discretion of our board of directors and will depend on various factors, including applicable laws, our results of operations, our financial condition, our capital requirements, general business conditions, our future prospects and other factors that our board of directors may deem relevant. Investors should not purchase our common stock with the expectation of receiving cash dividends.

Capitalization

The following table sets forth our cash and cash equivalents and capitalization as of March 31, 2017:

- on an actual basis;
- on a pro forma basis to reflect the conversion of all outstanding shares of our preferred stock into an aggregate of 56,799,234 shares of common stock prior to the completion of this offering and the conversion of a warrant to purchase 65,934 shares of our Series 1 Preferred Stock into a warrant to purchase 65,934 shares of our common stock upon the completion of this offering; and
- on a pro forma as adjusted basis to additionally reflect the issuance and sale by us of _____ shares of our common stock in this offering, after deducting the estimated underwriting discounts and commissions and estimated offering expenses payable by us, at an assumed initial public offering price of \$ _____ per share, the midpoint of the estimated price range set forth on the cover page of this prospectus.

Our capitalization following the closing of this offering will be adjusted based on the actual initial public offering price and other terms of the offering determined at pricing. You should read this information together with our audited financial statements and related notes appearing elsewhere in this prospectus and the information set forth under the “Selected Financial Data” and “Management’s Discussion and Analysis of Financial Condition and Results of Operations” sections.

(in thousands, except share and per share data)	As of March 31, 2017		
	Actual	Pro forma	Pro forma as adjusted(1)
Cash and cash equivalents	\$ 37,727	\$ 37,727	\$
Warrant liability	208	—	—
Series C Preferred Stock, \$0.0001 par value: 17,000,000 shares authorized, actual, 16,828,217 shares issued and outstanding, actual; no shares authorized, issued or outstanding, pro forma and pro forma as adjusted	55,156	—	—
Series B Preferred Stock, \$0.0001 par value: 23,000,000 shares authorized, actual, 22,928,234 shares issued and outstanding, actual; no shares authorized, issued or outstanding, pro forma and pro forma as adjusted	40,765	—	—
Series A Preferred Stock, \$0.0001 par value: 14,996,692 shares authorized, actual, 14,996,692 shares issued and outstanding, actual; no shares authorized, issued or outstanding, pro forma and pro forma as adjusted	14,586	—	—
Series 1 Preferred Stock, \$0.0001 par value: 2,112,025 shares authorized, actual, 2,046,091 shares issued and outstanding, actual; no shares authorized, issued or outstanding, pro forma and pro forma as adjusted	1,541	—	—
Common stock, \$0.0001 par value: 73,000,000 shares authorized, actual, 4,522,873 shares issued and 4,442,373 shares outstanding, actual; 73,000,000 shares authorized, pro forma; 61,321,607 shares issued and 61,241,607 shares outstanding, pro forma; _____ shares authorized, pro forma as adjusted; _____ shares issued and outstanding, pro forma as adjusted;	0	6	—
Treasury stock	(8)	(8)	—
Additional paid-in capital	0	112,251	—
Accumulated deficit	(81,251)	(81,251)	—
Total stockholders’ (deficit) equity	(81,258)	30,998	—
Total capitalization	\$ 30,998	\$ 30,998	\$

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- (1) The pro forma as adjusted information discussed above is illustrative only and will be adjusted based on the actual initial public offering price and other terms of this offering determined at pricing. A \$1.00 increase (decrease) in the assumed initial public offering price of \$ _____ per share, the midpoint of the estimated price range set forth on the cover page of this prospectus, would increase (decrease) the amount of cash and cash equivalents, additional paid-in capital, total stockholders' (deficit) equity and total capitalization on a pro forma as adjusted basis 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 estimated underwriting discounts and commissions and estimated offering expenses payable by us. We may also increase or decrease the number of shares we are offering. Each increase (decrease) of 1,000,000 shares offered by us would increase (decrease) cash and cash equivalents, total stockholders' equity (deficit) and total capitalization on a pro forma as adjusted basis by approximately \$ _____ million, assuming the assumed initial public offering price of \$ _____ per share, the midpoint of the estimated price range set forth on the cover page of this prospectus, remains the same, and after deducting the estimated underwriting discounts and commissions and estimated offering expenses payable by us.

The number of shares of our common stock to be outstanding after this offering excludes the following:

- 11,207,814 shares of common stock issuable upon the exercise of outstanding stock options as of March 31, 2017, having a weighted-average exercise price of \$0.73 per share;
- 126,334 shares of common stock issuable upon the exercise of outstanding warrants as of March 31, 2017, having a weighted-average exercise price of \$0.25 per share; and
- 385,600 shares of common stock reserved for issuance pursuant to future awards under our 2011 Equity Incentive Plan; and
- _____ shares of common stock reserved for issuance pursuant to future awards under our 2017 Employee, Director and Consultant Equity Plan, as well as any automatic increases in the number of shares of our common stock reserved for future issuance under this plan, which will become effective upon the closing of this offering.

Dilution

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

As of March 31, 2017, our historical net tangible book value was \$(81.3) million, or \$(18.09) per share of common stock. Our historical net tangible book value per share is equal to our total tangible assets, less total liabilities and preferred stock, divided by the number of outstanding shares of our common stock. As of March 31, 2017, the pro forma net tangible book value of our common stock was \$31.0 million, or \$0.50 per share of common stock, taking into account the expected conversion of our outstanding preferred stock into common stock prior to the completion of this offering. After giving further effect to the sale of _____ shares of common stock in this offering, after deducting estimated underwriting discounts and commissions and estimated offering expenses payable by us, at an assumed initial public offering price of \$ _____ per share, the midpoint of the price range set forth on the cover of this prospectus, our pro forma as adjusted net tangible book value as of March 31, 2017, would have been approximately \$ _____ million, or approximately \$ _____ per share of common stock. 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 of \$ _____ per share to investors participating in this offering. The following table illustrates this per share dilution:

The following table illustrates this per share dilution:

Assumed initial public offering price per share of our common stock	\$
Historical net tangible book value per share of our common stock as of March 31, 2017, before giving effect to this offering	\$(18.09)
Increase attributable to the conversion of outstanding preferred stock	<u>\$ 18.59</u>
Pro forma net tangible book value per share as of March 31, 2017, before giving effect to this offering	\$ 0.50
Increase in net tangible book value per share attributable to new investors	<u>_____</u>
Pro forma as adjusted net tangible book value per share of our common stock after giving effect to this offering	_____
Dilution per share of common stock to new investors participating in this offering	\$ _____

The information discussed above is illustrative only, and the dilution information following this offering will be adjusted based on the actual initial public offering price and other terms of this offering determined at pricing. A \$1.00 increase (decrease) in the assumed initial public offering price of \$ _____ per share, the midpoint of the estimated price range set forth on the cover page of this prospectus, would increase (decrease) the pro forma as adjusted net tangible book value by \$ _____ per share and the dilution to new investors by \$ _____ per share, assuming the number of shares offered by us, as set forth on the cover page of this prospectus, remains the same, and after deducting the estimated underwriting discounts and commissions and estimated expenses payable by us. We may also increase or decrease the number of shares we are offering. An increase of 1,000,000 shares offered by us would increase the pro forma as adjusted net tangible book value by \$ _____ per share and decrease the dilution to new investors by \$ _____ per share, assuming the assumed initial public offering price of \$ _____ per share, the midpoint of the estimated price range set forth on the cover page of this prospectus, remains the same and after deducting the estimated underwriting discounts and commissions and estimated expenses payable by us. Similarly, a decrease of 1,000,000 shares offered by us would decrease the pro forma as adjusted net tangible book value by \$ _____ per share and increase the dilution to new investors by \$ _____ per share, assuming the assumed initial public offering price of \$ _____

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per share, the midpoint of the estimated price range set forth on the cover page of this prospectus, remains the same and after deducting the estimated underwriting discounts and commissions and estimated expenses payable by us.

If the underwriters exercise their option to purchase additional shares in full, the pro forma as adjusted net tangible book value as of March 31, 2017, will increase to \$ million, or \$ per share, representing an increase to existing stockholders of \$ per share, and there will be an immediate dilution of \$ per share to new investors.

The following table summarizes as of March 31, 2017, on the pro forma as adjusted basis as described above, the differences between the number of shares of common stock purchased from us, the total consideration and the average price per share paid by existing stockholders (giving effect to the conversion of all of our preferred stock into 56,799,234 shares of common stock prior to the completion of this offering) and by investors participating in this offering, after deducting the estimated underwriting discounts and commissions and estimated offering expenses, at an assumed initial public offering price of \$ per share, the midpoint of the estimated price range set forth on the cover page of this prospectus.

	Shares purchased		Total consideration		Average price/share
	Number	Percent	Amount	Percent	
Existing shareholders		%	\$	%	\$
Investors participating in this offering		%	\$	%	\$
Total		100%	\$	100%	\$

Each \$1.00 increase (decrease) in the assumed initial public offering price of \$ per share, the midpoint of the estimated price range set forth on the cover page of this prospectus, would increase (decrease) the total consideration paid by new investors by \$, and increase (decrease) the percentage of total consideration paid by new investors by approximately % , assuming that the number of shares offered by us, as listed on the cover page of this prospectus, remains the same. Similarly, each increase (decrease) of 1,000,000 shares in the number of shares of common stock offered by us would increase (decrease) the total consideration paid by new investors by \$ million and increase (decrease) the percentage of total consideration paid by new investors by approximately % assuming that the assumed initial public offering price of \$ per share, the midpoint of the estimated price range set forth on the cover page of this prospectus, price remains the same.

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 of our common stock outstanding after this offering.

The number of shares of common stock to be outstanding after this offering is based on 61,241,607 shares of common stock outstanding as of March 31, 2017, and excludes the following:

- 11,207,814 shares of common stock issuable upon the exercise of outstanding stock options as of March 31, 2017, having a weighted-average exercise price of \$0.73 per share;
- 126,334 shares of common stock issuable upon the exercise of outstanding warrants as of March 31, 2017, having a weighted-average exercise price of \$0.25 per share;

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- 385,600 shares of common stock reserved for issuance pursuant to future awards under our 2011 Equity Incentive Plan; and
- shares of common stock reserved for issuance pursuant to future awards under our 2017 Employee, Director and Consultant Equity Plan, as well as any automatic increases in the number of shares of our common stock reserved for future issuance under this plan, which will become effective upon the closing of this offering.

To the extent that any options or warrants are exercised, new options or other securities are issued under our equity incentive plans, or we issue additional shares of common stock in the future, there will be further dilution to investors participating in this offering. In addition, we may choose to raise additional capital because of market conditions or strategic considerations, even if we believe that we have sufficient funds for our current or future operating plans. If we raise additional capital through the sale of equity or convertible debt securities, the issuance of such securities could result in further dilution to our stockholders.

Selected financial data

You should read the following selected financial data together with our financial statements and the related notes appearing at the end of this prospectus and the "Management's Discussion and Analysis of Financial Condition and Results of Operations" section of this prospectus. We have derived the statement of operations data for the years ended December 31, 2015 and 2016, and the balance sheet data as of December 31, 2015 and 2016, from our audited financial statements included elsewhere in this prospectus. The statement of operations data for the three months ended March 31, 2016 and 2017, and the balance sheet data as of March 31, 2017, are derived from our unaudited interim financial statements included elsewhere in this prospectus. Our historical results are not necessarily indicative of the results that should be expected in the future.

	Year ended December 31,		Three months ended	
	2015	2016	2016 (unaudited)	March 31, 2017 (unaudited)
Statements of Operations Data:				
Grant revenue	\$ 522,431	\$ —	\$ —	\$ —
Operating expenses:				
Research and development	12,730,335	25,161,300	3,871,476	11,084,252
General and administrative	3,215,803	5,229,640	2,074,877	1,294,097
Total operating expenses	15,946,138	30,390,940	5,946,353	12,378,349
Operating loss	(15,423,707)	(30,390,940)	(5,946,353)	(12,378,349)
Other income (expenses):				
Other income	17,781	182,372	11,789	73,875
Change in fair value of warrant liability	(84,998)	(82,231)	(19,522)	(40,890)
Change in fair value of Series B purchase option liability	(4,772,509)	—	—	—
Total other income (expense), net	(4,839,726)	100,141	(7,733)	32,985
Net loss and comprehensive loss	(20,263,433)	(30,290,799)	(5,954,086)	(12,345,364)
Accretion of redeemable convertible preferred stock(1)	(1,426,740)	(4,405,007)	(1,009,135)	(4,468,032)
Net loss attributable to common stockholders	\$ (21,690,173)	\$ (34,695,806)	\$ (6,963,221)	\$ (16,813,396)
Basic and diluted net loss per share(2)	\$ (5.38)	\$ (7.78)	\$ (1.57)	\$ (3.75)
Weighted average shares outstanding, basic and diluted(2)	4,033,722	4,460,986	4,431,687	4,489,039
Pro forma basic and diluted net loss per share (unaudited)(2)		\$ (0.54)		\$(0.20)
Pro forma weighted-average basic and diluted shares outstanding (unaudited)(2)		55,647,597		61,288,273
		As of December 31,		March 31,
		2015	2016	2017
				(unaudited)
Balance Sheet Data:				
Cash, cash equivalents and short term investments	\$ 22,937,720	\$ 47,304,820	\$ 37,726,520	
Working capital(3)	21,582,367	42,275,736	30,478,441	
Total assets	23,896,625	48,211,921	39,293,819	
Redeemable convertible preferred stock	53,424,060	107,580,149	112,048,181	
Total stockholders' deficit	(31,694,808)	(64,993,540)	(81,258,183)	

(1) See Note 7 to our financial statements appearing elsewhere in this prospectus for further details on the calculation of accretion of redeemable convertible preferred stock.

(2) See Note 9 to our financial statements appearing elsewhere in this prospectus for further details on the calculation of basic and diluted net loss per share and pro forma basic and diluted net loss per share applicable to common stockholders.

(3) We define working capital as current assets less current liabilities.

Management's discussion and analysis of financial condition and results of operations

You should read the following discussion and analysis of our financial condition and results of operations together with the "Selected Financial Data" section and our financial statements and related notes included elsewhere in this prospectus. This discussion and other parts of this prospectus contain forward-looking statements that involve risk and uncertainties, such as statements of our plans, objectives, expectations and intentions. As a result of many factors, including those factors set forth in the "Risk Factors" section of this prospectus, our actual results could differ materially from the results described in or implied by the forward-looking statements contained in the following discussion and analysis.

Overview

We are a clinical-stage biopharmaceutical company focused on the discovery and development of novel therapeutics for the treatment of cancer. Our two clinical assets are based on our core understanding of cyclin-dependent kinases, or CDKs, a family of proteins that play an important role in the growth and proliferation of all human cells. Two particular CDKs, CDK4 and CDK6, collectively known as CDK4/6, represent a validated and promising class of targets for anti-cancer therapeutics. We have leveraged our deep expertise in CDK4/6 biology to discover and develop two highly potent and selective CDK4/6 inhibitors that may have broad applicability across multiple cancer indications. We believe we are the only company with two distinct clinical-stage CDK4/6 inhibitors, trilaciclib and G1T38, each of which has the potential to be the backbone therapy of multiple combination regimens.

CDK4/6 is required for growth and proliferation in certain normal cell types, such as hematopoietic stem and progenitor cells, or HSPCs. HSPCs reside in the bone marrow and are the "reservoir" from which all blood and immune system cells are formed. Additionally, CDK4/6 plays an integral role in the growth and proliferation of certain types of tumors. Tumors that rely on CDK4/6 to grow and proliferate are referred to as CDK4/6-dependent tumors, and include the most common kinds of prostate and breast cancer. Alternatively, some tumors can grow and proliferate without CDK4/6 activity and are referred to as CDK4/6-independent. CDK4/6 independent tumors include small cell lung cancer, or SCLC, and triple-negative breast cancer, or TNBC. Our two CDK4/6 inhibitors were rationally designed to treat distinct patient populations with different combination regimens. Trilaciclib is in development in combination with chemotherapy for the treatment of patients with CDK4/6-independent tumors. G1T38 is in development in combination with targeted therapies for the treatment of patients with CDK4/6-dependent tumors.

Trilaciclib, our most advanced candidate, is a potential first-in-class intravenous CDK4/6 inhibitor we rationally designed to preserve HSPCs and enhance immune system function during chemotherapy. Chemotherapy has significant clinical utility and continues to be the most effective treatment for many cancers. However, it also damages HSPCs (myelosuppression) and the immune system (immunosuppression), leading to severe adverse effects and limiting anti-tumor activity. We believe that if the beneficial effects of chemotherapy (i.e. potent tumor cell killing) could be maximized, while minimizing the deleterious side-effects of myelosuppression and immunosuppression, patient outcomes would be significantly improved.

Based on compelling response rates and favorable tolerability shown in early-stage trials, trilaciclib is currently being evaluated in three randomized trials: two Phase 1b/2a trials in patients with SCLC, and one Phase 2 trial in patients with TNBC. We have completed the Phase 1b parts of the two SCLC trials, and initial data from the ongoing randomized placebo-controlled Phase 2a parts of these trials are expected to be released in 2018. Initial data from the TNBC trial is also expected to be released in 2018.

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G1T38, our second clinical-stage candidate, is a potential best-in-class oral CDK4/6 inhibitor being developed to be used in combination with other targeted therapies to treat multiple cancers. We rationally designed G1T38 to improve upon and address the shortcomings of the approved CDK4/6 inhibitors Ibrance and Kisqali and others in development. Our preclinical data and early clinical data indicate the potential for continuous daily dosing and improved antitumor activity and tolerability. A Phase 1 trial of G1T38 in 75 healthy volunteers showed a favorable safety profile leading to the initiation of a Phase 1/2 trial in ER+, HER2- breast cancer (in combination with Faslodex) in January 2017. Our plans for G1T38 include combinations in other cancers, such as non-small cell lung cancer, or NSCLC, where we expect to begin a Phase 2 trial in 2018 in combination with an EGFR inhibitor.

As part of our strategy to develop wholly owned proprietary combinations that complement our CDK4/6 portfolio, we have exclusively in-licensed G1T48, a potential first/best-in-class oral selective estrogen receptor degrader, or SERD. We expect to initially develop G1T48 to be used in combination with G1T38 for the treatment of ER+, HER2- breast cancer. Based on compelling preclinical efficacy and safety data, we expect to file an investigational new drug application, or IND, or clinical trial authorization application, or CTA, for G1T48 in the fourth quarter of 2017. We plan to continue to leverage our proprietary assets and knowledge of CDK4/6 biology to explore additional combination treatments and to build a fully integrated oncology company.

Since our inception in 2008, we have devoted substantially all of our resources to synthesizing, acquiring, testing and developing our product candidates, including conducting preclinical studies and clinical trials and providing general and administrative support for these operations as well as securing intellectual property protection for our product candidates. We do not have any products approved for sale and have not generated any revenues from product sales. We recorded \$0.5 million and \$0 million of revenue from government grants for the years ended December 31, 2015 and December 31, 2016, respectively. We recorded \$0 million of revenue from government grants for the three months ended March 31, 2016 and March 31, 2017, and we do not expect to receive government grants in the foreseeable future. To date, we have financed our operations primarily through private placements of convertible debt and equity securities.

As of March 31, 2017, we had cash and cash equivalents of \$37.7 million. Since inception, we have incurred net losses. Our net losses were \$20.3 million and \$30.3 million for the years ended December 31, 2015, and December 31, 2016, respectively and net losses of \$6.0 million and \$12.3 million for the three months ended March 31, 2016 and March 31, 2017, respectively. As of March 31, 2017, we had an accumulated deficit of \$81.3 million. Substantially all of our net losses have resulted from costs incurred in connection with our research and development programs and from general and administrative expenses associated with our operations. 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:

- continue development of our product candidates, including initiating additional clinical trials of trilaciclib and G1T38 and completing preclinical studies and potentially initiating clinical trials of our preclinical-stage product candidate, G1T48;
- identify and develop new product candidates;
- seek marketing approvals for our product candidates that successfully complete clinical trials;
- establish a sales, marketing and distribution infrastructure to commercialize any products for which we may obtain marketing approval;
- achieve market acceptance of our product candidates in the medical community and with third-party payors;
- maintain, expand and protect our intellectual property portfolio;

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- hire additional personnel;
- enter into collaboration arrangements, if any, for the development of our product candidates or in-license other products and technologies;
- add operational, financial and management information systems and personnel, including personnel to support our product development and planned future commercialization efforts; and
- incur increased costs as a result of operating as a public company.

As further discussed in our audited financial statements and related footnotes appearing elsewhere in this prospectus, these matters raise substantial doubt about our ability to continue as a going concern.

License agreement with the University of Illinois

In November 2016, we entered into a license agreement with the University of Illinois, or UIC, pursuant to which we obtained an exclusive, worldwide license to make, have made, use, import, sell and offer for sale SERDs, including G1T48, covered by certain patent rights owned UIC. The rights licensed to us are for all fields of use. Under the terms of the agreement we paid a one-time only, non-refundable upfront fee of \$500,000, and are required to pay UIC low single-digit royalties on all net sales of products and a share of any sublicensing revenues. We are also obligated to pay annual maintenance fees, which are fully creditable against any royalty payments made by us. We may also be required to pay UIC milestone payments of up to an aggregate of \$2.625 million related to the initiation and execution of clinical trials and first commercial sale of a product in multiple countries. We are responsible for all future patent prosecution costs. See “Business—Intellectual Property—Exclusive License for G1T48.”

Financial operations overview

Revenues

To date, we have not generated any revenues from the commercial sale of approved products or out-licensing of our product candidates, and we do not expect to generate substantial revenue from the commercial sale of our products for at least the foreseeable future, if ever. In the future, we will seek to generate revenue primarily from product sales and, potentially, regional or global collaborations with strategic partners. We have received all of our revenues to date from government grants related to our research.

Operating expenses

We classify our operating expenses into two categories: research and development and general and administrative expenses. Personnel costs, including salaries, benefits, bonuses and stock-based compensation expense, comprise a significant component of each of these expense categories. We allocate expenses associated with personnel costs based on the nature of work associated with these resources.

Research and Development Expenses

The largest component of our total operating expenses since inception has been research and development activities, including the preclinical and clinical development of our product candidates.

Research and development costs are expensed as incurred. Our research and development expense primarily consists of:

- salaries and personnel-related costs, including bonuses, benefits and any stock-based compensation, for our scientific personnel performing or managing out-sourced research and development activities;

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- costs incurred under agreements with contract research organizations and investigative sites that conduct preclinical studies and clinical trials;
- costs related to manufacturing pharmaceutical active ingredients and drug products for preclinical studies and clinical trials;
- costs related to upfront and milestone payments under in-licensing agreements;
- fees paid to consultants and other third parties who support our product candidate development;
- other costs incurred in seeking regulatory approval of our product candidates; and
- allocated facility-related costs and overhead.

The successful development of our product candidates is highly uncertain. Product candidates in later stages of clinical development generally have higher development costs than those in earlier stages of clinical development, primarily due to the increased size and duration of later-stage clinical trials. Accordingly, we expect research and development costs to increase significantly for the foreseeable future as programs progress. However, we do not believe that it is possible at this time to accurately project total program-specific expenses through commercialization. We are also unable to predict when, if ever, material net cash inflows will commence from our product candidates to offset these expenses. Our expenditures on current and future preclinical and clinical development programs are subject to numerous uncertainties in timing and cost to completion. The duration, costs and timing of clinical trials and development of our product candidates will depend on a variety of factors including:

- the scope, rate of progress, and expenses of our ongoing as well as any additional clinical trials and other research and development activities;
- future clinical trial results;
- achievement of milestones requiring payments under our in-licensing agreements;
- uncertainties in clinical trial enrollment rates or drop-out or discontinuation rates of patients;
- potential additional studies requested by regulatory agencies;
- significant and changing government regulation; and
- the timing and receipt of any regulatory approvals.

We track research and development expenses on a program-by-program basis only for clinical-stage product candidates. Preclinical research and development expenses and chemical manufacturing research and development expenses are not assigned or allocated to individual development programs. In 2015, trilaciclib was our only clinical-stage product candidate. In 2016, we had two clinical-stage product candidates, trilaciclib and G1T38.

General and administrative expenses

General and administrative expenses consist of personnel costs, allocated expenses and other expenses for outside professional services, including legal, audit and accounting services. Personnel costs consist of salaries, bonuses, benefits and stock-based compensation. Other general and administrative expenses include facility-related costs not otherwise allocated to research and development expense, professional fees, expenses associated with obtaining and maintaining patents and costs of our information systems. We anticipate that our general and administrative expenses will continue to increase in the future as we increase our headcount to support our continued research and development and potential commercialization of our product candidates.

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We also expect to incur additional expenses as a public company, including expenses related to compliance with the rules and regulations of the SEC and NASDAQ, additional insurance expenses, and expenses related to investor relations activities and other administration and professional services.

Total other income (expense), net

Total other income (expense), net consists of interest income earned on cash and cash equivalents and the change in fair value of warrant liabilities and other liabilities.

Income taxes

To date, we have not been required to pay U.S. federal or state income taxes because we have not generated taxable income.

Critical accounting policies and significant judgments and estimates

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

While our significant accounting policies are more fully described in the notes to our financial statements appearing elsewhere in this prospectus, we believe that the following accounting policies are critical to the process of making significant judgments and estimates in the preparation of our financial statements and understanding and evaluating our reported financial results.

Accrued research and development expenses

As part of the process of preparing our financial statements, we are required to estimate and accrue expenses, the largest of which is related to accrued research and development expenses. This process for estimating and accruing expenses involves reviewing contracts and purchase orders, identifying services that have been performed on our behalf, and estimating the level of service performed and the associated cost incurred for the service when we have not yet been invoiced or otherwise notified of the actual costs.

Costs for preclinical study and clinical trial activities are recognized based on an evaluation of our vendors' progress towards completion of specific tasks, using data such as patient enrollment, clinical site activations or information provided to us by our vendors regarding their actual costs incurred. Payments for these activities are based on the terms of individual contracts and payment timing may differ significantly from the period in which the services were performed. We determine accrual estimates through reports from and discussions with applicable personnel and outside service providers as to the progress or state of completion of trials, or the services completed. Our estimates of accrued expenses as of each balance sheet date are based on the facts and circumstances known at the time.

Although we do not expect our estimates to be materially different from the amounts actually incurred, if our estimates of the status and timing of the services performed differ from the actual status and timing of services performed, we may report amounts that are too high or too low in any particular period. To date, there have been no material differences from our estimates to the amount actually incurred.

Warrant liability

Warrants to purchase our preferred stock are classified as liabilities and are recorded at their estimated fair value. In each reporting period, any change in fair value of the warrants is recorded as expense in the case of an increase in fair value and income in the case of a decrease in fair value. We used significant assumptions in estimating the fair value of our warrant liability including the estimated volatility, risk free interest rate, estimated fair value of our redeemable convertible preferred shares and the estimated life of the warrant. These assumptions were used in our option pricing method and the probability weighted expected return method, a blend of which were considered in establishing fair value.

Series B purchase option liability

The option to purchase shares of Series B redeemable convertible preferred stock in a second tranche has been accounted for as a free-standing instrument and classified as a liability. On February 4, 2015, upon purchase of the first tranche of Series B Preferred Stock, the option to purchase additional shares was recorded at its fair value, with the remaining cash proceeds received on that date allocated to Series B Preferred Stock. As the value of the option to purchase shares in the second tranche increased over time, a change in the fair value of the liability was recorded as "Change in fair value of Series B purchase option liability" in the accompanying statement of operations. This free-standing instrument was exercised on December 10, 2015 when the right to require the purchase of the second tranche shares by the holders of the outstanding shares of Series B Preferred Stock was exercised, resulting in an outstanding liability of zero on December 31, 2015.

Stock-based compensation

We account for stock-based compensation awards in accordance with Financial Accounting Standards Board (FASB) Accounting Standards Codification (ASC) Topic 718, *Compensation—Stock Compensation*, or ASC 718. ASC 718 requires all stock-based payments to employees, including grants of employee stock options, to be recognized in the statement of operations based on their fair values. Our stock-based compensation awards have historically consisted of stock options.

We recognize compensation costs related to stock options granted to employees based on the estimated fair value of the awards on the date of grant, net of estimated forfeitures. We estimate the grant date fair value, and the resulting stock-based compensation expense, using the Black-Scholes option-pricing model. The grant date fair value of the stock-based awards is generally recognized on a straight-line basis over the requisite service period, which is generally the vesting period of the respective awards.

We recognize compensation costs related to stock options granted to non-employees based on the estimated fair value of the awards on the date of grant in the same manner as we do options for employees; however, the fair value of the stock options granted to non-employees is re-measured each reporting period until the service is complete, and the resulting increase or decrease in value, if any, is recognized as expense or income, respectively, during the period the related services are rendered.

We calculate the fair value of stock options using the Black-Scholes option-pricing model. The Black-Scholes option-pricing model requires the use of subjective assumptions, including the expected volatility of our common stock, the assumed dividend yield, the expected term of our stock options, the risk-free interest rate for a period that approximates the expected term of our stock options, and the fair value of the underlying common stock on the date of grant. In applying these assumptions, we considered the following factors:

- we do not have sufficient history to estimate the volatility of our common stock; we calculate expected volatility based on reported data for selected similar publicly traded companies for which the historical

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information is available; we plan to continue to use the guideline peer group volatility information until the historical volatility of our common stock is sufficient to measure expected volatility for future option grants;

- the assumed dividend yield of zero is based on our expectation of not paying dividends for the foreseeable future;
- our estimates of expected term used in the Black-Scholes option-pricing model were based on the estimated time from the grant date to the date of exercise;
- we determine the risk-free interest rate by reference to implied yields available from U.S. Treasury securities with a remaining term equal to the expected life assumed at the date of grant; and
- we estimate forfeitures based on our historical analysis of actual stock option forfeitures. To date, we have had minimal forfeitures, accordingly, we have assumed no forfeiture rate.

The following summarizes the assumptions we used to estimate the fair value of stock options that we granted to employees and non-employees for the periods indicated:

	Employees year ended December 31,		Non-employees year ended December 31,		Employees three months ended March 31,		Non-employees three months ended March 31,	
	2015	2016	2015	2016	2016	2017	2016	2017
Expected volatility	66.8—69.3%	74.8—78.8%	66.8—69.3%	75.3—83.9%	—	79.2—79.3%	—	—
Weighted-average risk free rate	1.50—1.71%	1.28—2.08%	1.50—1.71%	1.21—1.80%	—	2.12%	—	—
Dividend yield	0%	0%	0%	0%	—	0%	—	—
Expected Term (in years)	6.25	6.07	10	9.01	—	6.06	—	—

For the years ended December 31, 2015 and 2016, share-based compensation expense was \$388,835 and \$1,390,555, respectively. Share-based compensation expense for 2015 was comprised of \$179,792 and \$209,043 for employees and non-employees, respectively. This expense reflects the reassessment of the fair value of stock options granted throughout 2015 in light of our proposed initial public offering. Share-based compensation expense for 2016 was comprised of \$907,135 and \$483,420 for employees and non-employees, respectively. As of December 31, 2016, we had \$5,074,934 of total unrecognized share-based compensation costs, net of estimated forfeitures, which we expect to recognize over a weighted-average period of 2.81 years.

For the three months ended March 31, 2016 and 2017, share-based compensation expense was \$221,387 and \$547,778, respectively. Share-based compensation expense for the three months ended March 31, 2016 was comprised of \$128,825 and \$92,562 for employees and non-employees, respectively. Share-based compensation expense for the three months ended March 31, 2017 was comprised of \$320,499 and \$227,279 for employees and non-employees, respectively. As of March 31, 2017, we had \$5,187,324 of total unrecognized share-based compensation costs, net of estimated forfeitures, which we expect to recognize over a weighted-average period of 2.57 years.

Stock option award grants

The following table summarizes by grant date the number of shares of our common stock subject to stock option and stock warrants granted from January 1, 2015 through March 31, 2017, as well as the associated per-share exercise price of the award, the estimated fair value per share of our common stock on the grant date, and the reassessment of the estimated fair value per share of the award.

Grant date	Number of shares underlying option granted	Exercise price per share	Estimated FV per share of common stock at grant date	Reassessed FV per share of common stock
February 27, 2015	2,625,000	\$ 0.10	\$ 0.10	\$ 0.25
July 15, 2015	80,000	\$ 0.10	\$ 0.10	\$ 0.80
September 7, 2015	150,000	\$ 0.10	\$ 0.10	\$ 0.91
December 21, 2015	1,966,400	\$ 1.24	\$ 1.24	\$ 1.24
May 10, 2016	2,668,000	\$ 1.39	\$ 1.39	\$ 1.39
July 15, 2016	195,000	\$ 1.39	\$ 1.39	\$ 1.39
September 22, 2016	205,000	\$ 1.39	\$ 1.39	\$ 1.39
December 1, 2016	230,000	\$ 2.29	\$ 2.29	\$ 2.29
January 19, 2017	145,000	\$ 2.29	\$ 2.29	\$ 2.29

Prior to this offering, the fair value of our common shares underlying our stock options was estimated on each grant date by our board of directors. In order to determine the fair value of our common shares underlying granted stock options, our board of directors considered, among other things, timely valuations of our common shares prepared by an unrelated third-party valuation firm in accordance with the guidance provided by the American Institute of Certified Public Accountants Practice Guide, Valuation of Privately-Held-Company Equity Securities Issued as Compensation.

Given the absence of a public trading market for our common shares, our board of directors exercised reasonable judgment and considered a number of objective and subjective factors to determine the best estimate of the fair value of our common shares, including (1) our business, financial condition and results of operations, including related industry trends affecting our operations; (2) our forecasted operating performance and projected future cash flows; (3) the illiquid nature of our common shares; (4) liquidation preferences and other rights and privileges of our common shares; (5) market multiples of our most comparable public peers and (6) market conditions affecting our industry.

In connection with our 2015 audit, we reassessed the determination of the fair value of the common shares underlying 4,821,400 stock options granted throughout 2015. As a result, we determined that the fair value of the common shares in 2015 increased from \$0.10 per common share at January 31, 2015 to \$1.24 per common share at December 31, 2015, which was higher than the fair value per share as initially determined by the board of directors on the respective grant dates of February 27, 2015, July 15, 2015 and September 7, 2015. The use of this higher share price increased both recognized and unrecognized share-based compensation expense.

In connection with our proposed initial public offering and after preliminary discussions with our underwriters, we reassessed the determination of the fair value of the common shares underlying the 3,298,000 stock options granted throughout 2016, and the 145,000 options granted throughout the three months ended March 31, 2017, and determined that no adjustment was necessary.

After the closing of the offering contemplated hereby, our board of directors will determine the fair value of each common share underlying share-based awards based on the closing price of our common shares as reported by the NASDAQ on the date of grant.

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, the intrinsic value of stock options outstanding at March 31, 2017 was

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\$ million, with \$ million related to vested options and \$ million related to unvested options.

The table below summarizes the stock-based compensation expense recognized in our statements of operation by classification:

	Year ended December 31,		Three months ended March 31,	
	2015	2016	2016	2017
	(in thousands)		(in thousands)	
Research and development	\$ 221	\$ 911	\$ 150	\$ 395
General and administrative	\$ 168	\$ 480	\$ 71	\$ 153

Income taxes

We recognize deferred income taxes for temporary differences between the basis of assets and liabilities for financial statement and income tax purposes. We periodically evaluate the positive and negative evidence bearing upon the ability to realize our deferred tax assets. Based upon the weight of the available evidence, which includes historical operating performance, reported cumulative net losses since inception and difficulty in accurately forecasting our future results, we maintained a full valuation allowance on the net deferred tax assets for all periods presented. We intend to maintain a full valuation allowance on the U.S. deferred tax assets for the foreseeable future until sufficient positive evidence exists to support reversal of the valuation allowance.

As of December 31, 2016, we had federal and state operating loss carryforwards of approximately \$46.8 million, available to reduce future taxable income that will begin to expire in 2028. As of December 31, 2016, we also had research and development tax credit carryforwards of approximately \$1.5 million for federal purposes available to offset future income tax. If not utilized, the federal carryforwards will expire in various amounts beginning in 2034.

Utilization of the net operating loss carryforwards may be subject to a substantial annual limitation due to the ownership change limitations provided by Section 382 of the Internal Revenue Code of 1986, as amended, and similar state provisions. The annual limitation may result in the expiration of net operating losses and credits before utilization. An analysis to determine the limitation of the net operating loss carryforwards has not been performed.

Results of operations

Comparison of the three months ended March 31, 2016 and March 31, 2017

	Three months ended		Change
	2016	March 31, 2017	
	(in thousands)		
Revenue	\$ —	\$ —	\$ —
Operating Expenses:			
Research and Development	3,871	11,084	7,213
General and Administrative	2,075	1,294	(781)
Total Operating Expenses	5,946	12,378	6,432
Loss from Operations	(5,946)	(12,378)	(6,432)
Other Income (expenses)	(8)	33	41
Net Loss	\$(5,954)	\$(12,345)	\$(6,391)

[Table of Contents](#)*Research and development*

Research and development expenses were \$11.1 million for the three months ended March 31, 2017 compared to \$3.9 million for the three months ended March 31, 2016. The increase of \$7.2 million, or 186%, was due to an increase of \$4.4 million in our clinical program costs, which included increased costs of \$2.8 million in our trials of trilaciclib in SCLC and TNBC as well as initiation costs for our Phase 2 trilaciclib trial in SCLC with Tecentriq, an increase of \$0.6 million in connection with costs associated with our G1T38 trial in ER+,HER2- breast cancer and an increase of \$1.0 million in personnel costs related to the trilaciclib and G1T38 clinical programs. The increase in overall research and development expenses also includes an increase of \$2.2 million in connection with manufacturing of pharmaceutical active ingredient and drug product to support our clinical trials, an increase of \$0.3 million in preclinical and drug development personnel-related costs as a result of increased headcount and fees paid to consultants, an increase of \$0.2 million in external research studies and an increase of \$0.1 million in supplies and facility costs. The following table summarizes our research and development expenses for the periods indicated:

	Three months ended March 31,	
	2016	2017
(in thousands)		
Clinical Expenses—trilaciclib	\$ 1,939	\$ 5,554
Clinical Expenses—G1T38	104	928
Chemical Manufacturing and Development	769	3,033
Discovery and Pre-clinical Expenses	1,059	1,569
Total Research and Development Expenses	\$ 3,871	\$ 11,084

General and administrative

General and administrative expenses were \$1.3 million for the three months ended March 31, 2017 compared to \$2.1 million for the three months ended March 31, 2016. The decrease of \$0.8 million, or 38%, was due to a decrease of \$1.0 million of transaction costs related to our deferred initial public offering, offset by an increase of \$0.2 million in personnel costs as a result of increased headcount and fees paid to consultants.

Total other income (expense), net

Total other income (expense), net was \$0 million for the three months ended March 31, 2016 and March 31, 2017.

Comparison of the year ended December 31, 2016 and December 31, 2015

	Years ended December 31,		Change \$
	2015	2016	
(in thousands)			
Grant Revenue	\$ 522	\$ —	\$ (522)
Operating Expenses:			
Research and Development	12,730	25,161	12,431
General and Administrative	3,216	5,230	2,014
Total Operating Expenses	15,946	30,391	14,445
Loss from Operations	(15,424)	(30,391)	(14,967)
Other Income (expenses)	(4,840)	100	4,940
Net Loss	\$(20,264)	\$(30,291)	\$(10,027)

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Revenue

Revenue was \$0 for the year ended December 31, 2016 as compared to \$0.5 million for the year ended December 31, 2015. The decrease of \$0.5 million was due to the expiration of existing government grants in 2015. We have not applied for new government grants and do not expect any additional grant revenue in the near future.

Research and development

Research and development expenses were \$25.2 million for the year ended December 31, 2016 as compared to \$12.7 million for the year ended December 31, 2015. The increase of \$12.4 million, or 98%, was due to an increase of \$10.3 million in our clinical program costs, which included increased costs of \$6.2 million due to our ongoing Phase 1b/2a clinical trials of trilaciclib in SCLC and initiation costs for the Phase 2 clinical trial of trilaciclib in TNBC, an increase of \$2.5 million in connection with the completion of a Phase 1 trial for G1T38 in healthy normal volunteers and preparation for a Phase 1/2 clinical trial in ER+, HER2- breast cancer and \$1.6 million in increased personnel costs and other costs related to the trilaciclib and G1T38 clinical programs. The increase in overall research and development expenses also includes an increase of \$2.0 million in connection with manufacturing of pharmaceutical active ingredient and drug product to support our clinical trials, an increase of \$0.9 million in preclinical and drug development personnel-related costs as a result of increased headcount and fees paid to consultants, an increase of \$0.4 million in license fees and an increase of \$0.2 million in supplies and facility costs, offset in part by a decrease of \$1.4 million in external costs related to the selection of compounds for development and preclinical development of G1T38 and G1T48. The following table summarizes our research and development expenses allocated to trilaciclib and G1T38 and unallocated research and development expenses for the periods indicated:

	Year ended December 31,	
	2015	2016
	(in thousands)	
Clinical Expenses—trilaciclib	\$ 4,889	\$ 11,693
Clinical Expenses—G1T38	—	3,504
Chemical Manufacturing and Development	2,688	4,967
Discovery and Pre-Clinical Expenses	5,153	4,997
Total Research and Development Expenses	\$12,730	\$ 25,161

General and administrative

General and administrative expenses were \$5.2 million for the year ended December 31, 2016 as compared to \$3.2 million for the year ended December 31, 2015. The increase of \$2.0 million, or 63%, was due to an increase of \$1.0 million of transaction related costs from our deferred initial public offering, an increase of \$0.6 million in personnel costs as a result of increased headcount and fees paid to consultants and an increase of \$0.4 million in general and intellectual property legal expenses.

Total other income (expense), net

Total other income (expense), net was \$0.1 million for the year ended December 31, 2016 as compared to \$(4.8) million for the year ended December 31, 2015. The decrease in expense of \$4.9 million was due to the change in fair value of the Series B purchase option liability in 2015 and no equivalent expense in 2016, the change in the fair value of the warrant liability and an increase in interest income.

Liquidity and capital resources

We have incurred cumulative losses and negative cash flows from operations since our inception in 2008. As of March 31, 2017, we had an accumulated deficit of \$81.3 million. We do not expect to generate substantial revenue from the commercial sale of our products and anticipate that we will continue to incur losses for the foreseeable future.

To date, we have financed our operations primarily through private placements of convertible debt and equity securities. In October 2013, we issued 7,509,696 shares of our Series A Preferred Stock for total proceeds of \$6.3 million, including cash proceeds of \$5.0 million and cancellation of approximately \$1.3 million in debt. In May 2014, we issued an additional 7,486,996 shares of our Series A Preferred Stock for total gross proceeds of \$6.3 million. In February 2015, we issued 11,382,087 shares of our Series B Preferred Stock for total proceeds of \$16.5 million, including cash proceeds of \$16.5 million and cancellation of approximately \$12,000 in debt. In December 2015, we issued an additional 11,546,147 shares of our Series B Preferred Stock for total gross proceeds of \$16.7 million. In the second quarter of 2016, we issued 16,828,217 shares of our Series C Preferred Stock for total gross proceeds of \$50.0 million.

As of March 31, 2017, we had cash and cash equivalents of \$37.7 million. We believe that the net proceeds from the offering contemplated hereby and our existing cash and cash equivalents will be sufficient to fund our projected cash needs for at least the next 24 months. We expect that our research and development and general and administrative expenses will continue to increase and, as a result, we will need additional capital to fund our operations, which we may raise through a combination of equity offerings, debt financings, other third-party funding, marketing and distribution arrangements and other collaborations, strategic alliances and licensing arrangements. We may also need to raise additional funds sooner to pursue other development activities related to additional product candidates. Our recurring loss from operations and negative cash flows raise substantial doubt about our ability to continue as a going concern. We may never become profitable, or if we do, we may not be able to sustain profitability on a recurring basis.

Cash flows

The following table summarizes our cash flows for the periods indicated:

	Three months ended		Change \$
	2016	March 31, 2017	
	(in thousands)		
Net cash used in operating activities	\$(5,291)	\$(9,280)	\$(3,989)
Net cash used in investing activities	(56)	(13)	43
Net cash used in financing activities	—	(285)	(285)
Net decrease in cash and cash equivalents	\$(5,347)	\$(9,578)	\$(4,231)

Net cash used in operating activities

Net cash used in operating activities increased \$4.0 million from \$5.3 million for the three months ended March 31, 2016 to \$9.3 million for the three months ended March 31, 2017. The increase in net cash used in operating activities is primarily due to the increase in net loss. The primary drivers of operating cash requirements were our research and development and general and administrative activities in each period. For the three months ended March 31, 2016, we used net cash in operating activities of \$5.3 million which consisted primarily of our net loss of \$6.0 million partially offset by a change in accounts payable and accrued expenses of \$0.4 million, non-cash stock compensation expense of \$0.2 million and \$0.1 million of other working capital

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adjustments. During the three months ended March 31, 2017, we used net cash in operating activities of \$9.3 million, which consisted primarily of our net loss of \$12.3 million and a \$0.6 million increase in prepaid assets, offset by a change in accounts payable and accrued expenses of \$3.1 million, related primarily to an increase in research and development activity during that period and \$0.5 million non-cash stock compensation expense.

Net cash used in investing activities

Net cash used in investing activities was consistent for the three months ended March 31, 2016 and the three months ended March 31, 2017.

Net cash used in financing activities

Net cash used in financing activities increased to \$0.3 million in March 31, 2017 from \$0 million in March 31, 2016. During the three months ended March 31, 2017, we recorded payment of proposed public offering costs of \$0.3 million.

The following table summarizes our cash flows for the periods indicated:

	Years ended December 31,		Change \$
	2015	2016	
	(in thousands)		
Net cash used in operating activities	\$(13,845)	\$ (25,141)	\$ (11,296)
Net cash used in investing activities	(87)	(250)	(163)
Net cash provided by financing activities	33,176	49,758	16,582
Net increase in cash and cash equivalents	\$ 19,244	\$ 24,367	\$ 5,123

Net cash used in operating activities

Net cash used in operating activities increased \$11.3 million, from \$13.8 million for the year ended December 31, 2015 to \$25.1 million for the year ended December 31, 2016. The increase in net cash used in operating activities as compared to the prior year period is mainly due to the increase in net loss. The primary drivers of operating cash requirements were our research and development and general and administrative activities in each period. During the year ended December 31, 2015, we used net cash in operating activities of \$13.8 million, which consisted primarily of our net loss of \$20.3 million partially offset by \$4.8 million due to the increase in fair value of the Series B purchase option liability and a change in accrued expenses and accounts payable of \$1.7 million, related primarily to an increase in research and development activity during that period. During the year ended December 31, 2016, we used net cash in operating activities of \$25.1 million, which consisted primarily of our net loss of \$30.3 million partially offset by a change in accrued expenses and accounts payable of \$3.4 million, related primarily to an increase in research and development activity during that period, non-cash stock-based compensation charges of \$1.4 million, and \$0.4 million of other working capital adjustments.

Net cash used in investing activities

Net cash used in investing activities increased \$0.2 million from \$0.1 million for the year ended December 31, 2015 to \$0.3 million for the year ended December 31, 2016. The increase was due to increased purchases of property and equipment.

Net cash provided by financing activities

Net cash provided by financing activities increased \$16.6 million from \$33.2 million for the year ended December 31, 2015 to \$49.8 million for the year ended December 31, 2016. For the year ended December 31,

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2015, we issued shares of our Series B Preferred Stock which resulted in \$33.3 million in gross proceeds which was offset in part by financing costs of \$0.1 million. During the year ended December 31, 2016, we issued shares of our Series C Preferred Stock which resulted in \$50.0 million in gross proceeds which was offset in part by financing costs of \$0.2 million.

Operating capital requirements and plan of operations

To date, we have not generated any revenue from product sales. We do not know when, or if, we will generate any revenue from product sales. We do not expect to generate significant revenue from product sales unless and until we obtain regulatory approval of and commercialize one of our current or future product candidates. We anticipate that we will continue to generate losses for the foreseeable future, and we expect the losses to increase as we continue the development of and seek regulatory approvals for our product candidates, and begin to commercialize any approved products. We are subject to all of the risks inherent in the development of new products, and we may encounter unforeseen expenses, difficulties, complications, delays and other unknown factors that may adversely affect our business. Upon the closing of this offering, we expect to incur additional costs associated with operating as a public company and we anticipate that we will need substantial additional funding in connection with our continuing operations.

We believe that the net proceeds from this offering and our existing cash and cash equivalents will be sufficient to fund our projected cash needs for at least the next 24 months. In order to complete the process of obtaining regulatory approval for our product candidates and to build the sales, marketing and distribution infrastructure that we believe will be necessary to commercialize our product candidates, if approved, we will require substantial additional funding.

We have based our projections of operating capital requirements on assumptions that may prove to be incorrect and we may use all of our available capital resources sooner than we expect. Because of the numerous risks and uncertainties associated with research, development and commercialization of pharmaceutical products, we are unable to estimate the exact amount of our operating capital requirements. Our future funding requirements will depend on many factors, including, but not limited to:

- the scope, progress, results and costs of nonclinical development, laboratory testing and clinical trials for our product candidates;
- the scope, prioritization and number of our research and development programs;
- the costs, timing and outcome of regulatory review of our product candidates;
- the extent to which we enter into non-exclusive, jointly funded clinical research collaboration arrangements, if any, for the development of our product candidates in combination with other companies' products;
- our ability to establish such collaborative co-development arrangements on favorable terms, if at all;
- the achievement of milestones or occurrence of other developments that trigger payments under our license agreement and any collaboration agreements into which we enter;
- the extent to which we are obligated to reimburse, or entitled to reimbursement of, clinical trial costs under future collaboration agreements, if any;
- the extent to which we acquire or in-license product candidates and technologies, such as G1T48, and the terms of such in-licenses;
- the costs of future commercialization activities, including product sales, marketing, manufacturing and distribution, for any of our product candidates for which we receive marketing approval;

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- revenue, if any, received from commercial sales of our product candidates, should any of our product candidates receive marketing approval; and
- the costs of preparing, filing and prosecuting patent applications, maintaining and enforcing our intellectual property rights and defending intellectual property-related claims.

Until such time, if ever, as we can generate substantial revenues, we expect to finance our cash needs through a combination of equity offerings, debt financings, other third-party funding, marketing and distribution arrangements and other collaborations, strategic alliances and licensing arrangements. We do not 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, if available, may involve 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 funds through additional collaborations, strategic alliances or licensing arrangements with third parties, we may have to relinquish valuable rights to our technologies, future revenue streams, research programs or product candidates or to grant licenses on terms that may not be favorable to us. If we are unable to raise additional funds when needed, we may be required to delay, limit, reduce or terminate our product development or future commercialization efforts or grant rights to develop and market product candidates that we would otherwise prefer to develop and market ourselves.

Contractual obligations, commitments and contingencies

Our principal commitments consist of obligations under our clinical trial commitments, consulting fees and operating lease commitments. The following table summarizes these contractual obligations as of December 31, 2016:

	Payments due by period				Total
	Less than 1 Year	1 to 3 Years	3 to 5 Years	More Than 5 Years	
	(in thousands)				
Contractual Obligations:					
Operating lease obligations(1)	\$ 173	\$ 413	\$ 439	\$ 229	\$1,254
Total contractual obligations(2)	\$ 173	\$ 413	\$ 439	\$ 229	\$1,254

(1) Represents future minimum lease payments under the non-cancelable lease for our headquarters in Research Triangle Park, NC. The minimum lease payments above do not include any related common area maintenance charges or real estate taxes.

(2) We enter into agreements in the normal course of business with contract research organizations for clinical trials and with vendors for preclinical studies and other services and products for operating purposes which are cancelable at any time by us, generally upon 30-60 days prior written notice. The contractual obligations above do not include such payments.

The above amounts exclude potential payments to be made under our license agreement for G1T48 with the University of Illinois that are based on the progress of G1T48, as these payments are not determinable.

On March 27, 2017, we signed an amendment to our existing lease, to lease additional office space adjacent to our existing office space. Payments on the additional space are estimated to begin in August 2017 and continue until the lease expires on December 31, 2022.

Off-Balance sheet arrangements

We did not have, during the periods presented, and we do not currently have, any off-balance sheet arrangements, as defined under applicable SEC rules.

Quantitative and qualitative disclosures about market risk

We are exposed to market risks in the ordinary course of our business. These risks primarily include interest rate sensitivities. We had cash and cash equivalents of \$37.7 million as of March 31, 2017, which consists of deposits in banks, including checking accounts, money market accounts and certificates of deposit. Such interest-earning instruments carry a degree of interest rate risk; however, historical fluctuations in interest income have not been significant. We had no outstanding debt as of March 31, 2017.

JOBS Act: emerging growth company status

We are an “emerging growth company,” as defined in the Jumpstart Our Business Startups Act, or JOBS Act. Under the JOBS Act, emerging growth companies can delay adopting new or revised accounting standards issued subsequent to the enactment of the JOBS Act until such time as those standards apply to private companies. We have irrevocably elected to not take advantage of the extended transition period afforded by the JOBS Act for the implementation of new or revised accounting standards and, as a result, will comply with new or revised accounting standards on the relevant dates on which adoption of such standards is required for non-emerging growth companies.

For so long as we are an emerging growth company we expect that:

- we will present no more than two years of audited financial statements and no more than two years of related management's discussion and analysis of financial condition and results of operations in our initial registration statement;
- we will avail ourselves of the exemption from the requirement to comply with any requirement that may be adopted by the Public Company Accounting Oversight Board regarding mandatory audit firm rotation or a supplement to the auditor's report providing additional information about the audit and the financial statements;
- we will avail ourselves of the exemption from the requirement to obtain an attestation and report from our auditors on the assessment of our internal control over financial reporting pursuant to the Sarbanes-Oxley Act; and
- we will provide less extensive disclosure about our executive compensation arrangements.

We will remain an emerging growth company for up to five years, although we will cease to be an “emerging growth company” upon the earliest of: (1) the last day of the fiscal year following the fifth anniversary of this offering, (2) the last day of the first fiscal year in which our annual revenues are \$1 billion or more, (3) the date on which we have, during the previous rolling three-year period, issued more than \$1 billion in non-convertible debt securities, and (4) the date on which we are deemed to be a “large accelerated filer” as defined in the Exchange Act.

Recently issued accounting pronouncements

In October 2016, the FASB issued ASU No. 2016-17, *Consolidation (Topic 810): Interests Held through Related Parties That Are under Common Control*, which amends the consolidation guidance on how a reporting entity that is a single decision maker of a variable interest entity should treat indirect interest in the entity held through related parties that are under common control. This guidance is effective for annual periods beginning after December 15, 2016, including interim periods within those annual periods, with early adoption permitted. We adopted this ASU on January 1, 2017. The adoption of this standard did not have a material impact on our financial statements.

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In August 2016, the FASB issued ASU No. 2016-15, *Statement of Cash Flows (Topic 230): Classification of Certain Cash Receipts and Cash Payments*. The FASB issued ASU 2016-09 to improve U.S. GAAP by providing guidance on the cash flow statement classification of eight specific areas where there is existing diversity in practice. The FASB expects that the guidance in this ASU will reduce the current and potential future diversity in practice in such areas. This ASU is effective for annual and interim periods beginning after December 15, 2017, with early adoption permitted. We are currently evaluating the impact of the adoption of this ASU on our financial statements.

In March 2016, the FASB issued ASU No. 2016-09, *Compensation—Stock Compensation (Topic 718): Improvements to Employee Share-Based Payment Accounting*. The FASB issued ASU 2016-09 to simplify several aspects of the accounting for share-based payment transactions, including the income tax consequences. This ASU is effective for annual and interim periods ending after December 15, 2016, with early adoption permitted. We adopted this ASU for the year ended December 31, 2016. The adoption of this standard did not have a material impact on our financial statements.

In February 2016, the FASB issued ASU No. 2016-02, *Leases (Topic 842)*. This guidance revises the accounting related to leases by requiring lessees to recognize a lease liability and a right-of-use asset for all leases. The new lease guidance also simplifies the accounting for sale and leaseback transactions. This ASU is effective for annual reporting periods beginning after December 15, 2018 and early adoption is permitted. We are currently evaluating the impact of the adoption of this ASU on our financial statements.

In November 2014, the FASB issued ASU No. 2014-16, *Determining Whether the Host Contract in a Hybrid Financial Instrument Issued in the Form of a Share Is More Akin to Debt or to Equity*. The guidance requires an entity to determine the nature of the host contract by considering all stated and implied substantive terms and features of the hybrid financial instrument, weighing each term and feature on the basis of the relevant facts and circumstances (commonly referred to as the whole-instrument approach). ASU 2014-16 applies to all entities and is effective for annual periods beginning after December 15, 2015, and interim periods thereafter. Early adoption is permitted. We adopted this ASU for the year ended December 31, 2016. Adoption of this standard did not have material impact on our financial statements.

In August 2014, the FASB issued ASU No. 2014-15, *Presentation of Financial Statements—Going Concern (Subtopic 205-40): Disclosure of Uncertainties about an Entity's Ability to Continue as a Going Concern*, requiring management to evaluate whether events or conditions could impact an entity's ability to continue as a going concern for at least one year after the date that the financial statements are issued and to provide disclosures if necessary. Disclosures will be required if conditions give rise to substantial doubt and the type of disclosure will be determined based on whether management's plans will be able to alleviate the substantial doubt. The ASU will be effective for the first annual period ending after December 15, 2016, and for annual periods and interim periods thereafter with early application permitted. We adopted this ASU for the year ended December 31, 2016. Adoption of this standard did not have material impact on our financial statements.

In June 2014, the FASB issued ASU No. 2014-12, *Compensation—Stock Compensation (Topic 718): Accounting for Share-Based Payments When the Terms of an Award Provide That a Performance Target Could be Achieved after the Requisite Service Period*, which requires an entity to assess share-based awards with performance targets that could be achieved after the requisite service period for potential treatment as performance conditions. Under the ASU, compensation expense is to be recognized when the performance target is deemed probable and should represent the compensation expense attributable to the periods for which service has already been rendered. If the performance target is reached prior to achievement of the service period, the remaining unrecognized compensation cost should be recognized over the remaining service period. The ASU is effective for annual and interim periods beginning after December 15, 2015 with early adoption permitted. We adopted this ASU for the year ended December 31, 2016. The adoption of this standard did not have a material impact on our financial statements.

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In May 2014, the FASB and the International Accounting Standards Board jointly issued ASU No. 2014-09, *Revenue from Contracts with Customers* (“ASU No. 2014-09”), which supersedes the revenue recognition requirements in ASC 605 and most industry-specific guidance. The new standard requires that an entity recognize revenue to depict the transfer of promised goods or services to customers in an amount that reflects the consideration to which the company expects to be entitled in exchange for those goods and services. The update also requires additional disclosures about the nature, amount, timing and uncertainty of revenue and cash flows arising from customer contracts, including significant judgments and changes in judgments and assets recognized from costs incurred to obtain or fulfill a contract. ASU 2014-09 is effective for public entities for annual and interim periods within those annual periods beginning after December 15, 2017. We are evaluating the method of adoption and the potential impact this standard may have on our financial position and results of operations.

Business

Overview

We are a clinical-stage biopharmaceutical company focused on the discovery and development of novel therapeutics for the treatment of cancer. Our two clinical assets are based on our core understanding of cyclin-dependent kinases, or CDKs, a family of proteins that play an important role in the growth and proliferation of all human cells. Two particular CDKs, CDK4 and CDK6, collectively known as CDK4/6, represent a validated and promising class of targets for anti-cancer therapeutics. We have leveraged our deep expertise in CDK4/6 biology to discover and develop two highly potent and selective CDK4/6 inhibitors that may have broad applicability across multiple cancer indications. We believe we are the only company with two distinct clinical-stage CDK4/6 inhibitors, trilaciclib and G1T38, each of which has the potential to be the backbone therapy of multiple combination regimens.

CDK4/6 is required for growth and proliferation in certain normal cell types, such as hematopoietic stem and progenitor cells, or HSPCs. HSPCs reside in the bone marrow and are the “reservoir” from which all blood and immune system cells are formed. Additionally, CDK4/6 plays an integral role in the growth and proliferation of certain types of tumors. Tumors that rely on CDK4/6 to grow and proliferate are referred to as CDK4/6-dependent tumors, and include the most common kinds of prostate and breast cancer. Alternatively, some tumors can grow and proliferate without CDK4/6 activity and are referred to as CDK4/6-independent. CDK4/6 independent tumors include small cell lung cancer, or SCLC, and triple-negative breast cancer, or TNBC. Our two CDK4/6 inhibitors were rationally designed to treat distinct patient populations with different combination regimens. Trilaciclib is in development in combination with chemotherapy for the treatment of patients with CDK4/6-independent tumors. G1T38 is in development in combination with targeted therapies for the treatment of patients with CDK4/6-dependent tumors.

Trilaciclib, our most advanced candidate, is a potential first-in-class intravenous CDK4/6 inhibitor we rationally designed to preserve HSPCs and enhance immune system function during chemotherapy. Chemotherapy has significant clinical utility and continues to be the most effective treatment for many cancers. However, it also damages HSPCs (myelosuppression) and the immune system (immunosuppression), leading to severe adverse effects and limiting anti-tumor activity. We believe that if the beneficial effects of chemotherapy (i.e. potent tumor cell killing) could be maximized, while minimizing the deleterious side-effects of myelosuppression and immunosuppression, patient outcomes would be significantly improved.

Based on compelling response rates and favorable tolerability shown in early-stage trials, trilaciclib is currently being evaluated in three randomized trials: two Phase 1b/2a trials in patients with SCLC, and one Phase 2 trial in patients with TNBC. We have completed the Phase 1b parts of the two SCLC trials, and initial data from the ongoing randomized, placebo-controlled Phase 2a parts of these trials are expected to be released in 2018. Initial data from the TNBC trial is also expected to be released in 2018.

To our knowledge, we are the only company developing a CDK4/6 inhibitor specifically for use with chemotherapy. We believe that trilaciclib has the potential to transform the chemotherapy treatment paradigm and significantly benefit patient outcomes. In addition, based on robust preclinical data, we believe that trilaciclib has the potential to significantly enhance the efficacy of immune checkpoint inhibitor/chemotherapy combinations. In December 2016, we entered into a non-exclusive collaboration with Genentech to evaluate trilaciclib in combination with Genentech’s checkpoint inhibitor Tecentricq to realize this potential.

G1T38, our second clinical-stage candidate, is a potential best-in-class oral CDK4/6 inhibitor being developed to be used in combination with other targeted therapies to treat multiple cancers. We rationally designed G1T38 to improve upon and address the shortcomings of the approved CDK4/6 inhibitors Ibrance and Kisqali and others

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in development. Our preclinical data and early clinical data indicate the potential for continuous daily dosing and improved antitumor activity and tolerability. A Phase 1 trial of G1T38 in 75 healthy volunteers showed a favorable safety profile leading to the initiation of a Phase 1/2 trial in ER+, HER2- breast cancer (in combination with Faslodex) in January 2017. Our plans for G1T38 include combinations in other cancers, such as non-small cell lung cancer, or NSCLC, where we expect to begin a Phase 2 trial in 2018 in combination with an EGFR inhibitor. We believe that G1T38 has the potential to be the backbone therapy of multiple proprietary combination regimens.

As shown in the table below, we designed two distinct CDK4/6 inhibitors, trilaciclib and G1T38, with unique properties for different uses:

Two distinct CDK4/6 inhibitors, rationally designed and optimized by G1 Therapeutics

Drug	CDK4/6 tumor type	MOA	Dosing	Combination	Initial indications
Trilaciclib	Independent	Preserves HSPCs, enhances immune system function	IV, intermittent	Chemotherapy and/or checkpoint inhibitor	SCLC, TNBC
G1T38	Dependent	Stops tumor cell proliferation	Oral, daily	Targeted therapies (e.g. SERD, EGFRi)	ER+, HER2- breast cancer, NSCLC

As part of our strategy to develop wholly owned proprietary combinations that complement our CDK4/6 portfolio, we have exclusively in-licensed G1T48, a potential first/best-in-class oral selective estrogen receptor degrader, or SERD. We expect to initially develop G1T48 to be used in combination with G1T38 for the treatment of ER+, HER2- breast cancer. Based on compelling preclinical efficacy and safety data, we expect to file an investigational new drug application, or IND, or clinical trial authorization application, or CTA, for G1T48 in the fourth quarter of 2017. With an oral SERD (G1T48) and an oral CDK4/6 inhibitor (G1T38), we believe we are in a unique position as the only emerging biopharmaceutical company with a wholly owned, proprietary combination for this validated regimen in ER+, HER2- breast cancer. We plan to continue to leverage our proprietary assets and knowledge of CDK4/6 biology to explore additional combination treatments and to build a fully integrated oncology company.

Cancer is the second leading cause of death in the United States with approximately 1.7 million new cases and 600,000 deaths in 2016. We estimate that more than one million patients in the United States receive chemotherapy annually and that approximately 300,000 of these patients have CDK4/6-independent tumors where treatment with trilaciclib may provide significant benefit. Other cancers, such as many types of breast, prostate, colon, lung and brain cancers, as well as various hematologic malignancies, are CDK4/6-dependent. We estimate that at least 300,000 patients are diagnosed with late-stage CDK4/6-dependent tumors per year in the United States and could potentially benefit from G1T38. There are also approximately 160,000 women in the United States with late-stage ER+, HER2- breast cancer who could potentially benefit from G1T38 and G1T48. Given the size of these patient populations and the unmet medical need, we believe the worldwide market potential for each of our product candidates exceeds several billion dollars annually.

Broadly speaking, the treatment of cancer can be divided into three major therapeutic categories: chemotherapy, immunotherapy/checkpoint inhibitors, and targeted agents. Nearly all patients diagnosed with cancer get treated with one or more or a combination of these treatment modalities during the course of their disease. We believe that oncology has entered a new treatment paradigm involving combination therapies to attack multiple underlying mechanisms of cancer cell growth and survival.

- **Chemotherapy.** While chemotherapy can effectively kill tumor cells, its severe side-effects remain a major burden to patients and the healthcare system. For example, chemotherapy-induced myelosuppression causes abnormally low numbers of red blood cells, or anemia, abnormally low numbers of neutrophils, or neutropenia, and/or abnormally low numbers of platelets, or thrombocytopenia. Collectively, these “cytopenias” put patients at an increased risk for infection and bleeding, requiring hospitalizations, antibiotics, transfusions, and growth factor administrations. Dose reductions and delays are often needed to manage side-effects, limiting efficacy. Moreover, while chemotherapy induces tumor cell death, releasing neoantigens that are immunogenic, chemotherapy-induced immunosuppression impairs the generation of a robust, sustained anti-tumor immune response.
- **Cancer immunotherapy.** Cancer immunotherapy, the second broad category of cancer treatments, works by harnessing the body’s own immune system to recognize, attack, and eradicate malignant cells. There are several immunotherapy treatment modalities, including vaccines, engineered T-cells, and monoclonal antibodies. Monoclonal antibodies against a recently validated class of targets—immune checkpoints—have demonstrated unprecedented efficacy for patients with melanoma, bladder cancer, and non-small cell lung cancer, or NSCLC. Despite impressive durability, less than 30% of patients respond to checkpoint inhibitors, and several efforts are underway to increase response rates. One such approach is the use of chemotherapy at the time of checkpoint inhibitor administration. However, as noted above, despite chemo-induced immunogenic tumor cell death, chemotherapy also causes immunosuppression that can dampen the anti-tumor response and renders the treatment less effective.

If the beneficial effects of chemotherapy (i.e. potent tumor cell killing) could be maximized, while minimizing the deleterious side-effects of myelosuppression and immunosuppression, patient outcomes could be significantly improved. Trilaciclib has been developed to do exactly this: preserve HSPCs and enhance immune system function during chemotherapy. To our knowledge, we are the only company developing a CDK4/6 inhibitor in this way, and we believe that trilaciclib has the potential to transform the chemotherapy treatment paradigm and significantly benefit patient outcomes. We also believe that trilaciclib has the potential to become an essential component of checkpoint inhibitor/chemotherapy combination regimens.

- **Targeted therapies.** The third major class of anti-cancer agents is comprised of targeted therapies, which include therapies that block critical receptors or enzymes that transduce signals for tumor cells to proliferate. Typically, such targeted therapies are small molecule therapies taken orally, are less toxic than chemotherapy, and may be taken chronically. Examples include the Bruton’s tyrosine kinase (Btk) inhibitor Ibrutinib for B-cell malignancies, the epidermal growth factor receptor (EGFR) inhibitor Tagrisso for NSCLC, and the CDK4/6 inhibitors Ibrance and Kisqali for ER+, HER2- breast cancer. Because cancer cells can become resistant to single-agent targeted therapies, combination regimens are being utilized more frequently. Each component of these combination regimens must be well tolerated to limit potential additive toxicities.

G1T38 is a potential best-in-class oral CDK4/6 inhibitor with broad applicability to multiple cancers. We rationally designed G1T38 to improve upon and address the shortcomings of the approved CDK4/6 inhibitors Ibrance and Kisqali and others in development. In 2015, Ibrance became the first FDA-approved CDK4/6 inhibitor for use as a combination therapy for the treatment of ER+, HER2- breast cancer. Despite a favorable efficacy/tolerability profile, patients on Ibrance must be monitored for abnormally low numbers of neutrophils, or neutropenia, and can only be given the drug on a 21 day-on/7 day-off schedule. Even with this dosing holiday, dose-delays and dose reductions due to persistent neutropenia are common. Despite these shortcomings, since its launch in the United States, Ibrance has been prescribed by more than 9,000 physicians to approximately 45,000 patients. Worldwide sales of Ibrance in 2016 were approximately \$2.1 billion and analysts estimate peak annual worldwide sales exceeding \$7 billion. Other CDK4/6 inhibitors have reported cardiovascular and liver side effects or gastrointestinal tolerability issues. We believe that G1T38 has the potential for continuous daily

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dosing and may be able to be given in combination with several targeted therapies that are on the market or in development. Moreover, our oral SERD, G1T48, gives us the opportunity to develop a wholly owned proprietary combination therapy, G1T38 + G1T48, for patients with ER+, HER2- breast cancer.

Pipeline overview

We believe that our CDK4/6 inhibitors candidates have the potential to treat nearly all forms of cancer and be administered in combination with most conventional and emerging cancer therapies. Both trilaciclib and G1T38 were designed and synthesized by us, and we hold an exclusive license to G1T48. We own or exclusively license the worldwide commercial rights to each of our product candidates, and hold or own exclusive rights to over 120 U.S. and international patents and pending patent applications covering our product development programs.

Program	Initial indications	Phase	Expected milestones	Additional potential indications	Worldwide commercial rights
trilaciclib (IV CDK4/6 inhibitor)	1st-line SCLC	1b/2a	Phase 1b complete. Report initial Phase 2a data in 2018	NSCLC, bladder, head and neck cancer	
	2nd/3rd-line SCLC	1b/2a	Phase 1b complete. Report initial Phase 2a data in 2018		
	metastatic TNBC	2	Report initial data in 2018		
	1st-line SCLC plus Tecentriq	—	Initiate Phase 2 in 2Q17		
G1T38 (oral CDK4/6 inhibitor)	ER+, HER2-breast cancer (plus Faslodex)	1/2	Initiate Phase 2 in 2018	CRPC, Heme malignancies	
	NSCLC (plus EGFRi)	—	Initiate Phase 2 in 2018		
G1T48 (oral SERD)	ER+, HER2-breast cancer	Preclinical	File IND/CTA in 4Q17		

Trilaciclib

We have completed a Phase 1 clinical trial in 45 healthy volunteers in which trilaciclib was well tolerated with no dose limiting toxicities, or DLTs, or serious adverse events, or SAEs, reported. Trilaciclib also demonstrated dose-dependent increases in exposure, and we identified the pharmacologically active dose to support testing in cancer patients. We are currently evaluating trilaciclib in combination with chemotherapy in three randomized trials: two Phase 1b/2a trials in extensive-stage SCLC (one as first-line treatment and another as second/third-line treatment) and a third Phase 2 trial in metastatic TNBC. In the two completed open-label Phase 1b parts of the SCLC trials, response rates and tolerability have compared favorably to historical chemotherapy-only trials. For example, in 17 evaluable patients in the Phase 1b part of the trial in first-line SCLC patients, we have seen an 88% response rate (including one complete response, or CR) and a clinical benefit rate of 94%. In historical chemotherapy-only trials, the response rates are approximately 50% and the CR rates are less than 1%. In the Phase 1b parts of these two trials, we treated 51 patients with over 250 cycles of trilaciclib and chemotherapy, and have not had a single episode of febrile neutropenia – one of the most common adverse consequences of these chemotherapy regimens. Further, there were no drug-related serious adverse events reported during the Phase 1b parts of these two trials. There were some adverse events

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reported involving fatigue and cytopenias, but those adverse events were less severe and less frequent than those generally reported in trials involving the use of chemotherapy alone. For example, the FDA label for topotecan, which is the existing second-line standard of care chemotherapy for the treatment of SCLC, states that patients experienced grade 4 neutropenia or thrombocytopenia in 70% and 29% of cases, respectively, and grade 3 or 4 anemia or fatigue in 42% and 6% of cases, respectively. Among the eight patients in the Phase 1b part of our second/third-line trial who received the chosen Phase 2a doses of trilaciclib (240 mg/m²) and topotecan (0.75 mg/m²), no cases of grade 4 or 5 neutropenia or thrombocytopenia were reported, and Grade 3, 4 or 5 anemia or fatigue were reported in 13% and 0% of cases, respectively.

Enrollment in the Phase 2a parts of the SCLC trials is expected to be completed in 2017 and initial data are expected in 2018. Enrollment in the Phase 2 TNBC trial is expected to be completed in 2018 and initial data are expected in 2018. As part of our non-exclusive collaboration with Genentech, we expect to begin a Phase 2 trial of trilaciclib in combination with Tecentriq and chemotherapy in first-line SCLC in the second quarter of 2017.

G1T38

Our preclinical data demonstrate the potential for less neutropenia than Ibrance and an improved safety/tolerability profile versus Kisqali and another CDK4/6 inhibitor in development, indicating best-in-class potential. We have recently completed a Phase 1 trial in 75 healthy volunteers, in which G1T38 was well-tolerated with no grade 3/4 adverse events. We initiated a Phase 1/2 trial in ER+, HER2- breast cancer patients (in combination with Faslodex, an FDA-approved intramuscular, or IM, SERD) in January 2017. Preliminary results from the first six patients enrolled in the Phase 1/2 trial suggest that G1T38 may be able to address the shortcomings of the other CDK4/6 inhibitors. Our plans for G1T38 include other major indications, such as NSCLC, where we expect to begin a Phase 2 trial in 2018 in combination with an EGFR inhibitor.

G1T48

Based on compelling preclinical anti-tumor efficacy and safety data, we expect to file an IND and/or CTA for G1T48 in the fourth quarter of 2017.

Our strategy

Our goal is to be a leader in the discovery and development of CDK4/6 inhibitor-based treatments for cancer. Our strategy includes the following key components:

- ***Develop trilaciclib in combination with chemotherapy across multiple indications.*** We believe that trilaciclib has the potential to be used to treat any patient with a CDK4/6-independent tumor who receives chemotherapy. We are currently evaluating trilaciclib in combination with chemotherapy in three randomized clinical trials: two Phase 1b/2a trials in patients with SCLC and a third Phase 2 trial in patients with TNBC. We have completed the Phase 1b parts of both SCLC trials. Enrollment in the Phase 2a parts of these trials is expected to be completed in 2017, and initial data are expected in 2018. The TNBC trial is expected to complete enrollment in 2018 and initial data are expected in 2018. Based on the outcomes of those trials, we expect to initiate trials in other cancers such as bladder and head and neck cancer.
- ***Develop trilaciclib in combination with immune checkpoint inhibitors.*** We believe that using trilaciclib in combination with chemotherapy and checkpoint inhibitors has the potential to significantly enhance efficacy. In December 2016, we entered into a collaboration with Genentech to evaluate trilaciclib in combination with Genentech's checkpoint inhibitor Tecentriq in multiple indications. A Phase 2 trial in first-line SCLC patients receiving chemotherapy is expected to be initiated in the second quarter of 2017, and trials in other indications are anticipated.

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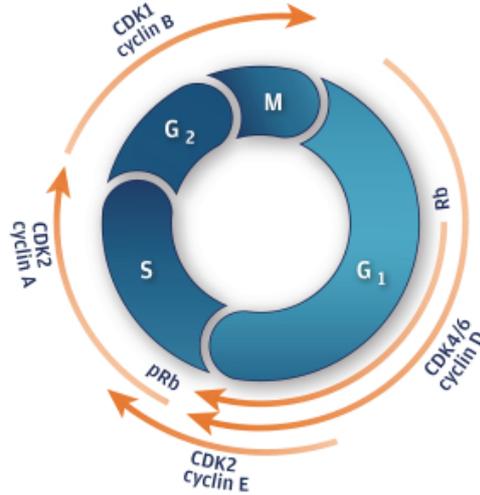
- **Develop G1T38 as a best-in-class treatment across multiple CDK4/6-dependent cancers.** We believe that G1T38 has the potential for less neutropenia than Ibrance and Kisqali and an improved safety/tolerability profile versus Kisqali and other CDK4/6 inhibitors currently in development. We have recently completed a Phase 1 trial in 75 healthy volunteers, in which G1T38 was well-tolerated with no grade 3/4 adverse events. We initiated a Phase 1/2 trial in ER+, HER2- breast cancer patients (in combination with Faslodex, an FDA-approved IM SERD) in January 2017. We plan to expand the development of G1T38 across multiple CDK4/6-dependent cancer indications, either alone or with one or more strategic collaborators. A phase 2 trial in NSCLC, in combination with an EGFR inhibitor, is planned for 2018.
- **Rapidly advance G1T48 into clinical trials in combination with G1T38.** The use of a selective CDK4/6 inhibitor in combination with a SERD has been validated by the FDA approval and commercial success of Ibrance. We specifically in-licensed G1T48, a highly potent oral SERD, to advance into clinical trials with G1T38. With an oral SERD (G1T48) and an oral CDK4/6 inhibitor (G1T38), we believe we are in a unique position as the only emerging biopharmaceutical company with a wholly owned proprietary combination for this validated anti-cancer regimen. We expect to file an IND and/or CTA for G1T48 in the fourth quarter of 2017.
- **Pursue global development of combination therapies.** We believe our expertise in CDK4/6 biology puts us in an advantageous position to develop proprietary best-in-combination or first-in-combination therapies with the potential for improved efficacy and safety. We are developing G1T38 to be used in combination with other targeted therapies such as SERDs. The approval of Ibrance has created significant interest in the use of selective CDK4/6 inhibitors in combination with other targeted therapies for the treatment of cancer. Ibrance, Kisqali and the other selective CDK4/6 inhibitor in clinical development are owned by large pharmaceutical companies. As a result, we believe that we are in a strong position to explore collaborative arrangements with other pharmaceutical and biotechnology companies that are interested in combining their targeted therapies with G1T38.
- **Build a fully integrated oncology company.** We plan to commercialize our product candidates on our own in the United States using a small and highly specialized sales force. We may also establish global or regional collaborations with pharmaceutical companies to leverage their development and commercialization capabilities and enable us to maximize the potential of our product candidates.

Our focus: CDK4/6 biology

The importance of CDKs in cell cycle progression

Cell proliferation, whereby a cell duplicates its contents and then divides into two cells, typically involves an orderly progression through four distinct phases of the cell cycle: G₁, S, G₂ and M. The first phase in the cell cycle, the G₁ phase, is the period when the necessary proteins for DNA replication are synthesized and any damage to DNA is repaired. This is a major step in the cell cycle before transitioning to S phase. The duplication of DNA occurs during S phase, so called because this is when DNA is synthesized. In the G₂ phase, the cell confirms that complete replication of DNA has occurred and that all conditions are favorable to enter M phase. M phase is composed of two distinct steps: mitosis, which is the pairing and separation of the duplicated chromosomes, and cytokinesis, which is the physical process whereby the cell splits into two separate cells. This cell cycle progression is depicted in the figure below:

Cell Cycle Progression

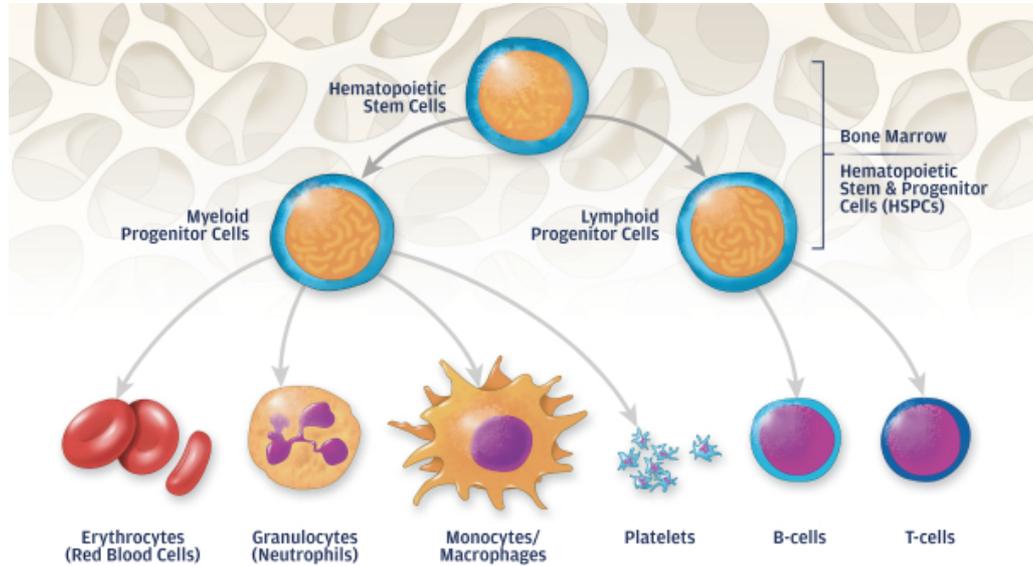


As shown above, CDKs control the transition across each phase of the cell cycle. Progression from G₁ phase into S phase is regulated by the retinoblastoma protein, or Rb, which prevents cells from entering into S phase. Progression from G₁ to S requires deactivation of Rb by a process known as phosphorylation, which is dependent on CDK4/6 and/or CDK2 activity. Controlled phosphorylation and deactivation of Rb is essential to progression from G₁ to S. In certain cells, including HSPCs and many tumor cells, phosphorylation of Rb is controlled predominately by CDK4/6. In CDK4/6-dependent cells, where CDK4/6 is required to phosphorylate Rb, inhibition of CDK4/6 by a selective small-molecule kinase inhibitor prevents phosphorylation, which arrests the cell in the G₁ phase. In some tumors, there is loss of Rb or loss of Rb function, and therefore such tumors can progress from G₁ to S without phosphorylation, making them CDK4/6-independent. These CDK4/6-independent tumors can proliferate even in the presence of a CDK4/6 inhibitor.

CDK4/6 inhibition with trilaciclib: preserving HSPCs from damage by chemotherapy and enhancing immune system function

Cancer chemotherapy involves treating patients with cytotoxic drugs that are designed to kill rapidly growing cancer cells in either the S phase or the M phase of the cell cycle. Chemotherapy has significant clinical utility and continues to be the most effective treatment for many cancers. However, chemotherapy also kills normal cells, including HSPCs. HSPCs reside in the bone marrow and play a critical role as the reservoir from which all cells of the blood and immune system are formed. Damage to HSPCs can result in the loss of blood and immune system cells causing serious and even life-threatening side effects, and limiting anti-tumor efficacy. The production of all blood and immune system cells from HSPCs is depicted in the figure below:

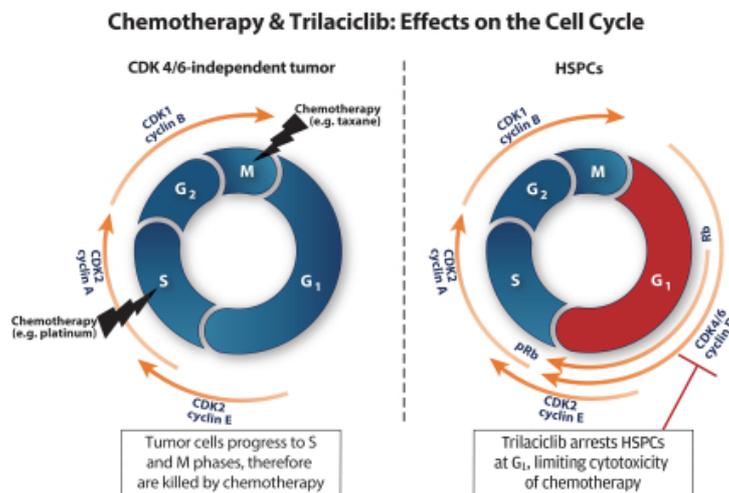
Production of Blood and Immune System Cells from HSPCs



Chemotherapy-induced myelosuppression caused by damage to HSPCs continues to represent the major DLT of chemotherapy and can be manifested as anemia, neutropenia, and/or thrombocytopenia. In addition, chemotherapy can cause a long-term decrease in lymphocytes, or lymphopenia, due to a phenomenon known as myeloid skewing, whereby HSPCs forego production of lymphoid cells (B-cells and T-cells) in favor of production of myeloid cells (red blood cells, neutrophils, monocytes and platelets). Furthermore, after repeated cycles of chemotherapy-induced damage, the ability of HSPCs to repopulate the cells of the blood and immune system can become compromised. This is known as bone marrow exhaustion. Accordingly, myelosuppression is the source of many of the serious side effects of cancer treatment such as infection, sepsis, bleeding, and fatigue. Clinical concerns raised by myelosuppression commonly lead to chemotherapy dose reductions that can limit therapeutic benefit. In addition to these debilitating side effects of chemotherapy, chemotherapy-induced immunosuppression may limit anti-tumor activity by preventing the patient's immune system from effectively mounting a sustained response against the cancer. Therefore, preserving the bone marrow and immune system from the cytotoxic effects of chemotherapy has the potential to enhance the anti-tumor activity of chemotherapy while minimizing myelotoxicity.

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Because nearly all chemotherapeutics mediate their cytotoxic effects by inhibiting the cell cycle in either S phase (e.g., platinum-based agents) or M phase (e.g., taxanes), cells that are in G₁ phase are resistant to killing by these S-phase and M-phase agents. CDK4/6-independent tumors have an unrestricted G₁ to S phase transition, making them particularly susceptible to S- and M- phase agents. Our approach with trilaciclib takes advantage of the difference between tumor cells that are CDK4/6-independent and will progress into S or M phase and therefore be susceptible to chemotherapy, and HSPCs, which are CDK4/6-dependent and can be transiently arrested in the G₁ phase by a CDK4/6 inhibitor and spared damage by chemotherapy. The figure below depicts how tumor cells are killed, and HSPCs are preserved:



We have also recently discovered that transient inhibition of CDK4/6 directly stimulates effector T-cells in the tumor microenvironment of mouse cancer models. Effector T-cells are important elements of the immune system that can directly kill tumor cells. We have observed that CDK4/6 phosphorylates a critical regulator of T-cell activation: nuclear factor of activated T-cells, or NFAT. Transient inhibition by trilaciclib of NFAT phosphorylation activates T-cells in the tumor microenvironment of mouse cancer models. We have observed that the activated T-cells secrete elevated levels of the anti-tumor cytokines interferon gamma and interleukin 2. When trilaciclib is combined with chemotherapy and/or a checkpoint inhibitor in these mouse models, anti-tumor activity is enhanced.

The mechanism of action, or MOA, of trilaciclib has been well characterized: trilaciclib directly affects HSPCs and T-cells. We believe that preserving HSPCs and enhancing immune system function during chemotherapy offers significant potential to minimize toxicity, while improving efficacy. We have rationally designed trilaciclib to achieve these objectives. Trilaciclib has the following attributes:

- highly potent CDK4/6 inhibition;
- highly selective for CDK4/6 versus CDK2 and other kinases, which is important for transient G₁ arrest;
- highly targeted arrest of cells only in the G₁ phase of the cell cycle;
- short-acting pharmacology in order to transiently arrest HSPC proliferation with temporal precision and activate T-cells; and
- IV formulation allowing convenient combination treatment with chemotherapy and/or checkpoint inhibitors.

The treatment of patients with CDK4/6-independent tumors with a CDK4/6 inhibitor represents a novel approach to cancer treatment. To our knowledge, we are the only company currently developing a CDK4/6 inhibitor for use in this patient population. We believe that trilaciclib has the potential to transform how patients are treated with chemotherapy and/or checkpoint inhibitors and significantly improve patient outcomes.

CDK4/6 inhibition with G1T38: directly inhibiting the growth and proliferation of CDK4/6-dependent tumors

The dysregulation of multiple CDK family members occurs commonly in human cancer, prompting long-standing interest in targeting CDKs as an anti-cancer strategy. However, poor initial understanding of the biology of the CDK family resulted in the development of nonselective pan-CDK inhibitors, including flavopiridol, roscovatine, dinaciclib and others, with significant toxicities that have limited their therapeutic potential in oncology. More recently, CDK4/6 has been identified as a critical regulator of the G₁ to S phase transition in CDK4/6-dependent tumors. It is now well understood that selective CDK4/6 inhibition without affecting other proteins in the CDK family is important for maximizing efficacy and minimizing toxicity.

The clinical utility of CDK4/6 inhibition in CDK4/6-dependent tumors has been validated by the FDA's accelerated approval in 2015 of the CDK4/6 inhibitor Ibrance – in combination with letrozole—for the treatment of post-menopausal women with ER+, HER2- advanced breast cancer and the approval in 2017 of Kisqali in combination with an aromatase inhibitor in the same population. Selective CDK4/6 inhibitors have only shown modest activity as monotherapy agents, because their activity is primarily cytostatic, only arresting tumor cell proliferation, and not cytotoxic, i.e., directly killing the tumor cells. The anti-tumor activity of CDK4/6 inhibitors is increased when used in combination with other targeted anti-cancer therapies. In mouse CDK4/6-dependent tumor models, targeted therapies, such as androgen receptor, EGFR, MEK, Btk, Raf and PI3K inhibitors, have demonstrated greater activity when each of these targeted therapies is paired with a CDK4/6 inhibitor. This is also true clinically; Ibrance is approved for use only in combination with an aromatase inhibitor or Faslodex for the treatment of advanced breast cancer, and Kisqali only in combination with an aromatase inhibitor. G1T38 is being designed to be used in combination with other targeted therapies, including SERDs such as G1T48. We are also aggressively pursuing combination indications beyond breast cancer, and believe that there is broad potential for G1T38 in diseases such as NSCLC, prostate cancer and hematological malignancies.

Our product candidates

Both trilaciclib and G1T38 were designed and synthesized by us, and we hold an exclusive license to G1T48. We own or exclusively license the worldwide commercial rights to each of our product candidates, and hold or own exclusive rights to over 120 U.S. and international patents and pending patent applications covering our product development programs. We believe the worldwide market potential for each of our product candidates exceeds several billion dollars annually.

Program	Initial indications	Phase	Expected milestones	Additional potential indications	Worldwide commercial rights
trilaciclib (IV CDK4/6 inhibitor)	1st-line SCLC	1b/2a	Phase 1b complete. Report initial Phase 2a data in 2018	NSCLC, bladder, head and neck cancer	
	2nd/3rd-line SCLC	1b/2a	Phase 1b complete. Report initial Phase 2a data in 2018		
	metastatic TNBC	2	Report initial data in 2018		
	1st-line SCLC plus Tecentriq	—	Initiate Phase 2 in 2Q17		
G1T38 (oral CDK4/6 inhibitor)	ER+, HER2-breast cancer (plus Faslodex)	1/2	Initiate Phase 2 in 2018	CRPC, Heme malignancies	
	NSCLC (plus EGFRi)	—	Initiate Phase 2 in 2018		
G1T48 (oral SERD)	ER+, HER2-breast cancer	Preclinical	File IND/CTA in 4Q17		

Trilaciclib: our novel approach to preserve HSPCs and enhance immune system function

Trilaciclib is a potential first-in-class, highly potent and selective, short-acting CDK4/6 inhibitor we are developing to be administered intravenously prior to chemotherapy. In preclinical studies, administration of trilaciclib prior to chemotherapy has been shown to induce a transient cell cycle arrest of HSPCs, protect HSPCs from chemotherapy-induced damage, preserve bone marrow and immune system function, protect from bone marrow exhaustion, improve complete blood count, or CBC, recovery, prevent myeloid skewing and consequent lymphopenia, and enhance chemotherapy anti-tumor activity.

Based on compelling response rates and favorable tolerability shown in early-stage trials, we are currently evaluating trilaciclib in combination with chemotherapy in three randomized clinical trials: two Phase 1b/2a trials in extensive-stage SCLC (one trial as first-line treatment and another as second/third-line treatment) and a third Phase 2 trial in metastatic TNBC. We have completed the Phase 1b parts of both SCLC trials. Enrollment in the Phase 2a parts of these trials is expected to be completed in 2017, and initial data are expected in 2018. The TNBC trial is expected to complete enrollment in 2018 and initial data are expected in 2018. As part of our non-exclusive collaboration with Genentech, we will begin a Phase 2 trial of trilaciclib in combination with Tecentriq and chemotherapy in first-line SCLC in the second quarter of 2017.

Market opportunities for trilaciclib

Cancer is the second leading cause of death in the United States with approximately 1.7 million new cases and 600,000 deaths in 2016. Chemotherapy is still the standard of care treatment for multiple cancers. We estimate

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that more than one million patients in the United States receive chemotherapy annually and that approximately 300,000 of these patients have CDK4/6-independent tumors where treatment with trilaciclib may provide significant benefit.

Certain cancers are inherently or largely CDK4/6-independent, such as SCLC and TNBC, respectively. Additionally, many other cancers have significant subsets of patients that have CDK4/6-independent tumors and are treated by chemotherapy. For example, approximately 70% of patients with NSCLC have CDK4/6-dependent tumors, while approximately 30% of patients with NSCLC have CDK4/6-independent tumors. The major cell signaling pathways associated with CDK4/6-independent tumors are well understood, such as the role of inactivation of Rb. Rb status is often analyzed during cancer diagnoses, and we believe that evaluation of Rb status will allow us to identify a significant portion of patients with CDK4/6-independent tumors. While we are initially focusing the development of trilaciclib on patients with CDK4/6-independent tumors, we are also exploring the use of trilaciclib combined with chemotherapy and/or a checkpoint inhibitor in patients with CDK4/6-dependent tumors. We believe that the benefits of HSPC preservation and T-cell stimulation by trilaciclib may override any potential short-term protection of a CDK4/6 dependent tumor from chemotherapy.

Our first indication for trilaciclib is extensive-stage SCLC. SCLC is inherently CDK4/6-independent and accounts for approximately 15% of all lung cancers. Approximately 31,000 people are diagnosed annually with SCLC in the United States and approximately 70%, or 21,000, of those have extensive-stage disease. First-line treatment for extensive-stage SCLC is typically a chemotherapy regimen of carboplatin and etoposide, each of which has significant myelosuppressive side effects. While these patients often respond to chemotherapy, approximately 90% progress within one year and die within two years. Five-year survival rates are less than 5% for patients with extensive-stage SCLC. The last drug approved for the treatment of patients with SCLC was topotecan in 2007, which was approved in a second/third line setting and is highly myelosuppressive.

We have also initiated a Phase 2 trial of trilaciclib in TNBC. According to the World Cancer Research Fund International, breast cancer is the second most common cancer in the world and the most prevalent cancer in women, with an estimated 1.7 million cases of breast cancer diagnosed annually worldwide. TNBC makes up approximately 15-20% of such diagnosed breast cancers. Because TNBC cells lack key growth-signaling receptors, patients do not respond well to medications that block estrogen, progesterone, or HER2 receptors. Instead, treating TNBC typically involves chemotherapy, radiation, and surgery. In general, survival rates tend to be lower with TNBC compared to other forms of breast cancer, and TNBC is also more likely than some other types of breast cancer to return after it has been treated, especially in the first few years after treatment. We believe that approximately 80% of TNBC tumors are CDK4/6 independent. Accordingly, we believe that there is significant potential for treatment of TNBC with trilaciclib.

In addition, the treatment and prevention of myelosuppressive side effects is a large market opportunity. The only current treatment for chemotherapy-induced myelosuppression is growth factor support. Two main types of growth factors are commercially available: granulocyte-colony stimulating factor, or GCSF, and erythropoiesis stimulating agents, or ESAs. GCSF increases production of neutrophils after damage to HSPCs has occurred and is used to reduce the incidence of infection after chemotherapy. GCSF is administered starting 24 hours after the last dose of chemotherapy; hence, GCSF does not preserve the function of the bone marrow and immune system from chemotherapy damage. ESAs increase production of red blood cells after damage to HSPCs has occurred. Accordingly, ESAs also do not preserve the function of the bone marrow and immune system from chemotherapy. ESA use in oncology has diminished recently due to a "black box" warning related to death and serious cardiovascular events. Despite these limitations, we estimate that annual worldwide sales of growth factor support therapy in oncology exceeds \$7 billion.

Advantages of trilaciclib

We believe that treating patients with CDK4/6-independent tumors with trilaciclib prior to the administration of chemotherapy may have the following benefits and advantages:

- *Potential to minimize chemotherapy-induced myelotoxicity and immunosuppression.* Trilaciclib has been rationally designed and optimized to preserve HSPCs from damage by chemotherapy, thereby minimizing cytopenias.
- *Potential to improve efficacy by maintaining the chemotherapy dosing regimen.* Chemotherapy-induced myelosuppression is the major DLT of cytotoxic chemotherapy and can lead to dose reductions and schedule delays that can limit therapeutic benefit. Trilaciclib has been designed specifically to minimize myelosuppression and has the potential to enable maintenance of the indicated and planned chemotherapeutic dose and schedule.
- *Potential to improve efficacy by enhancing immune system function.* Based on our preclinical data, we have observed that trilaciclib activates T-cells in the tumor microenvironment. We believe that this T-cell activation, together with preservation of other components of the immune system, is contributing to the compelling response rates that we have observed with trilaciclib in early clinical trials to date.
- *Potential for combination with immune checkpoint inhibitors.* There are currently over 70 trials evaluating checkpoint inhibitors in combination with chemotherapy. We believe that administering trilaciclib with chemotherapy/checkpoint inhibitor combinations may increase efficacy. We are collaborating non-exclusively with Genentech to explore the utility of trilaciclib and their checkpoint inhibitor Tecentriq combined with chemotherapy. Our first indication is first-line SCLC, with a Phase 2 trial expected to begin in the second quarter of 2017. Trials in other indications are also anticipated.
- *Potential broad applicability.* We believe trilaciclib has the potential to benefit any patient that has CDK4/6-independent tumors and is treated with myelosuppressive chemotherapy. We estimate that there are approximately 300,000 such patients annually in the United States.
- *Convenience of administration.* Trilaciclib is designed to be administered via a 30-minute IV infusion prior to chemotherapy treatment. This dosing regimen fits with standard clinical practice for chemotherapy and/or checkpoint inhibitor treatment.
- *Reduced potential of secondary hematological malignancies.* Chemotherapy has been linked with secondary types of cancer that may occur years after initial treatment. HSPCs are especially sensitive to chemotherapy, and damage to HSPCs by chemotherapy can lead to both myelodysplastic syndrome and acute myelogenous leukemia. We believe that protecting HSPCs from the cytotoxic effects of chemotherapy has the potential to reduce incidence of these secondary hematological malignancies.
- *Potential to reduce the overall cost of care.* Chemotherapy-induced myelosuppression leads to severe adverse side effects, such as fatigue due to anemia, infections due to neutropenia, and bleeding due to thrombocytopenia. These adverse side effects often require costly hospitalizations, transfusions, antibiotic usage and/or treatment with growth factor support. Because trilaciclib has been designed specifically to minimize myelosuppression, we believe that it has the potential to reduce the overall cost of care. Our market research with payers supports the value proposition of trilaciclib.

Trilaciclib: preclinical and clinical development

Preclinical development

We have published extensive biochemical, cellular and *in vivo* data on trilaciclib demonstrating:

- transient and reversible G₁ arrest of HSPCs;
- protection of HSPCs from damage by chemotherapy;
- preservation of bone marrow and immune system function;
- improved CBC recovery;
- protection from bone marrow exhaustion;
- prevention of myeloid skewing and consequent lymphopenia;
- activation of T-cells in the tumor microenvironment; and
- enhancement of chemotherapy and checkpoint inhibitor anti-tumor activity.

Completed Phase 1 clinical trial

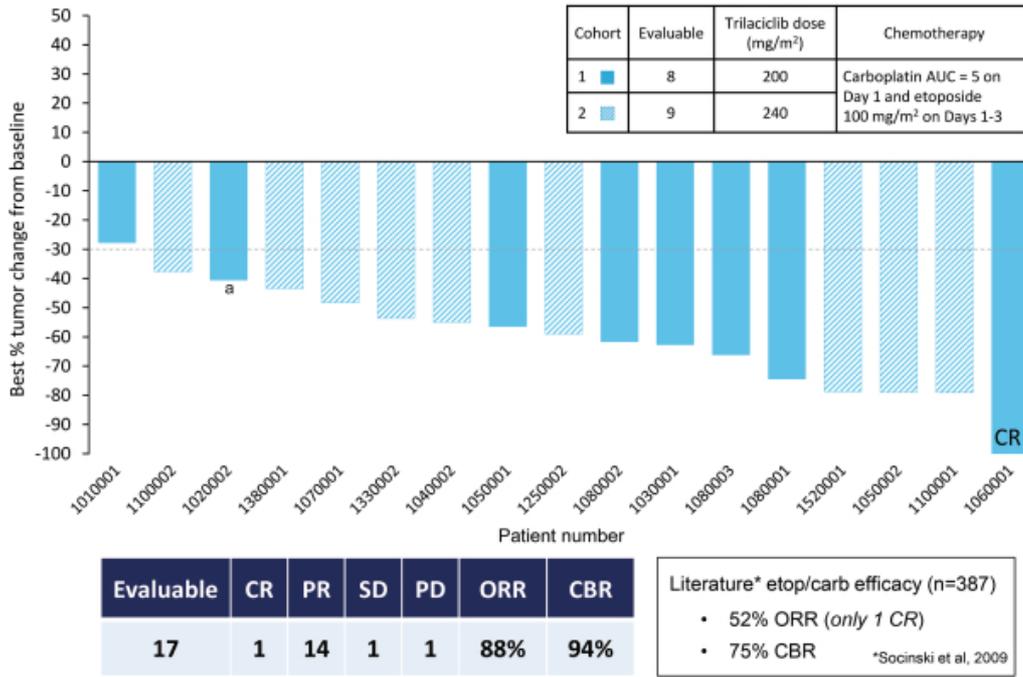
In 2015, we completed a Phase 1 clinical trial of trilaciclib in 45 healthy volunteers in the Netherlands. In this trial, subjects in seven cohorts were administered a single ascending dose of trilaciclib between 6 mg/m² and 192 mg/m². The purpose of this trial was to evaluate the safety, pharmacokinetics, or PK, and identify a biologically effective dose of trilaciclib. Published data from this trial demonstrate that trilaciclib was well tolerated with no DLTs or SAEs reported. Trilaciclib also showed dose-dependent increases in exposure, and a biologically effective dose was established based on cell-cycle analysis of HSPCs obtained from bone marrow aspirates. These HSPC data demonstrated that the administration of trilaciclib resulted in the robust arrest of HSPCs in the G₁ phase for at least 32 hours and supported a starting dose of 200 mg/m² for studies in SCLC patients.

Ongoing Phase 1b/2a clinical trial in first-line treatment of SCLC

In 2015, we initiated a two-part Phase 1b/2a clinical trial in first-line extensive-stage SCLC patients across multiple sites in the United States. The Phase 1b part of the trial was an open-label, dose-confirmation stage to confirm the trilaciclib dose to be used in the randomized, placebo-controlled Phase 2a part. The goals of the trial are to evaluate the safety, pharmacokinetics, or PK, and anti-tumor activity of trilaciclib in combination with the existing first-line chemotherapy standard of care regimen of etoposide and carboplatin and to confirm the dose to be used in future trials. All patients in the Phase 1b part were administered three-week cycles of trilaciclib plus etoposide/carboplatin, with an estimated four to six cycles administered in total per patient based on historical practice. Trilaciclib was administered as a 30 minute IV infusion once every chemotherapy treatment day prior to the dose(s) of etoposide/carboplatin. Tumor lesions were assessed by CT scans after cycles 2, 4 and 6 and complete blood counts, or CBCs were collected frequently. We enrolled 19 patients in the Phase 1b part and 17 patients were evaluable for tumor response. The overall response rate is 88%, with 14 confirmed partial responses, one confirmed complete response, one stable disease, one progressive disease, and a clinical benefit rate of 94%. Trilaciclib doses of 200 and 240 mg/m² were tested in the Phase 1b part of the trial, and 240 mg/m² was chosen for the randomized, placebo-controlled Phase 2a part.

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The following waterfall plot shows the percent change in target lesions for the 17 evaluable patients in the Phase 1b part of this trial:



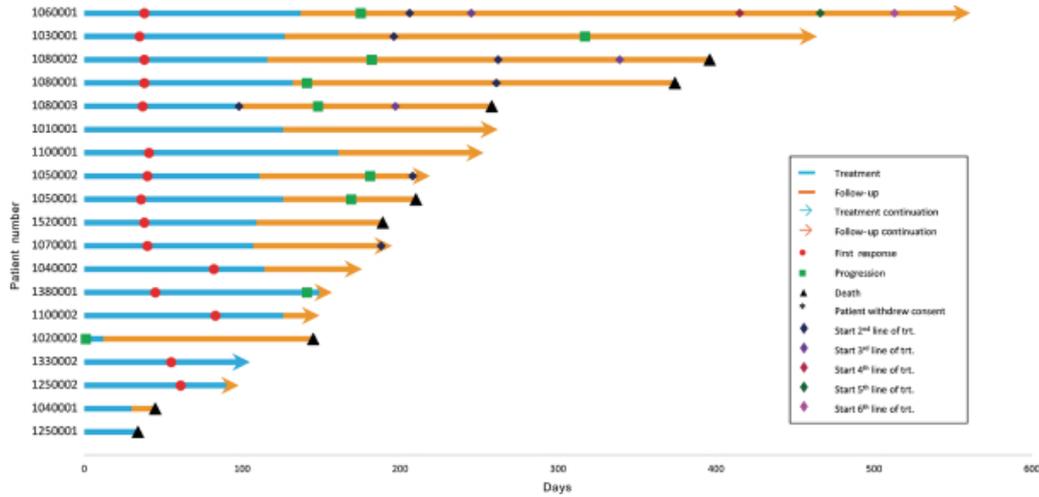
*Target lesion change consistent with PR at cycle 2; best response was PD due to occurrence of new lesions at cycle 2

Efficacy is being evaluated based on industry standard Response Evaluation Criteria in Solid Tumors, or RECIST, which are the unified response assessment criteria agreed to by the World Health Organization, United States National Cancer Institute, and European Organisation for Research and Treatment of Cancer. RECIST defines disease progression and tumor response based on the sum of the longest diameters of a set of target tumor lesions identified at baseline. A 20% or greater increase in the sum of diameters in target lesions, or unequivocal progression in non-target lesions, or the appearance of a new lesion is defined as disease progression, or PD. A reduction in the sum of the diameters of at least 30% as compared to baseline is defined as a partial response, or PR. A complete disappearance of target and non-target lesions, and the normalization of any tumor markers, constitutes a complete response, or CR. Both partial and complete responses must be confirmed by repeat assessments at least four weeks after the partial or complete response was first documented. Stable disease, or SD, refers to patients who exhibit neither response nor disease progression. Non-progression refers to patients who exhibit complete response, partial response, or stable disease. Objective response rate, or ORR, is typically defined as the sum of the partial and complete response rates. Clinical benefit rate, or CBR, is typically defined as the sum of the partial and complete response rates and stable disease.

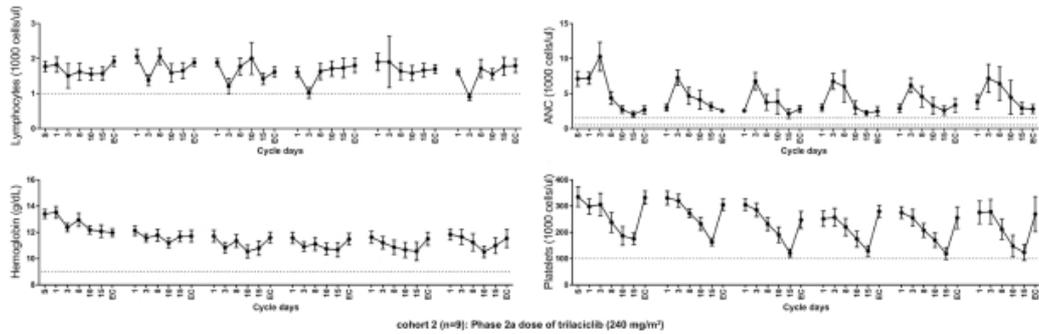
For context regarding these data, there are published data from a large Phase 3 clinical trial that enrolled 455 patients with extensive-stage SCLC who received first-line treatment of etoposide and carboplatin administered at the same dose and schedule as our clinical trial. The partial response rate in the 387 evaluable patients was 51% and the complete response rate was 0.3% (only one patient had a complete response).

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The following swimmer plot shows the treatment and follow-up history (as of January 20, 2017) for all 19 patients enrolled in the Phase 1b part of this trial:



The following graph shows the mean lymphocyte counts, absolute neutrophil counts, or ANC, hemoglobin levels, and platelet counts for the nine open-label patients in the Phase 1b part of the trial who received the Phase 2a dose of trilaciclib (240 mg/m²). These data show that there was no clinically-relevant hematological toxicity after administration of trilaciclib with etoposide and carboplatin. There were no episodes of febrile neutropenia in the Phase 1b part of the trial.



On the horizontal, or X, axes of the figures above, S refers to the baseline count before starting the trial. The numbers represent the days of each chemotherapy cycle and EC refers to the end of each cycle. The horizontal dotted lines for the blood cell types are at 1,000 cells/μl for lymphocytes, 500 and 1,500 cells/μl for ANC, 9 g/dL for hemoglobin and 100,000 cells/μl for platelets, which are commonly accepted thresholds of myelotoxicity.

We expect to present preliminary data from the Phase 1b part of this trial at the American Society of Clinical Oncology, or ASCO, Annual Meeting in June of 2017.

The Phase 2a part of this trial was initiated in the fourth quarter of 2016 at sites in the United States and Europe and consists of a double blind-design with patients randomized on a 1:1 basis to receive trilaciclib plus

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etoposide/carboplatin, or placebo plus etoposide/carboplatin. Based on planned discussions with the FDA, the size of the Phase 2a part of the trial may be modified; however we currently plan to enroll 70 patients.

Ongoing Phase 1b/2a clinical trial in second/third-line treatment of SCLC

In 2015, we initiated a Phase 1b/2a clinical trial in second/third-line SCLC patients across multiple sites in the United States. The Phase 1b part of the trial was an open-label, dose-confirmation stage to confirm the trilaciclib dose to be used in the randomized, placebo-controlled Phase 2a part of the trial. The goals of the trial are to evaluate the safety, PK, and anti-tumor activity of trilaciclib in combination with the existing second-line chemotherapy standard of care regimen of topotecan and to confirm the dose to be used in future trials. All patients in the Phase 1b part were administered three-week cycles of trilaciclib plus topotecan until the progression of disease. Trilaciclib was administered as a 30 minute IV infusion once every day prior to the dose of topotecan. Tumor lesions were assessed by CT scans after every even cycle and CBCs were collected frequently.

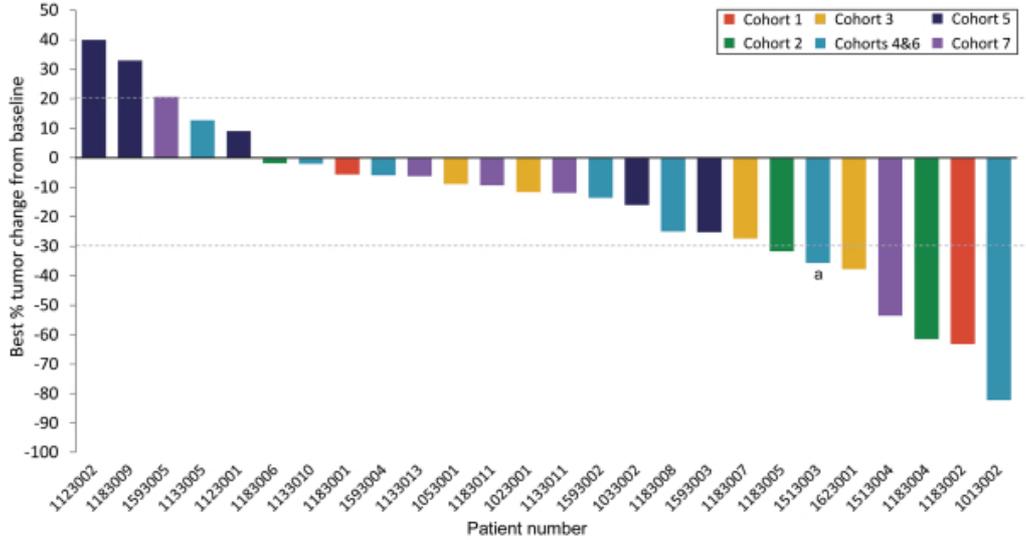
We enrolled 32 patients in the open-label Phase 1b part and 29 patients were evaluable for tumor response as of an interim data cut-off of January 20, 2017. The overall response rate is 21%, with six confirmed partial responses, 15 with stable disease, and eight with progressive disease. The clinical benefit rate is 72%.

Trilaciclib doses of 200 to 280 mg/m² and topotecan doses of 0.75 to 1.5 mg/m² were tested across 7 cohorts in the completed Phase 1b open-label part of the trial. The combination of trilaciclib with topotecan resulted in an anticipated drug-drug PK interaction, requiring the testing of several dose levels of topotecan and trilaciclib prior to defining the Phase 2a doses for both drugs. Topotecan is excreted primarily by the kidney. To prevent toxic, supratherapeutic levels of topotecan in patients with impaired kidney function, there are two FDA approved doses for topotecan. For patients with normal kidney function, the labeled dose for topotecan is 1.5 mg/m²; for patients with impaired kidney function it is 0.75 mg/m². Because trilaciclib inhibits a specific kidney transporter thought to be important for the excretion of topotecan, we saw supratherapeutic plasma levels of topotecan at the 1.5 and 1.25 mg/m² doses and normal therapeutic levels of topotecan at the 0.75 mg/m² dose. Accordingly, doses chosen for the randomized, placebo-controlled Phase 2a part of this trial are trilaciclib 240 mg/m² and topotecan 0.75 mg/m². We do not anticipate trilaciclib to affect the plasma levels of any other chemotherapeutic, and have not seen any effect on carboplatin or etoposide plasma levels in the first-line trial. Importantly, we have not seen any deleterious effects of trilaciclib on kidney function in general. All patients have maintained normal renal function.

In the Phase 1b part to date, more than 135 cycles of trilaciclib and topotecan have been administered. Of these, a total of 3 cycles were administered at a topotecan dose of 1.5 mg/m² in 2 patients, and 7 cycles were administered at a dose of 1.25 mg/m² in 5 patients. Most of the remaining cycles were administered at a topotecan dose of 0.75 mg/m², including patients in the early cohorts who received 1 or 2 cycles with doses higher than 0.75 mg/m² before reducing the dose to 0.75 mg/m² for their remaining cycles.

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The following waterfall plot shows the percent change in target lesions for all 29 patients evaluable for tumor response as of an interim data cutoff of January 20, 2017 in the open-label Phase 1b part of the trial. Three of the 29 evaluable patients had clinical progression prior to their first scan and they are not represented in the waterfall plot below.



	PR	SD	PD	ORR	CBR
Overall (n=29)*	6*	15	8	21%	72%
Sensitive (n=17)	4	8	5	24%	71%
Resistant (n=8)	1	4	3	13%	63%

* 1st-line sensitivity unknown for 4 patients, including 1 patient with PR

Patient number

Topotecan response rates in 2nd-line (per literature^{**})

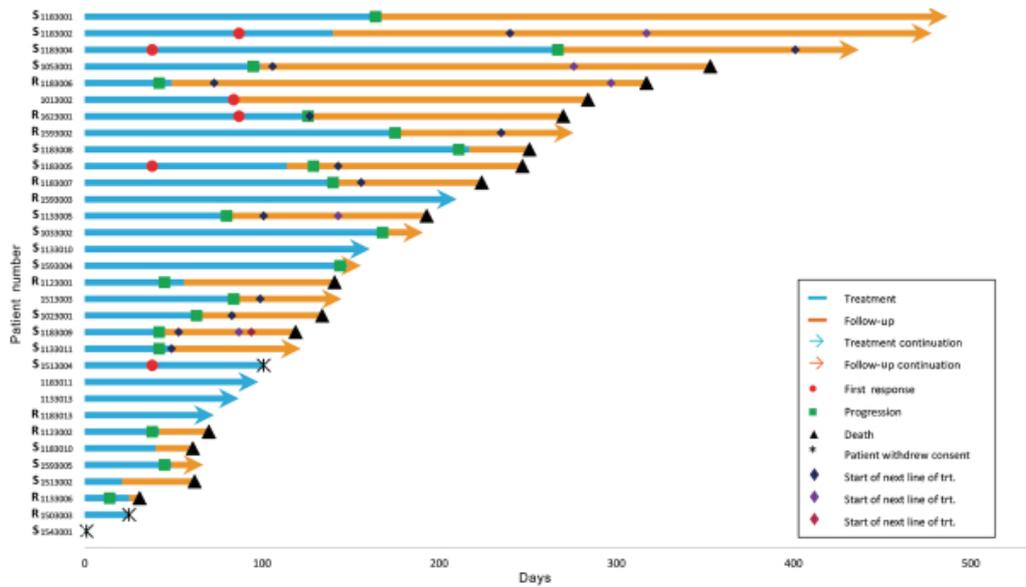
- ORR of 17-24%
 - 23% for sensitive patients
 - 9% for resistant/refractory patients
- CBR of 44-62%

**Von Pawel et al 1999, 2014

*Target lesion change consistent with SD at cycle 2, PR at cycle 4; best response was SD due to occurrence of new lesions at cycle 4

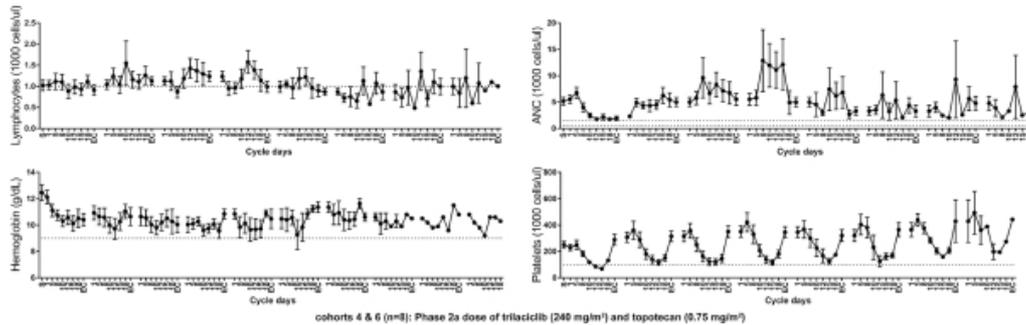
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The following swimmer plot shows the treatment and follow-up history (as of January 20, 2017) for all 32 patients enrolled in the Phase 1b part of this trial:



For context regarding these data, there are published data from a large Phase 3 trial that enrolled 213 patients with second-line SCLC who received topotecan administered at a dose of 1.5 mg/m², which results in similar plasma drug levels as topotecan 0.75 mg/m² given with trilaciclib 240 mg/m². The overall response was 17%.

The following mean graph shows the lymphocyte counts, ANC, hemoglobin levels, and platelet counts for eight patients in the Phase 1b part of the trial who received the chosen Phase 2a doses of trilaciclib 240 mg/m² and topotecan 0.75 mg/m². These data demonstrate that there was no clinically-relevant hematological toxicity after administration of trilaciclib with topotecan, including no grade 4 thrombocytopenia or neutropenia. For context, the incidence of grade 4 thrombocytopenia and neutropenia with topotecan has been reported to be 29% and 70%, respectively. In addition, there have been no episodes of febrile neutropenia in the entire study, whereas the historical rate of febrile neutropenia with topotecan is approximately 30%.



On the horizontal, or X, axes of the figures above, S refers to the baseline count before starting the trial. The numbers represent the days of each chemotherapy cycle and EC refers to the end of each cycle. The horizontal

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dotted lines for the blood cell types are at 1,000 cells/ μ l for lymphocytes, 500 and 1,500 cells/ μ l for ANC, 9 g/dL for hemoglobin and 100,000 cells/ μ l for platelets.

We presented preliminary data from the Phase 1b part of this trial at the World Conference on Lung Cancer in December of 2016.

The Phase 2a part of the trial was initiated in the first quarter of 2017 and consists of a double blind-design with patients randomized on a 2:1 basis to receive trilaciclib plus topotecan, or placebo plus topotecan. U.S. and European sites will participate in this part of the study. Based on planned discussions with the FDA, the size of the Phase 2 part may be modified; however we currently plan to enroll 60 patients.

Ongoing Phase 2 clinical trial in TNBC

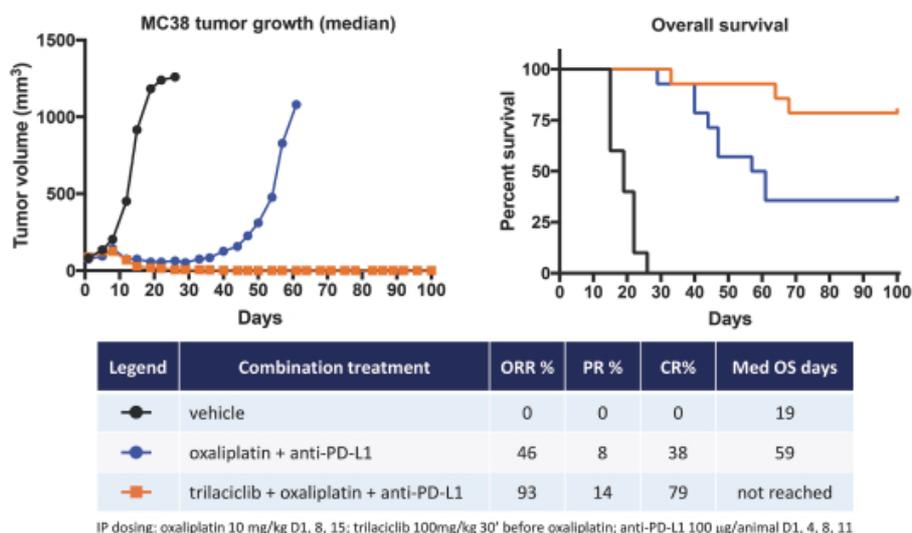
In January 2017, we initiated an open label, randomized, Phase 2 trial that is expected to enroll approximately 90 patients with first or second-line metastatic TNBC across multiple sites in the United States and Europe. The goals of the clinical trial are to evaluate the safety, PK, and anti-tumor activity of trilaciclib in combination with the existing chemotherapy standard of care regimen of gemcitabine and carboplatin. Tumor lesions are being assessed by CT scans or MRI after every even cycle and CBCs are being collected frequently. Patients will be randomized to one of three arms with the drugs given in three-week cycles until the progression of disease.

The potential to use trilaciclib in combination with checkpoint inhibitors

Recent developments in the field of immunotherapy, including checkpoint inhibitors, have shown anti-tumor responses with unprecedented durability. However, despite impressive durability, less than 30% of patients respond to checkpoint inhibitors. Because trilaciclib can preserve HSPCs and enhance immune system function, we believe that using trilaciclib in combination with chemotherapy and checkpoint inhibitors has the potential to increase response rates and enhance efficacy. In December 2016, we entered into a collaboration with Genentech to evaluate trilaciclib in combination with Genentech's checkpoint inhibitor Tecentriq in small cell lung cancer. A Phase 2 trial in first-line SCLC patients receiving chemotherapy is expected to be initiated in the second quarter of 2017, and trials in other indications are anticipated.

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The figure below demonstrates the rationale for combining trilaciclib with Tecentriq (an anti-PD-L1 antibody) and chemotherapy. In this preclinical study, trilaciclib was administered with the chemotherapy oxaliplatin and an anti-PD-L1 antibody to immune-competent tumor-bearing mice. The trilaciclib arm shows significantly better anti-tumor activity and overall survival compared to the oxaliplatin, anti-PD-L1 antibody arm. MC38 tumors are CDK4/6-independent, and other experiments have demonstrated that trilaciclib monotherapy does not inhibit MC38 tumor growth. Therefore, trilaciclib's effects on HSPCs and T-cells are likely responsible for enhancing the efficacy of the oxaliplatin/anti-PD-L1 combination.



G1T38: Our potential best-in-class CDK4/6 inhibitor for patients with CDK4/6-dependent tumors

G1T38, our second clinical-stage candidate, is a potential best-in-class oral CDK4/6 inhibitor, to be used in combination with other targeted therapies to treat multiple cancers. We rationally designed G1T38 to improve upon and address the shortcomings of the approved CDK4/6 inhibitors Ibrance and Kisqali and others in development. Our preclinical data and early clinical data indicate the potential for continuous daily dosing and improved antitumor activity and tolerability. A Phase 1 trial of G1T38 in 75 healthy volunteers showed a favorable safety profile, and we initiated a Phase 1/2 trial in ER+, HER2- breast cancer in January 2017. Our plans for G1T38 include combinations in other cancers, such as NSCLC, where we expect to begin a Phase 2 trial in 2018 in combination with an EGFR inhibitor. We believe that G1T38 has the potential to be the backbone therapy of multiple proprietary combination regimens.

Market opportunity for G1T38

Many different cancers, such as many types of breast, prostate, colon, lung and brain cancers, as well as various hematologic malignancies, are CDK4/6-dependent. We estimate that at least 300,000 patients are diagnosed with late-stage CDK4/6-dependent tumors per year in the United States. The importance of CDK4/6 as a key regulator of tumor cell growth and proliferation in CDK4/6-dependent tumors has been recently validated by the FDA's accelerated approval of Pfizer's CDK4/6 inhibitor Ibrance for the treatment of ER+, HER2- advanced breast cancer in post-menopausal women and in women with disease progression following endocrine therapy and the approval in 2017 of Kisqali in combination with an aromatase inhibitor. Since its launch in the United

States, Ibrance has been prescribed by more than 9,000 physicians to approximately 45,000 patients. Worldwide sales of Ibrance in 2016 were approximately \$2.1 billion, and analysts estimate peak annual worldwide sales exceeding \$7 billion.

Advantages of G1T38

We believe that G1T38 has the potential to be a best-in-class CDK4/6 inhibitor. There are currently three other selective CDK4/6 inhibitors either approved or being developed to treat CDK4/6-dependent tumors, including Ibrance and Kisqali. Each of these drugs has shortcomings that we believe could be addressed by a best-in-class CDK4/6 inhibitor. Ibrance and Kisqali have long half-lives that can lead to drug accumulation and neutropenia, requiring a dosing regimen of 21 days on drug and a treatment holiday of at least seven days off drug. Another CDK4/6 inhibitor in development has demonstrated significant gastrointestinal issues, which may make it difficult to combine with targeted therapies, which typically also carry their own side-effect liabilities. Kisqali has also exhibited cardiovascular and liver side effects.

We believe that G1T38 has the potential to be best-in-class because of the following advantages:

- *Less myelotoxicity.* In preclinical studies, G1T38 has demonstrated less myelotoxicity than Ibrance, but equivalent anti-tumor efficacy. We believe this is due to the inherently different PK properties of G1T38.
- *Potential for continuous daily dosing.* Patients on Ibrance and Kisqali can only be given the drug on a 21 day-on/7 day-off schedule. Even with this dosing holiday, dose-delays and dose reductions due to persistent neutropenia are common. Our preclinical data and clinical data to date with G1T38 demonstrate the potential for continuous daily dosing.
- *Improved cardiovascular and liver safety.* G1T38 has not shown any of the QT prolongation issues and liver injury associated with Kisqali.
- *Improved tolerability profile.* We have designed G1T38 to be selective for CDK4/6 and have minimal CDK2 activity, as inhibition of CDK2 has been associated with gastrointestinal toxicities.
- *Greater potential for combination therapies.* We believe that G1T38 is the only selective CDK4/6 inhibitor in development that is not currently owned by a large pharmaceutical company. We believe that other pharmaceutical and biotech companies with targeted therapies may want to test a combination of their therapies with our CDK4/6 inhibitor. Accordingly, we believe we are in a strong position to explore collaborative arrangements with these companies.

G1T38: preclinical and clinical development

Preclinical development

We have generated extensive biochemical, cellular and *in vivo* data on G1T38 demonstrating:

- high potency and selectivity for CDK4/6;
- equivalent anti-tumor activity to Ibrance when dosed orally once daily for 28-days in a mouse model of ER+, HER2- breast cancer;
- less myelotoxicity than Ibrance in mouse models, suggesting the potential for continuous daily dosing without the need for a treatment holiday; and
- anti-tumor efficacy in models of certain CDK4/6-dependent tumor types, such as NSCLC and castrate resistant prostate cancer, or CRPC.

Completed Phase 1 clinical trial

In the fourth quarter of 2016, we completed a Phase 1 clinical trial of G1T38 in 75 healthy volunteers in the Netherlands. This was a single ascending dose, placebo-controlled study testing doses of 3 to 600 mg. In addition, G1T38 was dosed at 200 and 300 mg twice a day, 300 mg with and without food, and 300 mg as an oral solution. The goals of the clinical trial were to obtain PK and safety data to inform appropriate starting dose(s) for studies in patients. There were no DLTs, SAEs, or grade 3/4 AEs reported in this study. The most common grade 1/2 AEs were gastrointestinal in nature (such as diarrhea, nausea or vomiting), reported in 17% of placebo-dosed subjects versus 65% of G1T38-dosed subjects. A fed/fasted cohort demonstrated that taking G1T38 after a meal did not result in any nausea and that food had no effect on PK. Therefore, we expect that G1T38 will be taken with food in all upcoming studies. There was a dose-dependent increase in drug levels in the body, and we identified a well characterized active metabolite called G1T30, which we expect will make a significant contribution to the overall levels of active drug in the body.

Ongoing Phase 1/2 clinical trial in ER+, HER2- breast cancer

In January 2017, we initiated a two part Phase 1/2 trial in ER+, HER2- breast cancer patients in combination with Faslodex, an FDA-approved SERD. The trial is expected to enroll up to 102 patients in Europe. The goals of the clinical trial are to evaluate the safety, PK, and anti-tumor activity of G1T38 in combination with Faslodex and to determine the dose to be used in future trials. The Phase 1 part is open-label and consists of two arms, with G1T38 dosed continuously without a holiday, either once a day or twice a day in combination with Faslodex. Once the dose and schedule have been determined, the Phase 2 part will enroll approximately 30 patients at the recommended G1T38 dose and schedule in combination with Faslodex. All patients in the trial are being administered G1T38 orally continuously without a treatment holiday and IM Faslodex per the label. Tumor lesions are being assessed under RECIST criteria by CT scans or MRI every 8 weeks.

Preliminary results from the first six patients enrolled in the study, three in each arm, suggest that G1T38 may be able to address the shortcomings of the other CDK4/6 inhibitors. G1T38 has a shorter half-life than Ibrance and Kisqali and is not expected to show drug accumulation. All of the enrolled patients had a decline in neutrophil counts, which is expected and due to a mechanism-based decrease in neutrophil production by G1T38, which also occurs with other CDK4/6 inhibitors such as Ibrance and Kisqali. No gastrointestinal adverse events, such as nausea, vomiting, or diarrhea have been reported so far, comparing favorably to some other CDK4/6 inhibitors that have gastrointestinal tolerability issues. No cardiovascular or liver side effects have been reported so far and there have been no SAEs. These early clinical data indicate the potential for continuous daily dosing of G1T38 without a holiday in combination with Faslodex, and the potential for improved tolerability compared to other CDK4/6 inhibitors in development.

G1T48: Our oral SERD

G1T48, is a potential first/best-in-class oral SERD, which we plan to initially develop to use in combination with G1T38 for the treatment of ER+, HER2- breast cancer. Based on compelling preclinical efficacy and safety data, we expect to file an IND and/or CTA for G1T48 in the fourth quarter of 2017.

Market opportunity for G1T48

Breast cancer is the most prevalent cancer in women, accounting for 30% of all female cancers in the United States. The major cause of death from breast cancer is metastases, and approximately 30% of early-stage patients develop metastatic disease. Approximately 65% of breast cancers are ER-positive, or ER+, and depend on estrogen signaling for growth and survival. Patients with ER+ breast cancers are typically treated with

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endocrine therapies such as aromatase inhibitors, or AIs, selective estrogen receptor modulators, or SERMs, and SERDs. AIs, which block the generation of estrogen, and SERMs, which selectively inhibit an ER's ability to bind estrogen, both block ER-dependent signaling but leave functional ERs present in breast cancer cells. For this reason, although AIs and SERMs are effective treatments for some breast cancers, many patients acquire resistance to them by developing the ability to signal through the ER in a ligand-independent manner. In contrast, SERDs are a class of endocrine therapies that directly induce ER degradation. Therefore, it is believed that SERDs have the potential to treat ER+ tumors without allowing ligand-independent resistance to develop, and to act on AI- and SERM-resistant ER-positive tumors.

Currently only one SERD, Faslodex, is approved for the treatment of ER+ metastatic breast cancer. Faslodex is administered as an IM injection, and requires a loading dose during the first month of treatment. This means it is typically given on days 1, 15, and 29 of treatment and then once monthly thereafter. Each treatment typically consists of two injections, one into each buttock. Injection site reactions are common, occurring in approximately 10% of patients. Injection site related events including sciatica, neuralgia, neuropathic pain, and peripheral neuropathy have been reported. Other frequently reported adverse reactions with Faslodex include nausea (9.7%) and bone pain (9.4%).

While there are several oral SERDs in early clinical development, no one candidate has emerged as a clear front runner as an oral alternative to Faslodex based on early results. Limited efficacy has been reported in some of the oral SERDs in development and one has been shown to possess ER agonist activity without complete receptor degradation, suggesting that it is a SERM rather than a SERD with complete antagonist activity.

Advantages of G1T48

We believe that G1T48 has the potential to be first/best-in-class because of the following advantages:

- *Higher potency.* In preclinical models of ER+, HER2- breast cancer, G1T48 is more potent than Faslodex in binding and degrading the ER and inhibiting cell growth.
- *Complete antagonism.* G1T48 is a complete antagonist with no agonist activity.
- *Improved oral efficacy.* G1T48 demonstrated improved activity compared to another oral SERD in development in preclinical models of endocrine resistance mediated by ER mutation. G1T48 also demonstrated better efficacy than other oral SERDs in development in a tamoxifen resistant model of ER+, HER2- breast cancer.
- *Ease of administration.* The only approved SERD, Faslodex, is required to be given via IM injection. We have designed G1T48 to be administered orally.
- *Wholly owned proprietary combination regimen.* To our knowledge, we are the only emerging biopharmaceutical company with both an oral SERD (G1T48) and an oral CDK4/6 inhibitor (G1T38). We believe that being in the unique position of having this wholly owned proprietary combination of a validated regimen for the treatment of ER+, HER2- breast cancer provides us a strategic and competitive advantage.

G1T48: Preclinical development

We have generated extensive biochemical, cellular and *in vivo* data on G1T48 demonstrating:

- *Drug-like properties.* Soluble, rule of 5 compliant, non-steroidal small molecule, reversible estrogen receptor degrader
- *Highly potent.* In preclinical models of ER+, HER2- breast cancer, G1T48 is more potent than Faslodex in binding and degrading ER and inhibiting tumor cell growth.

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- *Active on ER mutant receptors.* In preclinical models of endocrine resistance mediated by ER mutation, G1T48 demonstrated superior activity compared to another oral SERD in development.
- *Highly selective.* G1T48 is highly selective for ER relative to other enzymes and receptors
- *Complete ER degradation.* Binding of G1T48 to ER leads to complete degradation by the proteasome
- *Favorable safety profile.* In multi-day toxicology studies in rats and dogs demonstrated a favorable safety profile, with a clean genotoxicity screen and no cardiovascular safety concerns.
- *Oral efficacy.* G1T48 demonstrated single agent efficacy in a tamoxifen resistant model of ER+, HER2- breast cancer which was further enhanced when combined with G1T38

Commercialization

Given our stage of development, we have not yet established our own commercial organization or distribution capabilities. We believe our focus on oncology will enable us to efficiently commercialize our product candidates on our own in the United States using a small and highly specialized sales force. However, we may also establish global or regional collaborations with pharmaceutical companies to leverage their development and commercialization capabilities to maximize the potential of our product candidates.

Manufacturing

We do not own or operate, and currently have no plans to establish any manufacturing facilities. We currently rely, and expect to continue to rely, on third parties for the manufacture of our product candidates for preclinical and clinical testing, as well as for commercial manufacture of any drugs that we may commercialize. To date, we have obtained active pharmaceutical ingredients, or API, formulations, and drug products for trilaciclib, G1T38 and G1T48 for our preclinical studies and clinical trials from multiple third-party manufacturers. We obtain our supplies from these manufacturers on a purchase order basis and do not have long-term supply arrangements in place. We have arrangements in place for a redundant supply of API. For each of our product candidates, we are in the process of identifying and qualifying additional manufacturers to provide the API, formulations, and drug products prior to approval and commercialization.

Competition

The development and commercialization of new drug therapies is highly competitive. We will face competition with respect to all therapeutics we may develop or commercialize in the future from pharmaceutical and biotechnology companies worldwide. If any of our product candidates is approved, they will compete with currently marketed drugs and therapies used for treatment of the same indications, and potentially with product candidates currently in development for the same indications. Many of the entities marketing or developing potentially competing products have significantly greater financial resources and expertise than we do in research and development, manufacturing, preclinical testing, conducting clinical trials, obtaining regulatory approvals and marketing. We believe the key competitive factors affecting the success of any approved product will be its efficacy, safety profile, price, convenience of administration, and level of promotional activity. Accordingly, our commercial opportunity will be reduced or eliminated if our competitors develop and commercialize products that are more effective, have fewer side effects, are more convenient or are less expensive than any products that we may develop.

If trilaciclib is approved, it will compete with:

- existing growth factor support treatments, including Neulasta (pegfilgrastim), Neupogen (filgrastim), Procrit (epoetin alpha), and Aranesp (darbepoetin alfa) as well as biosimilars of these products when available;

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- if approved, rovalpituzumab tesirine (Rova-T), an antibody drug conjugate currently being developed by Abbvie for the treatment of patients with SCLC;
- if approved, the multiple immune checkpoint inhibitors in clinical trials for the treatment of patients with SCLC; and
- multiple approved drugs or drugs that may be approved in the future for indications for which we may develop trilaciclib.

If G1T38 is approved, it will compete with:

- Pfizer's approved CDK4/6 inhibitor Ibrance;
- Novartis's approved CDK4/6 inhibitor Kisqali;
- if approved, Eli Lilly's CDK4/6 inhibitor product candidate currently in clinical development (abemaciclib);
- if approved, other non-selective CDK4/6 inhibitor product candidates in clinical development, including product candidates being developed by FLX Bio and Onconova Therapeutics; and
- multiple approved drugs or drugs that may be approved in the future for indications for which we may develop G1T38.

If G1T48 is approved, it will compete with:

- the approved IM SERD, Faslodex, being marketed by AstraZeneca;
- if approved, other oral SERDs in development including: RAD1901, being developed by Radius Health; GDC-0810 and GDC-0927 (formerly SRN-927), being developed by Genentech; AZD9496, being developed by AstraZeneca; and LSZ102, being developed by Novartis; and
- multiple approved drugs or drugs that may be approved in the future for indications for which we may develop G1T38.

Intellectual property

Our commercial success depends in part on our ability to obtain and maintain proprietary protection for our CDK4/6 inhibitor molecules, including our CDK4/6 inhibitors in clinical trials and methods of treatment using our CDK4/6 inhibitors, alone and in combination with other therapeutic agents. We also seek protection on processes for the production of our CDK4/6 inhibitors, formulations incorporating our CDK4/6 inhibitors, combinations of our product candidates with other active agents and dosing schedules and regimens related to our CDK4/6 inhibitors. Our success also depends on our ability to operate without infringing on the proprietary rights of others and to prevent others from infringing our proprietary rights. Our policy is to seek to protect our proprietary position by, among other methods, filing U.S. and foreign patent applications covering our proprietary technology, inventions, and improvements that are important to the development and implementation of our business. In addition, we plan to seek patent term restorations and/or patent term extensions where applicable in the United States and other jurisdictions. We also rely on trade secrets, know-how, continuing technological innovation and potential in-licensing opportunities to develop and maintain our proprietary position. Additionally, we expect to benefit, where appropriate, from statutory frameworks in the United States, Europe and other countries that provide a period of clinical data exclusivity to compensate for the time required for regulatory approval of our drug products. See also the “— Government Regulation and Product Approval” section below.

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We are the sole owner or exclusive licensee of all of our patents and currently filed patent applications that cover our product candidates.

Our intellectual property strategy is focused on patenting our CDK4/6 inhibitors, their uses, and methods of manufacturing. We have obtained nine composition-of-matter patents in the United States on a number of our CDK4/6 inhibitors, including claims that cover our product candidates trilaciclib and G1T38, and we continue to seek composition-of-matter patents on additional CDK4/6 inhibitors both in the United States and throughout the world. In addition, we continue to seek method-of-treatment patents for our key CDK4/6 inhibitors in key therapeutic areas. We also seek patent protection on methods of treatment that incorporates our CDK4/6 inhibitors in combination with other therapeutic agents to treat specific clinical indications and targeted patient populations. Furthermore, we will seek, where appropriate, patent protection on processes of making certain of our CDK4/6 inhibitors, and intermediates used in the processes.

We continually assess and refine our intellectual property strategy as we develop new technologies and product candidates. We plan to file additional patent applications based on our intellectual property strategies where appropriate, including where we seek to adapt to competition or to improve business opportunities. Further, we plan to file patent applications, as we consider appropriate under the circumstances, to protect new technologies that we develop. Our patent filing strategy generally includes seeking patent protection in the United States, the European Union and in additional countries where we believe such protection is likely to be useful, including one or more of Australia, Brazil, Canada, China, Hong Kong, India, Israel, Japan, Mexico, Russia, Singapore, and South Korea.

Our patent estate as of March 31, 2017, on a worldwide basis, includes 125 granted or pending patent applications spread over 22 patent families with 12 granted U.S. patents, 26 pending U.S. applications, five pending international patent applications filed under the Patent Cooperation Treaty and 82 pending or granted patents that have entered the national phase of prosecution in countries outside the United States. The term of individual patents depends upon the laws of the countries in which they are obtained. In the countries in which we currently file, the patent term is 20 years from the earliest date of filing of a non-provisional patent application which serves as a priority application. However, the term of a U.S. patent may be extended to compensate for the time required to obtain regulatory approval to sell a drug (a patent term extension) or by delays encountered during patent prosecution that are caused by the USPTO (referred to as patent term restoration). For example, the Hatch-Waxman Act permits a patent term extension for FDA-approved drugs of up to five years beyond the expiration of the patent. The length of the patent term extension is related to the length of time the drug is under regulatory review and diligence during the review process. Patent term extensions cannot extend the remaining term of a patent beyond a total of 14 years from the date of product approval and only one patent covering an approved drug or its method of use may be extended. A similar kind of patent extension, referred to as a Supplementary Protection Certificate, is available in Europe. Legal frameworks are also available in certain other jurisdictions to extend the term of a patent. We currently intend to seek patent term extensions on any of our issued patents in any jurisdiction where we have a qualifying patent and the extension is available; however there is no guarantee that the applicable regulatory authorities, including the FDA in the United States, will agree with our assessment of whether such extensions should be granted, and even if granted, the length of such extensions. Further, even if our patent is extended, the patent, including the extended portion of the patent, may be held invalid or unenforceable by a court of final jurisdiction in the United States or a foreign country.

Our current issued patents covering our present clinical candidates trilaciclib and G1T38 will expire in 2031, exclusive of any patent term extension, and patent applications covering our clinical candidate G1T48 will expire in 2036, if issued and exclusive of any patent term extension. Our pending applications on additional methods of use of our clinical candidates, should they issue, will expire on dates ranging from 2034 to 2037. In addition, we plan to file additional applications on aspects of our innovations that may have patent terms that extend beyond these dates. However, any of our patents, including patents that we may rely on to protect our

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market for approved drugs, may be held invalid or unenforceable by a court of final jurisdiction. Alternatively, we may decide that it is in our interest to settle a litigation in a manner that affects the term or enforceability of our patent. Changes in either the patent laws or in interpretations of patent laws in the United States and other countries may diminish our ability to protect our inventions and enforce our intellectual property rights. Accordingly, we cannot predict the breadth or enforceability of claims that have been or may be granted in our patents or in third-party patents. The biotechnology and pharmaceutical industries are characterized by extensive litigation regarding patents and other intellectual property rights. Our ability to obtain and maintain our proprietary position for our CDK4/6 inhibitors and technology will depend on our success in enforcing the claims that have been granted or may grant. We do not know whether any of the pending patent applications that we have filed or may file or license from third parties will result in the issuance of any additional patents. The issued patents that we own or may receive in the future may be challenged, invalidated, or circumvented, and the rights granted under any issued patents may not provide us with sufficient protection or competitive advantages against competitors with similar technology. Furthermore, our competitors may be able to independently develop and commercialize drugs with similar mechanisms of action and duplicate our methods of treatments or strategies without infringing our patents. Because of the extensive time required for clinical development and regulatory review of a drug we may develop, it is possible that, before any of our drugs can be commercialized, any related patent may expire or remain in force for only a short period following commercialization, thereby reducing any advantage of any such patent.

Trilaciclib and G1T38 patent coverage

We own two issued U.S. Patents (U.S. 8,598,186; U.S. 8,598,197) and one pending U.S. application covering the trilaciclib compositions-of-matter and its pharmaceutical composition.

We also own two issued U.S. Patents (U.S. 8,598,197 and U.S. 9,481,691) and one U.S. application covering the G1T38 composition-of-matter and pharmaceutical composition. We own corresponding issued patents covering trilaciclib and G1T38 and their pharmaceutical compositions in Europe, Japan, Mexico, China, Australia and Singapore.

There are additional pending applications covering these compounds and compositions in Brazil, Canada, Israel, India, Japan, South Korea, Mexico and Russia. The expected year of expiration for these composition-of-matter patents, where issued, valid and enforceable, is 2031, without regard to any extensions or restorations of term that may be available under national law.

In addition, we own an issued U.S. Patent (U.S. 9,487,530) and one pending U.S. application covering the use of trilaciclib to reduce the effect of chemotherapy on healthy cells in a subject being treated for CDK4/6 replication independent cancer. This patent family covers, for example, SCLC treatment protocols involving chemotherapeutic agents carboplatin, etoposide, and/or topotecan along with trilaciclib for protection of healthy replicating cells like hematopoietic stem and progenitor cells. The patent filing also covers chemoprotection of healthy replicating cells with trilaciclib during the treatment of RB-negative breast cancer. This patent filing is also pending in Europe, Canada, China, Hong Kong and Japan. The expected year of expiration for this patent family, where issued, valid and enforceable, is 2034, without regard to any extensions or restorations of term that may be available under national law.

We also own a U.S. application and an international application filed under the Patent Cooperation Treaty that covers dosage formulations of trilaciclib for the protection of hematopoietic stem and progenitor cells during chemotherapy. The expected year of expiration for this patent family, where issued, valid and enforceable, is 2036, without regard to any extensions or restorations of term that may be available under national law.

We have filed a patent application that covers the administration of trilaciclib in combination with a PD-L1 inhibitor such as Tecentriq. The expected year of expiration for this patent family, where issued, valid and

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enforceable, is 2037, without regard to any extensions or restorations of term that may be available under national law.

We in addition own an international application filed under the Patent Cooperation Treaty that is directed to the treatment of RB-negative tumors with the administration of a topoisomerase inhibitor in combination with trilaciclib, to protect hematopoietic stem and progenitor cells during chemotherapeutic treatment. The expected year of expiration for this patent family, where issued, valid and enforceable, is 2035, without regard to any extensions or restorations of term that may be available under national law.

We own two patent families that are directed to the use of G1T38 to treat RB-positive tumors. The first family includes an issued U.S. Patent (U.S. 9,527,857) and one pending U.S. application directed to the treatment of RB-positive cancers with G1T38. The issued patent covers the use of G1T38, to treat RB-positive breast cancer, colon cancer, ovarian cancer, NSCL cancer, prostate cancer, and glioblastoma. This patent filing is also pending in Europe, Canada, China, Hong Kong and Japan. The expected year of expiration for this patent family, where issued, valid and enforceable, is 2034, without regard to any extensions or restorations of term that may be available under national law. The second family includes an international application filed under the Patent Cooperation Treaty that is directed to the treatment of RB-positive cancers with G1T38 with additional active agents. The expected year of expiration for this patent family, where issued, valid and enforceable, is 2035, without regard to any extensions or restorations of term that may be available under national law.

We own a patent family directed to the use of G1T38 as an anti-neoplastic agent against a T or B cell cancer. This patent filing is also pending in Europe, Canada, China and Japan. The expected year of expiration for this patent family, where issued, valid and enforceable, is 2034, without regard to any extensions or restorations of term that may be available under national law.

We have filed a patent application that covers the administration of G1T38 in combination with an EGFR inhibitor. The expected year of expiration for this patent family, where issued, valid and enforceable, is 2038, without regard to any extensions or restorations of term that may be available under national law.

G1T48 Patent Coverage

We have exclusively licensed from UIC two international applications filed under the Patent Cooperation Treaty and two U.S. pending applications that cover G1T48 and related compounds and their pharmaceutical compositions and use as selective estrogen receptor down-regulators. The expected year of expiration for this patent family, where issued, valid and enforceable, is 2036, without regard to any extensions or restorations of term that may be available under national law.

We co-own, along with UIC, one U.S. patent application directed to the combination of G1T48 and related compounds with G1T38 and related compounds for the treatment of estrogen-modulated disorders such as RB-positive breast cancer. In addition, we have exclusively licensed UIC's rights in this co-owned application. The expected year of expiration for this patent family, where issued, valid and enforceable, is 2037, without regard to any extensions or restorations of term that may be available under national law.

A number of our pending patent applications covering certain aspects of using our current clinical candidates have not yet issued. As with other biotechnology and pharmaceutical companies, our ability to obtain and maintain a proprietary position on our drug candidates and technologies will depend on our success in obtaining effective patent claims on these pending patents and enforcing those claims if granted. However, our pending patent applications, and any patent applications that we may in the future file or license from third parties, may not result in the issuance of patents. We also cannot predict the breadth of claims that may be allowed or enforced in our patents.

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Any issued patents that we have received or may receive in the future may be challenged, invalidated or circumvented. In addition, because of the extensive time required for clinical development and regulatory review of a drug candidate we may develop, it is possible that, before any of our drug candidates can be commercialized, any related patent may expire or remain in force for only a short period following commercialization, thereby limiting protection such patent would afford the respective product and any competitive advantage such patent may provide. Moreover, even our issued patents do not guarantee us the right to practice our technology in relation to the commercialization of our clinical candidates. The area of patent and other intellectual property rights in pharmaceuticals is an evolving one with many risks and uncertainties, and third parties may have blocking patents that could be used to prevent us from commercializing our clinical candidates.

Exclusive license for G1T48

In November 2016, we entered into a license agreement with the University of Illinois, or UIC, pursuant to which we obtained an exclusive, worldwide license to make, have made, use, import, sell and offer for sale of certain SERDs, including G1T48, covered by patent rights owned UIC. The rights licensed to us are for all fields of use.

Under the terms of the agreement we paid a one-time only, non-refundable upfront fee of \$500,000, and we are required to pay UIC low single-digit royalties on all net sales of products and a share of any sublicensing revenues. We are also obligated to pay annual maintenance fees, which are fully creditable against any royalty payments made by us. We may also be required to pay UIC milestone payments of up to an aggregate of \$2.625 million related to the initiation and execution of clinical trials and first commercial sale of a product in multiple countries. We are responsible for all future patent prosecution costs.

The term of the license agreement will continue on a country-by-country basis until the later of (i) the expiration of the last valid claim within the patent rights covering the product in such country, (ii) the expiration of market exclusivity in such country and (iii) the 10th anniversary of the first commercial sale in such country. UIC may terminate the agreement in the event (i) we fail to pay any amount or make any report when required to be made and fail to cure such failure within 30 days after receipt of notice, (ii) we are in breach of any provision of the agreement and fail to remedy such breach within 45 days after receipt of notice, (iii) we make a report to UIC under the agreement that is determined to be materially false, (iv) we declare insolvency or bankruptcy or (v) we take any action that causes patent rights or technical information to be subject to any lien or encumbrance and fail to remedy within 45 days of receipt of notice. We may terminate the agreement at any time upon at least 90 days' written notice. Upon expiration or termination of the agreement, all rights revert to UIC.

Trade secrets

In addition to patents, we rely upon unpatented trade secrets and know-how and continuing technological innovation to develop and maintain our competitive position. We seek to protect our proprietary information, in part, using confidentiality agreements with our commercial partners, collaborators, employees, and consultants, and invention assignment agreements with our employees. These agreements are designed to protect our proprietary information and, in the case of the invention assignment agreements, to grant us ownership of technologies that are developed through a relationship with a third party. These agreements may be breached, and we may not have adequate remedies for any breach. In addition, our trade secrets may otherwise become known or be independently discovered by competitors. To the extent that our commercial partners, collaborators, employees, and consultants use intellectual property owned by others in their work for us, disputes may arise as to the rights in related or resulting know-how and inventions.

Government regulation and product approval

FDA approval process

In the United States, pharmaceutical products are subject to extensive regulation by the FDA. The Federal Food, Drug, and Cosmetic Act, or the FDC Act, and other federal and state statutes and regulations, govern, among other things, the research, development, testing, manufacture, storage, recordkeeping, approval, labeling, promotion and marketing, distribution, post-approval monitoring and reporting, sampling, and import and export of pharmaceutical products. Failure to comply with applicable U.S. requirements may subject a company to a variety of administrative or judicial sanctions, such as FDA refusal to approve pending new drug applications, or NDAs, warning letters, voluntary product recalls, product seizures, total or partial suspension of production or distribution, injunctions, fines, civil penalties and criminal prosecution.

Pharmaceutical product development in the United States typically involves the performance of nonclinical laboratory and animal tests, the submission to the FDA of an investigational new drug application, or IND, which must become effective before clinical testing may commence, and adequate, well-controlled clinical trials to establish the safety and effectiveness of the drug for each indication for which FDA approval is sought. Satisfaction of FDA pre-market approval requirements typically takes many years and the actual time required may vary substantially based upon the type, complexity, and novelty of the product or disease.

Preclinical tests include laboratory evaluation of product chemistry, formulation, and toxicity, as well as animal studies to assess the characteristics and potential safety and efficacy of the product. The conduct of the preclinical and other nonclinical tests must comply with certain federal regulations and requirements, including good laboratory practices. The results of preclinical testing are submitted to the FDA as part of an IND along with other information, including information about product chemistry, manufacturing and controls, and a proposed clinical trial protocol. Long term nonclinical tests, such as animal tests of reproductive toxicity and carcinogenicity, may continue after the IND is submitted.

A 30-day waiting period after the submission of each IND is required prior to the commencement of clinical testing in humans. If the FDA has neither commented on nor questioned the IND within this 30-day period, the clinical trial proposed in the IND may begin.

Clinical trials involve the administration of the investigational new drug to healthy volunteers or patients under the supervision of a qualified investigator. Clinical trials must be conducted: (i) in compliance with federal regulations, including those encompassing good clinical practice, or GCP, requirements that are meant to protect the rights and health of patients and to define the roles of clinical trial sponsors, investigators, and monitors, and (ii) under protocols detailing the objectives of the clinical trial, the parameters to be used in monitoring safety and the effectiveness criteria to be evaluated. Each protocol involving testing on U.S. patients and subsequent protocol amendments must be submitted to the FDA as part of the IND.

The FDA may order the temporary, or permanent, discontinuation of a clinical trial at any time by imposing a clinical hold or impose other sanctions if it believes that the clinical trial either is not being conducted in accordance with FDA requirements or presents an unacceptable risk to the clinical trial patients. The clinical trial protocol and informed consent information for patients in clinical trials must also be submitted to an institutional review board, or IRB, at each site where a clinical trial will be performed for approval. An IRB may also require the clinical trial at the site to be halted, either temporarily or permanently, for failure to comply with the IRB's requirements or it may impose other conditions.

Clinical trials to support NDAs for marketing approval are typically conducted in three sequential phases, but the phases may overlap. In Phase 1, the initial introduction of the drug into healthy human subjects or patients, the drug is tested to assess metabolism, pharmacokinetics, pharmacological actions, side effects associated with

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increasing doses, and, if possible, early evidence on effectiveness. Phase 2 usually involves clinical trials in a limited patient population to determine the effectiveness of the drug for a particular indication, dosage tolerance, and optimum dosage, and to identify common adverse effects and safety risks. If a compound demonstrates evidence of effectiveness and an acceptable safety profile in Phase 2 evaluations, Phase 3 clinical trials are undertaken to obtain the additional information about clinical efficacy and safety in a larger number of patients, typically at geographically dispersed clinical trial sites, to permit the FDA to evaluate the overall benefit-risk relationship of the drug and to provide adequate information for the labeling of the drug. In most cases, the FDA requires two adequate and well-controlled Phase 3 clinical trials to demonstrate the efficacy of the drug. A single Phase 3 clinical trial with other confirmatory evidence may be sufficient in rare instances where the clinical trial is a large multicenter trial demonstrating internal consistency and a statistically very persuasive finding of a clinically meaningful effect on mortality, irreversible morbidity, or prevention of a disease with potentially serious outcome, and confirmation of the result in a second clinical trial would be practically or ethically impossible.

After completion of the required clinical testing, an NDA is prepared and submitted to the FDA. FDA approval of the NDA is required before marketing of the product may begin in the United States. The NDA must include the results of all nonclinical, clinical, and other testing and a compilation of data relating to the product's pharmacology, chemistry, manufacture, and controls. The cost of preparing and submitting an NDA is substantial. Under federal law, the submission of most NDAs is additionally subject to a substantial application user fee, currently \$2,038,100 for an NDA with clinical information, and the manufacturer and/or sponsor under an approved NDA is also subject to annual product and establishment user fees, currently \$97,750 per product and \$512,200 per establishment. These fees are typically increased annually.

The FDA has 60 days from its receipt of an NDA to determine whether the application will be accepted for filing based on the agency's threshold determination that it is sufficiently complete to permit substantive review. Once the submission is accepted for filing, the FDA begins an in-depth review. The FDA has agreed to certain performance goals in the review of NDAs. The FDA seeks to review applications for standard review drug products within ten months, and applications for priority review drugs within six months. Priority review can be applied to drugs intended to treat a serious condition and that the FDA determines offer major advances in treatment, or provide a treatment where no adequate therapy exists. The review process for both standard and priority review may be extended by FDA for three additional months to consider certain late-submitted information, or information intended to clarify information already provided in the submission.

The FDA may also refer applications for novel drug products, or drug products that present difficult questions of safety or efficacy, to an advisory committee, which is typically a panel that includes clinicians and other experts, for review, evaluation, and a recommendation as to whether the application should be approved. The FDA is not bound by the recommendation of an advisory committee, but it generally follows such recommendations. Before approving an NDA, the FDA will typically inspect one or more clinical sites to assure compliance with GCP. Additionally, the FDA will inspect the facility or the facilities at which the drug is manufactured. The FDA will not approve the product unless compliance with current good manufacturing practice, or cGMP, requirements is satisfactory and the NDA contains data that provide substantial evidence that the drug is safe and effective in the indication studied.

After the FDA evaluates the NDA and the manufacturing facilities, it issues either an approval letter or a complete response letter. A complete response letter generally outlines the deficiencies in the submission and may require substantial additional testing, or information, in order for the FDA to reconsider the application. If, or when, those deficiencies have been addressed to the FDA's satisfaction in a resubmission of the NDA, the FDA will issue an approval letter. The FDA has committed to reviewing such resubmissions in two or six months depending on the type of information included.

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An approval letter authorizes commercial marketing of the drug with specific prescribing information for specific indications. As a condition of NDA approval, the FDA may require a risk evaluation and mitigation strategy, or REMS, to help ensure that the benefits of the drug outweigh the potential risks. REMS can include medication guides, communication plans for health care professionals, and elements to assure safe and effective use, or ETASU. ETASU can include, but are not limited to, special training or certification for prescribing or dispensing, dispensing only under certain circumstances, special monitoring, and the use of patient registries. The requirement for a REMS can materially affect the potential market and profitability of the drug. Moreover, product approval may require substantial post-approval testing and surveillance to monitor the drug's safety or efficacy. Once granted, product approvals may be withdrawn if compliance with regulatory requirements is not maintained or problems are identified following initial marketing.

Disclosure of clinical trial information

Sponsors of clinical trials of certain FDA-regulated products, including prescription drugs, are required to register and disclose certain clinical trial information on a public website maintained by the U.S. National Institutes of Health. Information related to the product, patient population, phase of investigation, clinical trial sites and investigator, and other aspects of the clinical trial is made public as part of the registration. Sponsors are also obligated to disclose the results of these clinical trials after completion if the product candidate is ultimately approved, and disclosure of the results of these clinical trials will be delayed until such approval. Competitors may use this publicly-available information to gain knowledge regarding the design and progress of our development programs.

The Hatch-Waxman act

Orange book listing

In seeking approval for a drug through an NDA, applicants are required to list with the FDA each patent whose claims cover the applicant's product. Upon approval of a drug, each of the patents listed in the application for the drug is then published in the FDA's Approved Drug Products with Therapeutic Equivalence Evaluations, commonly known as the Orange Book. Drugs listed in the Orange Book can, in turn, be cited by potential generic competitors in support of approval of an abbreviated new drug application, or ANDA. An ANDA provides for marketing of a drug product that has the same active ingredients in the same strengths and dosage form as the listed drug and has been shown through bioequivalence testing to be therapeutically equivalent to the listed drug. Other than the requirement for bioequivalence testing, ANDA applicants are not required to conduct, or submit results of, nonclinical or clinical tests to prove the safety or effectiveness of their drug product. Drugs approved in this way are commonly referred to as "generic equivalents" to the listed drug, and can often be substituted by pharmacists under prescriptions written for the original listed drug.

The ANDA applicant is required to certify to the FDA concerning any patents listed for the approved product in the FDA's Orange Book. Specifically, the applicant must certify that: (i) the required patent information has not been filed; (ii) the listed patent has expired; (iii) the listed patent has not expired, but will expire on a particular date and approval is sought after patent expiration; or (iv) the listed patent is invalid or will not be infringed by the new product. The ANDA applicant may also elect to submit a section viii statement, certifying that its proposed ANDA label does not contain or carve out any language regarding the patented method-of-use, rather than certify to a listed method-of-use patent.

If the applicant does not challenge the listed patents, the ANDA application will not be approved until all the listed patents claiming the referenced product have expired. A certification that the new product will not infringe the already approved product's listed patents, or that such patents are invalid, is called a Paragraph IV

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certification. If the ANDA applicant has provided a Paragraph IV certification to the FDA, the applicant must also send notice of the Paragraph IV certification to the NDA and patent holders once the ANDA has been accepted for filing by the FDA. The NDA and patent holders may then initiate a patent infringement lawsuit in response to the notice of the Paragraph IV certification. The filing of a patent infringement lawsuit within 45 days of the receipt of a Paragraph IV certification automatically prevents the FDA from approving the ANDA until the earlier of 30 months, expiration of the patent, settlement of the lawsuit, or a decision in the infringement case that is favorable to the ANDA applicant.

The ANDA application also will not be approved until any applicable non-patent exclusivity listed in the Orange Book for the referenced product has expired.

Exclusivity

Upon NDA approval of a new chemical entity or NCE, which is a drug that contains no active moiety that has been approved by the FDA in any other NDA, that drug receives five years of marketing exclusivity during which time the FDA cannot receive any ANDA seeking approval of a generic version of that drug. Certain changes to a drug, such as the addition of a new indication to the package insert, are associated with a three-year period of exclusivity during which the FDA cannot approve an ANDA for a generic drug that includes the change.

An ANDA may be submitted one year before NCE exclusivity expires if a Paragraph IV certification is filed. If there is no listed patent in the Orange Book, there may not be a Paragraph IV certification, and, thus, no ANDA may be filed before the expiration of the exclusivity period.

Patent term extension

After NDA approval, owners of relevant drug patents may apply for up to a five-year patent term extension. The allowable patent term extension is calculated as half of the drug's testing phase—the time between when the IND becomes effective and NDA submission—and all of the review phase—the time between NDA submission and approval up to a maximum of five years. The time can be shortened if FDA determines that the applicant did not pursue approval with due diligence. The total patent term after the extension may not exceed 14 years.

For patents that might expire during the application phase, the patent owner may request an interim patent extension. An interim patent extension increases the patent term by one year and may be renewed up to four times. For each interim patent extension granted, the post-approval patent extension is reduced by one year. The director of the PTO must determine that approval of the drug covered by the patent for which a patent extension is being sought is likely. Interim patent extensions are not available for a drug for which an NDA has not been submitted.

Advertising and promotion

Once an NDA is approved, a product will be subject to certain post-approval requirements. For instance, FDA closely regulates the post-approval marketing and promotion of drugs, including standards and regulations for direct-to-consumer advertising, off-label promotion, industry-sponsored scientific and educational activities and promotional activities involving the internet. Drugs may be marketed only for the approved indications and in accordance with the provisions of the approved labeling. Changes to some of the conditions established in an approved application, including changes in indications, labeling, or certain manufacturing processes or facilities, require submission and FDA approval of a new NDA or NDA supplement before the change can be implemented. An NDA supplement for a new indication typically requires clinical data similar to that in the original application, and the FDA uses the same procedures and actions in reviewing NDA supplements as it does in reviewing NDAs.

Adverse event reporting and cGMP compliance

Adverse event reporting and submission of periodic reports is required following FDA approval of an NDA. The FDA also may require post-marketing testing, known as Phase 4 testing, REMS, and surveillance to monitor the effects of an approved product, or the FDA may place conditions on an approval that could restrict the distribution or use of the product. In addition, quality-control, drug manufacture, packaging, and labeling procedures, among other things, must continue to conform to cGMP after approval. Drug manufacturers and certain of their subcontractors are required to register their establishments with FDA and certain state agencies. Registration with the FDA subjects entities to periodic unannounced inspections by the FDA, during which the agency inspects manufacturing facilities to assess compliance with cGMP. Accordingly, manufacturers must continue to expend time, money and effort in the areas of production and quality-control to maintain compliance with cGMP. Regulatory authorities may impose a range of enforcement actions, including bringing a seizure and injunction in court, withdraw product approvals or request voluntary product recalls if a company fails to comply with cGMP requirements.

Pediatric information

Under the Pediatric Research Equity Act, or PREA, NDAs or supplements to NDAs must contain data to assess the safety and effectiveness of the drug for the claimed indications in all relevant pediatric subpopulations and to support dosing and administration for each pediatric subpopulation for which the drug is safe and effective. The sponsor must submit an initial Pediatric Study Plan, or PSP, within 60 days of an end-of-phase 2 meeting or as may be agreed between the sponsor and the FDA. The initial PSP must include an outline of the pediatric study or studies that the sponsor plans to conduct, including study objectives and design, age groups, relevant endpoints and statistical approach, or a justification for not including such detailed information, and any request for a deferral of pediatric assessments or a full or partial waiver of the requirement to provide data from pediatric studies along with supporting information. The FDA and the sponsor must reach agreement on the PSP. A sponsor can submit amendments to an agreed-upon initial PSP at any time if changes to the pediatric plan need to be considered based on data collected from nonclinical studies, early phase clinical trials, and/or other clinical development programs. The FDA may grant full or partial waivers, or deferrals, for submission of data.

The Best Pharmaceuticals for Children Act, or BPCA, provides NDA holders a six-month extension of any exclusivity—patent or non-patent—for a drug if certain conditions are met, including satisfaction of a pediatric trial as described above. Conditions for exclusivity include the FDA's determination that information relating to the use of a new drug in the pediatric population may produce health benefits in that population, the FDA making a written request for pediatric clinical trials, and the applicant agreeing to perform, and reporting on, the requested clinical trials within the statutory timeframe. Applications under the BPCA are treated as priority applications, with all of the benefits that designation confers.

Special protocol assessment

A company may reach an agreement with FDA under the Special Protocol Assessment, or SPA, process as to the required design and size of clinical trials intended to form the primary basis of an efficacy claim. Under the FDC Act and FDA guidance implementing the statutory requirement, an SPA is generally binding upon the FDA except in limited circumstances, such as if the FDA identifies a substantial scientific issue essential to determining safety or efficacy after the clinical trial begins, public health concerns emerge that were unrecognized at the time of the protocol assessment, the sponsor and FDA agree to the change in writing, or if the clinical trial sponsor fails to follow the protocol that was agreed upon with the FDA.

Expedited review and approval

The FDA has various programs, including Fast Track, priority review, accelerated approval and breakthrough designation which are intended to expedite or simplify the process for reviewing drugs, and/or provide for approval on the basis of surrogate endpoints. Even if a drug qualifies for one or more of these programs, the FDA may later decide that the drug no longer meets the conditions for qualification or that the time period for FDA review or approval will not be shortened. Generally, drugs that may be eligible for these programs are those for serious or life-threatening conditions, those with the potential to address unmet medical needs, and those that offer meaningful benefits over existing treatments. For example, Fast Track is a process designed to facilitate the development, and expedite the review, of drugs to treat serious diseases and fill an unmet medical need. The request may be made at the time of IND submission and generally no later than the pre-NDA meeting. The FDA will respond within 60 calendar days of receipt of the request. Priority review, which is requested at the time of NDA submission, is designed to give drugs that offer major advances in treatment or provide a treatment where no adequate therapy exists an initial review within six months as compared to a standard review time of ten months. Although Fast Track and priority review do not affect the standards for approval, the FDA will attempt to facilitate early and frequent meetings with a sponsor of a Fast Track designated drug and expedite review of the application for a drug designated for priority review. Accelerated approval provides an earlier approval of drugs to treat serious diseases, and that fill an unmet medical need based on a surrogate endpoint, which is a laboratory measurement or physical sign used as an indirect or substitute measurement representing a clinically meaningful outcome. Discussions with the FDA about the feasibility of an accelerated approval typically begin early in the development of the drug in order to identify, among other things, an appropriate endpoint. As a condition of approval, the FDA may require that a sponsor of a drug receiving accelerated approval perform post-marketing clinical trials to confirm the appropriateness of the surrogate marker clinical trial.

Another expedited program is that for Breakthrough Therapy. A Breakthrough Therapy designation is designed to expedite the development and review of drugs that are intended to treat a serious condition where preliminary clinical evidence indicates that the drug may demonstrate substantial improvement over available therapy on a clinically significant endpoint(s). A sponsor may request Breakthrough Therapy designation at the time that the IND is submitted, or no later than at the end-of-Phase 2 meeting. The FDA will respond to a Breakthrough Therapy designation request within sixty days of receipt of the request. A drug that receives Breakthrough Therapy designation is eligible for all fast track designation features, intensive guidance on an efficient drug development program, beginning as early as Phase 1 and commitment from the FDA involving senior managers.

Regulation of companion diagnostic devices

If we decide that a diagnostic test would provide useful information for patient selection or if the FDA requires us to develop such a test, we may work with a collaborator to develop an *in vitro* diagnostic, or companion test. The FDA regulates *in vitro* diagnostic tests as medical devices, and the type of regulation to which such a test will be subjected will depend, in part, on a risk assessment by the FDA as well as a determination of whether the test is intended to yield results that would be helpful to know versus one that the FDA or we believe is necessary to know for the safe and effective use of our drugs under development.

The FDA issued Guidance on In-Vitro Companion Diagnostic Devices in August 2014, which is intended to assist companies developing *in vitro* companion diagnostic devices and companies developing therapeutic products that depend on the use of a specific *in vitro* companion diagnostic for the safe and effective use of the product. The FDA defined an *in vitro* companion diagnostic device, or IVD companion diagnostic device, as a device that provides information that is essential for the safe and effective use of a corresponding therapeutic product. The use of an IVD companion diagnostic device with a therapeutic product will be stipulated in the instructions for

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use in the labeling of both the diagnostic device and the corresponding therapeutic product, including the labeling of any generic equivalents of the therapeutic product. The FDA expects that the therapeutic product sponsor will address the need for an approved or cleared IVD companion diagnostic device in its therapeutic product development plan and that, in most cases, the therapeutic product and its corresponding companion diagnostic will be developed contemporaneously.

Europe/Rest of world government regulation

In addition to regulations in the United States, we are and will be subject, either directly or through our distribution partners, to a variety of regulations in other jurisdictions governing, among other things, clinical trials and commercial sales and distribution of our products, if approved.

Whether or not we obtain FDA approval for a product, we must obtain the requisite approvals from regulatory authorities in non-U.S. countries prior to the commencement of clinical trials or marketing of the product in those countries. Certain countries outside of the United States have a process that requires the submission of a clinical trial application much like an IND prior to the commencement of human clinical trials. In Europe, for example, a clinical trial application, or CTA, must be submitted to the competent national health authority and to independent ethics committees in each country in which a company plans to conduct clinical trials. Once the CTA is approved in accordance with a country's requirements, clinical trials may proceed in that country.

The requirements and process governing the conduct of clinical trials, product licensing, pricing and reimbursement vary from country to country, even though there is already some degree of legal harmonization in the European Union member states resulting from the national implementation of underlying E.U. legislation. In all cases, the clinical trials are conducted in accordance with GCP and other applicable regulatory requirements.

To obtain regulatory approval of a new drug, or medicinal product in the European Union a sponsor must obtain approval of a marketing authorization application. The way in which a medicinal product can be approved in the European Union depends on the nature of the medicinal product

The centralized procedure results in a single marketing authorization granted by the European Commission that is valid across the European Union, as well as in Iceland, Liechtenstein and Norway. The centralized procedure is compulsory for human drugs that are: (i) derived from biotechnology processes, such as genetic engineering, (ii) contain a new active substance indicated for the treatment of certain diseases, such as HIV/AIDS, cancer, diabetes, neurodegenerative diseases, autoimmune and other immune dysfunctions and viral diseases, (iii) officially designated "orphan drugs" (drugs used for rare human diseases) and (iv) advanced-therapy medicines, such as gene-therapy, somatic cell-therapy or tissue-engineered medicines. The centralized procedure may at the request of the applicant also be used for human drugs which do not fall within the above mentioned categories if the human drug (a) contains a new active substance which was not authorized in the European Community; or (b) the applicant shows that the medicinal product constitutes a significant therapeutic, scientific or technical innovation or that the granting of authorization in the centralized procedure is in the interests of patients or animal health at the European Community level.

Under the centralized procedure in the European Union, the maximum timeframe for the evaluation of a marketing authorization application by the EMA is 210 days (excluding clock stops, when additional written or oral information is to be provided by the applicant in response to questions asked by the Committee for Medicinal Products for Human Use, or CHMP), with adoption of the actual marketing authorization by the European Commission thereafter. Accelerated evaluation might be granted by the CHMP in exceptional cases, when a medicinal product is expected to be of a major public health interest from the point of view of therapeutic innovation, defined by three cumulative criteria: the seriousness of the disease to be treated; the

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absence of an appropriate alternative therapeutic approach, and anticipation of exceptional high therapeutic benefit. In this circumstance, EMA ensures that the evaluation for the opinion of the CHMP is completed within 150 days and the opinion issued thereafter.

The mutual recognition procedure, or MRP, for the approval of human drugs is an alternative approach to facilitate individual national marketing authorizations within the European Union. Basically, the MRP may be applied for all human drugs for which the centralized procedure is not obligatory. The MRP is applicable to the majority of conventional medicinal products, and is based on the principle of recognition of an already existing national marketing authorization by one or more member states.

The characteristic of the MRP is that the procedure builds on an already existing marketing authorization in a member state of the E.U. that is used as reference in order to obtain marketing authorizations in other E.U. member states. In the MRP, a marketing authorization for a drug already exists in one or more member states of the E.U. and subsequently marketing authorization applications are made in other European Union member states by referring to the initial marketing authorization. The member state in which the marketing authorization was first granted will then act as the reference member state. The member states where the marketing authorization is subsequently applied for act as concerned member states.

The MRP is based on the principle of the mutual recognition by European Union member states of their respective national marketing authorizations. Based on a marketing authorization in the reference member state, the applicant may apply for marketing authorizations in other member states. In such case, the reference member state shall update its existing assessment report about the drug in 90 days. After the assessment is completed, copies of the report are sent to all member states, together with the approved summary of product characteristics, labeling and package leaflet. The concerned member states then have 90 days to recognize the decision of the reference member state and the summary of product characteristics, labeling and package leaflet. National marketing authorizations shall be granted within 30 days after acknowledgement of the agreement.

Should any Member State refuse to recognize the marketing authorization by the reference member state, on the grounds of potential serious risk to public health, the issue will be referred to a coordination group. Within a timeframe of 60 days, member states shall, within the coordination group, make all efforts to reach a consensus. If this fails, the procedure is submitted to an EMA scientific committee for arbitration. The opinion of this EMA Committee is then forwarded to the Commission, for the start of the decision making process. As in the centralized procedure, this process entails consulting various European Commission Directorates General and the Standing Committee on Human Medicinal Products or Veterinary Medicinal Products, as appropriate.

For other countries outside of the European Union, such as countries in Eastern Europe, Latin America or Asia, the requirements governing the conduct of clinical trials, product licensing, pricing and reimbursement vary from country to country. In all cases, again, the clinical trials are conducted in accordance with GCP and the other applicable regulatory requirements.

If we fail to comply with applicable foreign regulatory requirements, we may be subject to, among other things, fines, suspension of clinical trials, suspension or withdrawal of regulatory approvals, product recalls, seizure of products, operating restrictions and criminal prosecution.

Employees

As of March 31, 2017, we had 30 full-time employees and one part-time employee, including 21 in research and development, four in manufacturing, operations, and quality assurance, and six in general and administrative functions. We have no collective bargaining agreements with our employees, and we have not experienced any work stoppages. We consider our relations with our employees to be good.

Facilities

Our corporate headquarters is located in Research Triangle Park, North Carolina, where we lease approximately 14,103 square feet of laboratory and office space. Our lease on our corporate headquarters expires on December 31, 2022. We believe our facilities are adequate for our current needs and that suitable additional substitute space would be available if needed.

Legal Proceedings

We are not currently subject to any material pending legal proceedings.

Management

Executive officers and directors

The following table provides information regarding our executive officers and directors as of March 31, 2017:

Name	Age	Position
Executive Officers:		
Mark A. Velleca, M.D., Ph.D.	53	Chief Executive Officer, President and Director
Rajesh K. Malik, M.D.	58	Chief Medical Officer
Gregory J. Mossinghoff	56	Chief Business Officer and Secretary
Jay Strum, Ph.D.	53	Chief Scientific Officer
Jennifer K. Moses	42	Vice President of Finance and Administration
Non-Employee Directors:		
Seth A. Rudnick, M.D.	68	Chairman of the Board of Directors
Fredric N. Eshelman, Pharm.D.	68	Director
Peter Kolchinsky, Ph.D.	40	Director
Glenn P. Muir	58	Director
Tyrell J. Rivers, Ph.D.	44	Director
Christy L. Shaffer, Ph.D.	59	Director
Timothy E. Sullivan	46	Director

Executive officers

Mark A. Velleca, M.D., Ph.D., has served as our Chief Executive Officer, President and a member of our board of directors since May 2014. Prior to joining us, Dr. Velleca was a co-founder and served as Senior Vice President of CGI Pharmaceuticals, Inc., or CGI, a biopharmaceutical company, from 1999 to 2010, where he managed the company from its inception through clinical trials of multiple drug candidates. After CGI was acquired by Gilead Sciences, Inc., or Gilead, a biotechnology company, in 2010, Dr. Velleca served as a Senior Advisor to Gilead from 2010 to April 2012, where he worked to help build its oncology pipeline. Dr. Velleca has served on the board of directors of BioMarker Strategies, a private oncology diagnostics company, from 2010 to 2012, and on the scientific advisory boards of BioRelix Inc., a biopharmaceutical company, from 2007 to 2012 and Intellikine, Inc., a biopharmaceutical company, from 2007 to 2010. Dr. Velleca most recently served as Executive Vice President at The Leukemia & Lymphoma Society from April 2012 to April 2014. Dr. Velleca also served as an attending physician at Yale New Haven Hospital and on the faculty of the Yale University School of Medicine. Dr. Velleca received his B.S. from Yale University, and his M.D. and Ph.D. from Washington University in St. Louis. We believe that Dr. Velleca's perspective and experience as our Chief Executive Officer and President, as well as his depth of experience in the biotechnology industry, provide him with the qualifications and skills to serve on our board of directors.

Rajesh K. Malik, M.D., has served as our Chief Medical Officer since July 2014. He has over 20 years of experience in all phases of drug development in the pharmaceutical and biotechnology industry and academic

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medicine, with a focus in oncology. Prior to becoming our Chief Medical Officer, Dr. Malik served as a consultant for business, clinical and regulatory matters from May 2013 through July 2014, including as a consultant to our Company from July 2013 to June 2014. Prior to joining us, Dr. Malik served as Chief Medical Officer of Agennix AG, a German biotechnology company, from January 2007 to September 2013, and as a member of the management board of Agennix AG from November 2009 to September 2013. Dr. Malik also served as Chief Medical Officer of Adherex Technologies, Inc., a biopharmaceutical company, from September 2004 to January 2007. Dr. Malik also served as an attending physician at University of Virginia Medical Center and on the faculty of the University of Virginia School of Medicine. Dr. Malik received his M.B. and Ch.B. from the University of Sheffield Medical School.

Gregory J. Mossinghoff has served as our Chief Business Officer and Secretary since February 2015 and provided financial management, strategic planning and business development consulting services to our Company from June 2014 through January 2015. He has more than 20 years of experience in strategic planning, technology valuation, partnering, capital markets and fundraising. Mr. Mossinghoff served as Executive Vice President, Chief Business Officer of Zoion Pharma, Inc. from August 2010 to January 2015 and as a member of the board of directors of Zoion Pharma, Inc., since August 2010. Zoion Pharma, Inc. develops drugs for veterinary disorders such as canine keratoconjunctivitis. In addition to his work as a consultant in the biopharmaceutical industry from 2005 to 2014, Mr. Mossinghoff served as Co-Founder, President and Chief Executive Officer of NovoLipid, Inc., an oncology drug discovery company, from 2010 to December 2013; Co-Founder, President and Chief Executive Officer and a member of the board of directors of Integrated Oncology Solutions, Inc., an endocrine receptor oncology drug discovery and development company, from 2006 to 2010; and President, Chief Business Officer and a member of the board of directors of Inspire Pharmaceuticals, Inc., a publicly traded biopharmaceutical company, from 1998 to 2005, which was subsequently acquired by Merck & Co., Inc. in 2011. Mr. Mossinghoff received his B.A. from the University of Virginia and his M.B.A. from George Mason University.

Jay Strum, Ph.D., has served as our Chief Scientific Officer since 2009, and in addition to this role, served as our President and a member of our board of directors from 2011 until 2014. Prior to joining us, Dr. Strum served as a scientist, manager and then Director of the Genomics Division at GlaxoSmithKline plc, or GSK, a British pharmaceutical company, from May 1995 to February 2009, where he developed drugs in multiple therapeutic areas and target classes with a focus on kinases. In his role as a manager at GSK, Dr. Strum served as a program leader of interdisciplinary research and development teams in early drug discovery in metabolic diseases and oncology, and he contributed to the discovery of numerous drug candidates and the development of three approved drugs, including TYKERB. As the Director of the Genomics Division at GSK, he led the creation and operation of an international department responsible for supporting genomics research in all therapeutic areas within GSK. Dr. Strum is the author of more than 40 scientific publications and co-inventor of all intellectual property owned or co-owned by the Company that covers trilaciclib or G1T38 or their method of use, which consists of 11 patent families with five issued U.S. patents. Dr. Strum is also the co-inventor of another six patent families and six issued patents that cover additional compounds of interest. In total, Dr. Strum is a co-inventor of more than 75 applications that have entered the national phase of prosecution in countries outside the United States. Dr. Strum received his B.S. and B.A. from Western Carolina University and his Ph.D. in biochemistry from Wake Forest University.

Jennifer K. Moses has served as our Vice President of Finance and Administration since March 2015 and provided financial consulting services to our Company from October 2012 through February 2015. From October 2007 through February 2015, Ms. Moses was a partner of RankinMcKenzie, LLC, a professional finance and accounting services firm, and provided financial services to private companies. Previously, she was a senior manager in the tax services group at Deloitte LLP, where she served clients ranging from small, emerging growth companies to large, publicly traded companies. Ms. Moses received her B.S. from Pennsylvania State University and is a certified public accountant.

Non-employee directors

Seth A. Rudnick, M.D., has served as Chairman of our board of directors since May 2014 and as the Executive Chairman of our board of directors from January 2014 to May 2014. Dr. Rudnick also serves as a member of the boards of directors of several life sciences companies, including Pozen Inc., a publicly traded pharmaceutical company, and Liquidia Technologies, Inc., a privately held biotechnology company, for which he serves as Chairman of the board of directors. From 2012 until October 2015, he served as a member of the board of directors of Square 1 Financial Inc., a financial services company that was publicly traded until October 2015, and previously served on the boards of directors of more than a dozen other privately held biotechnology companies. From 1999 to December 2013, when he retired, Dr. Rudnick was a general partner at Canaan Partners, a venture capital firm that invests in companies in the technology and healthcare sectors. From 1986 to 1991, he was head of research and development at Johnson & Johnson's biotechnology company, Ortho Biotech, and from 1982 to 1986, Dr. Rudnick was head of pharmaceutical development at Biogen N.V. Dr. Rudnick received a B.A. from the University of Pennsylvania and an M.D. from the University of Virginia. We believe that Dr. Rudnick is qualified to serve as the Chairman of our board of directors based on his experience in the life sciences, biotechnology and pharmaceutical industries and for his knowledge of corporate development matters.

Fredric N. Eshelman, Pharm.D., has served as a member of our board of directors since February 2015. Dr. Eshelman founded Eshelman Ventures, LLC in March 2014, which invests in a variety of companies, primarily in the healthcare sector, and has served as a principal since its founding. Dr. Eshelman has served as the Chairman of the board of directors of The Medicines Company, a publicly traded biopharmaceutical company, since 2015 and has been a member of the board of Valeant Pharmaceuticals International, Inc. since 2016. Dr. Eshelman previously served on the board of directors of Furiex Pharmaceuticals, a publicly traded biopharmaceutical company, from 2010 until July 2014, when it was sold to Forest Labs/Actavis, and of Pharmaceutical Product Development, Inc., a contract research organization that was publicly traded until 2011, from 1986 until 2011. Dr. Eshelman also served as Chief Executive Officer for Pharmaceutical Product Development, Inc., a biopharmaceutical company, from June 1990 to December 2011, as Senior Vice President, Development and a member of the board of directors of the former Glaxo Inc., a pharmaceutical company, from 1989 to 1990. He also serves on the boards of directors of a number of privately held biopharmaceutical companies. Dr. Eshelman also served on the executive committee of the Medical Foundation of North Carolina, the board of the North Carolina Biotechnology Center, and the Board of Trustees for the University of North Carolina—Wilmington. In addition, Dr. Eshelman serves as an adjunct professor at the University of North Carolina—Chapel Hill School of Pharmacy, where he chairs the Board of Visitors. Dr. Eshelman received his B.S. in pharmacy from the University of North Carolina—Chapel Hill, and a Pharm.D. from the University of Cincinnati. We believe that Dr. Eshelman is qualified to serve as a member of our board of directors based on his experience in the life sciences, biotechnology and pharmaceutical industries and for his knowledge of corporate development matters.

Peter Kolchinsky, Ph.D., has served as a member of our board of directors since February 2015. Dr. Kolchinsky is a founder, Managing Director and Portfolio Manager of RA Capital Management, LLC, a crossover investment manager dedicated to evidence-based investing in healthcare and life science companies, where he has worked since January 2002. RA Capital Management, LLC is the general partner of RA Capital Healthcare Fund, L.P. and RA Capital Healthcare International Fund, Ltd. Dr. Kolchinsky serves as a member of the board of directors of two publicly traded biopharmaceutical companies, Dicerna Pharmaceuticals, Inc. and Wave Life Sciences Ltd., as well as a number of privately held companies. Dr. Kolchinsky served on the Board of Global Science and Technology for the National Academics of Sciences from 2009 to 2012. Dr. Kolchinsky earned a B.A. from Cornell University and a Ph.D. in virology from Harvard University. We believe Dr. Kolchinsky is qualified to serve on our board of directors because of his business experience, including his experience as a venture capitalist and his experience serving on the boards of directors of various healthcare and life science companies.

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Glenn P. Muir has served as a member of our board of directors since September 2015. Mr. Muir also has served as a member of the board of directors of two publicly traded life science and medical device companies, Repligen Corporation since September 2015 and ReWalk Robotics Ltd. since July 2014, as well as privately held biotechnology company, RainDance Technologies, Inc. since August 2014. From September 2000 until May 2014, when he retired, Mr. Muir served as Executive Vice President, Finance and Administration of Hologic, Inc., or Hologic, a publicly traded manufacturer and supplier of medical products, and was Hologic's Chief Financial Officer from 1992 until his May 2014 retirement. Mr. Muir served as the Controller of Hologic from October 1988 to 1992, including during its initial public offering in 1990. Mr. Muir served as a director of Hologic from 2001 through August 2013. Mr. Muir holds a B.B.A. with a major in accounting from the University of Massachusetts Amherst, an M.B.A. from the Harvard Graduate School of Business Administration and an M.Sc. in taxation from Bentley College Graduate School of Business. Mr. Muir is also a certified public accountant. We believe that Mr. Muir is qualified to serve as a member of our board of directors based on his experience in the life sciences, biotechnology and pharmaceutical industries and for his knowledge of financial and corporate development matters.

Tyrell J. Rivers, Ph.D., has served as a member of our board of directors since March 2017. Dr. Rivers is an Executive Director within AstraZeneca's Corporate Development group, having responsibility for strategic equity investments, mergers and acquisitions, and divestments and has served in this role since May 2014. Prior to joining AstraZeneca, Dr. Rivers was at MedImmune Ventures from October 2009 until May 2014 where he specialized in biotechnology investing, and at Merck & Co., Inc. from 2001 through 2007 where he led the technical support for multiple commercial vaccine franchises and subsequently directed global business initiatives for accessing key technologies for research and development. Dr. Rivers earned his B.S. in Chemical Engineering from the Massachusetts Institute of Technology, a Ph.D. in Chemical Engineering from University of Texas at Austin, and his M.B.A. from the New York University Stern School of Business. Dr. Rivers also serves on the board of directors for Armaron Bio Ltd., a private clinical stage biotechnology company, and Corvidia Therapeutics, a private biotechnology company. We believe Dr. Rivers is qualified to serve as a member of our board of directors based on his experience in the life sciences, biotechnology and pharmaceutical industries and his knowledge of corporate development matters.

Christy L. Shaffer, Ph.D., has served as a member of our board of directors since August 2012, and from 2012 until 2014, Dr. Shaffer served as the Executive Chairperson of our board of directors. Dr. Shaffer was the Chief Executive Officer and President of Inspire Pharmaceuticals, Inc., or Inspire, until her retirement in February 2010. Inspire is a biopharmaceutical company that was acquired by Merck & Co., Inc. in 2011. Following her retirement, Dr. Shaffer served as a consultant to Inspire until February 2012. From August 2011 to August 2015, Dr. Shaffer served as a Venture Partner of Hatteras Venture Partners, a venture capital firm with a focus on biopharmaceuticals and related opportunities in human medicine, and as a Managing Director of Hatteras Discovery, which is a part of Hatteras Venture Partners. Since August 2015, Dr. Shaffer has served as a General Partner of Hatteras Venture Partners. Dr. Shaffer has served as a member of the board of Clearside Biomedical Inc., a publicly traded biopharmaceutical company, since January 2012. Dr. Shaffer also serves as a member of the boards of directors of privately held life sciences companies, including Artizan Biosciences, Inc., Spyryx Biosciences, Inc., Trefoil Therapeutics, Inc., KinoDyn Inc., for which she serves as Chairperson of the board of directors, and GrayBug, Inc., for which she serves as Chairperson of the board of directors. In September 2008, the Securities and Exchange Commission approved a non-monetary settlement of its investigation relating to Inspire's disclosures in its periodic reports relating to a clinical trial. The Securities and Exchange Commission also approved a settlement with Dr. Shaffer, as Inspire's President and Chief Executive Officer and a member of its board of directors, under which she consented to a cease and desist order against future violations of Section 13(a) of the Exchange Act and Rules 12b-20 and 13a-13 thereunder. The cease and desist order followed a finding by the Securities and Exchange Commission that three Quarterly Reports on Form 10-Q filed by Inspire included misleading disclosure about a clinical trial, specifically that the trial was described as "confirmatory" and "replicating" the efficacy found in an earlier trial. Dr. Shaffer did not admit or deny any findings in the

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order, and the order did not include any finding of any violation of any statute or regulation that involved any intentional wrongdoing or fraud, any monetary payments or other sanctions or otherwise affect Dr. Shaffer's future employment status, nor did it prohibit Dr. Shaffer from serving in any capacity on public company boards of directors. Dr. Shaffer received her Ph.D. in Pharmacology from the University of Tennessee Health Science Center. We believe that Dr. Shaffer is qualified to serve as a member of our board of directors based on her experience in the life sciences, biotechnology and pharmaceutical industries and for her knowledge of corporate development matters.

Timothy E. Sullivan has served as a member of our board of directors since May 2016. In January 2014, Mr. Sullivan joined Aju IB Investment and currently serves as Partner. Previously, he was Head of Life Sciences Investment Banking at RBS Citizens from December 2011 to January 2014 and served as Executive Vice President and Head of Corporate Development at Cornerstone Pharmaceuticals from March 2010 to December 2011. He also was an investment banker focused on life sciences at Jefferies and Bear Stearns. Mr. Sullivan was involved in financing and M&A transactions in excess of \$20 billion in capital and advisory. His previous healthcare experience also includes three years of advisory, business development and operations at Cornerstone Pharmaceuticals as well as four years managing a clinical research division within Brigham & Women's Hospital. Mr. Sullivan also currently serves as a director of Molecular Templates, Inc., a private biopharmaceutical company. Mr. Sullivan received his M.B.A. from Columbia Business School and his B.A. in Biology from Harvard College. We believe that Mr. Sullivan is qualified to serve as a member of our board of directors based on his experience in the life sciences, biotechnology and pharmaceutical industries and for his knowledge of corporate development matters.

Board composition

As of March 31, 2017, our board of directors consisted of eight members, six of whom are members pursuant to the board composition provisions of our existing certificate of incorporation and Third Amended and Restated Stockholders Agreement, which agreement is described under the "Certain Relationships and Related Party Transactions" section of this prospectus. These board composition provisions will terminate upon the completion of this offering. Upon the termination of these provisions, there will be no further contractual obligations regarding the election of our directors. Our nominating and corporate governance committee and our board of directors may therefore consider a broad range of factors relating to the qualifications and background of nominees, which may include diversity, which is not only limited to race, gender or national origin. We have no formal policy regarding board diversity. Our nominating and corporate governance committee's and our board of directors' priority in selecting board members is identification of persons who will further the interests of our stockholders through his or her established record of professional accomplishment, the ability to contribute positively to the collaborative culture among board members, knowledge of our business, understanding of the competitive landscape and professional and personal experiences and expertise relevant to our growth strategy. Our directors hold office until their successors have been elected and qualified or until the earlier of their death, resignation or removal. Our amended and restated certificate of incorporation and amended and restated by-laws that will become effective upon the completion of this offering also provide that our directors may be removed only for cause by the affirmative vote of the holders of at least % of the votes that all our stockholders would be entitled to cast in an annual election of directors, and that any vacancy on our board of directors, including a vacancy resulting from an enlargement of our board of directors, may be filled only by vote of a majority of our directors then in office.

Director independence

Our board of directors has determined that all members of our board of directors, except _____, are independent directors, including for purposes of the rules of The NASDAQ Stock Market and relevant federal securities laws and regulations. There are no family relationships among any of our directors or executive officers.

Staggered board

In accordance with the terms of our amended and restated certificate of incorporation and amended and restated by-laws that will become effective upon the completion of this offering, our board of directors will be divided into three staggered classes of directors of the same or nearly the same number and each will be assigned to one of the three classes. At each annual meeting of the stockholders, a class of directors will be elected for a three-year term to succeed the directors of the same class whose terms are then expiring. The terms of the directors will expire upon the election and qualification of successor directors at the annual meeting of stockholders to be held during the years 2018 for Class I directors, 2019 for Class II directors and 2020 for Class III directors:

- our Class I directors will be _____, _____ and _____ ;
- our Class II directors will be _____ and _____ ; and
- our Class III directors will be _____ and _____ .

Our amended and restated certificate of incorporation and amended and restated by-laws provide that the number of our directors shall be fixed from time to time by a resolution of the majority of our board of directors. 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 shall consist of one third of the board of directors.

The division of our board of directors into three classes with staggered three-year terms may delay or prevent stockholder efforts to effect a change of our management or a change in control.

Committees of the board of directors

Our board of directors has an audit committee, a compensation committee and a nominating and corporate governance committee, each of which will have the composition and responsibilities described below upon completion of this offering. Each of the below committees will have a written charter approved by our board of directors, effective upon completion of the offering. Each of the committees will report to our board of directors as such committee deems appropriate and as our board of directors may request. Upon completion of this offering, copies of each charter will be posted on the investor relations section of our website. Members serve on these committees until their resignation or until otherwise determined by our board of directors.

Audit committee

Effective upon completion of this offering, our audit committee will be comprised of _____, _____ and _____, with _____ serving as chairman of the committee. Our board of directors has determined that each member of the audit committee meets the independence requirements of Rule 10A-3 under the Exchange Act and the applicable NASDAQ Stock Market rules, and has sufficient knowledge in financial and auditing matters to serve on the audit committee. Our board of directors has determined that _____ is an “audit committee financial expert” within the meaning of the Securities and Exchange Commission, or SEC, regulations

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and the applicable rules of The NASDAQ Stock Market. The audit committee's responsibilities upon completion of this offering will include:

- selecting a firm to serve as the independent registered public accounting firm to audit our financial statements;
- ensuring the independence of the independent registered public accounting firm;
- discussing the scope and results of the audit with the independent registered public accounting firm, and reviewing, with management and that firm, our interim and year-end operating results;
- establishing procedures for employees to anonymously submit concerns about questionable accounting or audit matters;
- considering the effectiveness of our internal controls and internal audit function;
- reviewing material related-party transactions or those that require disclosure; and
- approving or, as permitted, pre-approving all audit and non-audit services to be performed by the independent registered public accounting firm.

Compensation committee

Effective upon completion of this offering, our compensation committee is comprised of _____, _____ and _____, with _____ serving as chairman of the committee. Each member of this committee is a non-employee director, as defined by Rule 16b-3 promulgated under the Exchange Act, and an outside director, as defined pursuant to Section 162(m) of the Internal Revenue Code of 1986, as amended. Our board of directors has determined that each member of the compensation committee is "independent" as defined in the rules of The NASDAQ Stock Market. The composition of our compensation committee meets the requirements for independence under the listing standards of The NASDAQ Stock Market, including the applicable transition rules. Our board of directors intends to cause our compensation committee to be comprised of only directors that are independent under the rules of The NASDAQ Stock Market within one year of the date of this prospectus. The compensation committee's responsibilities upon completion of this offering will include:

- reviewing and approving, or recommending that our board of directors approve, the compensation of our executive officers;
- reviewing and recommending to our board of directors the compensation of our directors;
- reviewing and recommending to our board of directors the terms of any compensatory agreements with our executive officers;
- administering our stock and equity incentive plans;
- reviewing and approving, or making recommendations to our board of directors with respect to, incentive compensation and equity plans; and
- reviewing all overall compensation policies and practices.

Nominating and governance committee

Effective upon completion of this offering, our nominating and governance committee will be comprised of _____, _____ and _____, with _____ as the chairman of the committee. Our board of directors

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has determined that each member of the nominating and corporate governance committee is “independent” as defined in the applicable rules of The NASDAQ Stock Market. The nominating and corporate governance committee's responsibilities upon completion of this offering will include:

- identifying and recommending candidates for membership on our board of directors;
- recommending directors to serve on board committees;
- reviewing and recommending our corporate governance guidelines and policies;
- reviewing proposed waivers of the code of conduct for directors and executive officers;
- evaluating, and overseeing the process of evaluating, the performance of our board of directors and individual directors; and
- assisting our board of directors on corporate governance matters.

Leadership structure and risk oversight

Our board of directors is currently chaired by Dr. Rudnick. As a general policy, our board of directors believes that separation of the positions of chairman and chief executive officer reinforces the independence of the board of directors from management, creates an environment that encourages objective oversight of management's performance and enhances the effectiveness of the board of directors as a whole. As such, Dr. Velleca serves as our President and Chief Executive Officer while Dr. Rudnick serves as our Chairman of the board of directors but is not an officer.

Our board of directors oversees the management of risks inherent in the operation of our business and the implementation of our business strategies. Our board of directors performs this oversight role by using several different levels of review. In connection with its reviews of the operations and corporate functions of our company, our board of directors addresses the primary risks associated with those operations and corporate functions. In addition, our board of directors reviews the risks associated with our company's business strategies periodically throughout the year as part of its consideration of undertaking any such business strategies.

Each of our board committees also oversees the management of our company's risk that falls within the committee's areas of responsibility. In performing this function, each committee has full access to management, as well as the ability to engage advisors. Our Chief Executive Officer reports to the audit committee and is responsible for identifying, evaluating and implementing risk management controls and methodologies to address any identified risks. In connection with its risk management role, our audit committee meets privately with representatives from our independent registered public accounting firm and our Chief Executive Officer. The audit committee oversees the operation of our risk management program, including the identification of the primary risks associated with our business and periodic updates to such risks, and reports to our board of directors regarding these activities.

Compensation committee interlocks and insider participation

None of the members of our compensation committee has at any time during the prior three years been one of our officers or employees. None of our executive officers currently serves, or in the past fiscal year has served, as a member of the board of directors or compensation committee of any entity that has one or more executive officers serving on our board of directors or compensation committee. For a description of transactions between us and members of our compensation committee and affiliates of such members, please see the “Certain Relationships and Related Party Transactions” section.

Code of business conduct and ethics

We plan to adopt a code of business conduct and ethics that applies to all of our employees, officers and directors, including those officers responsible for financial reporting, which will be effective upon completion of this offering. Upon the completion of this offering, our code of business conduct and ethics will be available on our website at www.g1therapeutics.com. We intend to disclose any amendments to the code, or any waivers of its requirements, on our website or in a Current Report on Form 8-K.

Executive and director compensation

Summary compensation table

The following table shows the total compensation paid or accrued during the fiscal year ended December 31, 2016, to our Chief Executive Officer and President and our two next most highly compensated executive officers who earned more than \$100,000 during the fiscal year ended December 31, 2016, and were serving as executive officers as of such date.

Name and principal position	Year	Salary (\$)	Bonus \$(1)	Option awards \$(2)	All other compensation \$(3)	Total(\$)
Mark A. Velleca, M.D., Ph.D. Chief Executive Officer and President	2016	405,000	133,650	788,196	7,950	1,334,796
Rajesh K. Malik, M.D. Chief Medical Officer	2016	336,000	67,200	277,565	7,950	688,715
Gregory J. Mossinghoff Chief Business Officer and Secretary	2016	247,000	49,400	231,338	—	527,738

(1) Amounts represent cash bonuses earned for the 12-month period from January 1, 2016 to December 31, 2016, and exclude payments made in 2016 for 2015 bonuses.

(2) These amounts represent the aggregate grant date fair value for option awards granted during our fiscal year ended December 31, 2016, computed in accordance with FASB ASC Topic 718. A discussion of the assumptions used in determining grant date fair value may be found in Note 8 to our Financial Statements, included elsewhere in this prospectus.

(3) These amounts represent matching contributions made by the Company for the Named Executive Officers under the Company's 401(k) plan. The Company's matching contribution is equal to 50% of the employee's deferrals under the plan up to 6% of the employee's compensation.

Narrative disclosure to summary compensation table

We have entered into executive employment agreements with each of our named executive officers in connection with their employment with us, the material terms of which are described below. These executive employment agreements provide for "at will" employment and obligate each named executive officer to refrain from disclosing any of our proprietary information received during the course of employment and to assign to us any inventions conceived or developed during the course of employment.

Mark A. Velleca, M.D., Ph.D.

We entered into an executive employment agreement with Dr. Velleca with respect to his service as Chief Executive Officer on May 19, 2014, which was subsequently amended on February 1, 2015, to reflect an increase to Dr. Velleca's annual base salary and the deletion of a provision providing for reimbursement of temporary housing and travel expenses in relation to his commute to our corporate headquarters, and on May 10, 2016, to reflect a subsequent increase to Dr. Velleca's annual base salary. Under the terms of the agreement, Dr. Velleca is entitled to an initial annual base salary of \$405,000 and his current base salary is \$417,000. Dr. Velleca is eligible to receive an annual bonus of up to 30% of his then-current base salary based on achievement of certain individual and corporate targets in the sole discretion of our board of directors. Upon the closing of this offering, Dr. Velleca's base salary will be increased to \$500,000 and his target bonus percentage will be increased to 50% of his then-current base salary. The agreement also provides for reimbursement of certain of Dr. Velleca's relocation expenses in an amount of up to \$25,000, which reimbursement will occur upon Dr. Velleca's relocation. Pursuant to the agreement, Dr. Velleca is entitled to 12 months of his then-current base salary in the event we terminate his employment without Cause, as defined below, or Dr. Velleca terminates his employment with us for Good Reason, as defined below, subject to Dr. Velleca's execution of a release satisfactory to us following such termination.

Rajesh K. Malik, M.D.

We entered into an executive employment agreement with Dr. Malik with respect to his service as Chief Medical Officer on July 1, 2014. Under the terms of the agreement, Dr. Malik is entitled to an initial annual base salary of \$325,000 and his current base salary is \$346,000. Under the agreement, Dr. Malik is eligible to receive an annual bonus of up to 20% of his then-current base salary based on achievement of certain individual and corporate targets in the sole discretion of our board of directors. Half of Dr. Malik's bonus is payable in cash, and the other half may be paid in the form of options to purchase shares of our common stock, at the discretion of our board of directors. Upon the closing of this offering, Dr. Malik's base salary will be increased to \$375,000 and his target bonus percentage will be increased to 35% of his then-current base salary. Pursuant to the agreement, Dr. Malik is entitled to six months of his then-current base salary in the event we terminate his employment without Cause, as defined below, or Dr. Malik terminates his employment with us for Good Reason, as defined below, subject to Dr. Malik's execution of a release satisfactory to us following such termination. In addition, Dr. Malik has agreed not to engage in any business competitive with or adverse to our business during his employment with us, and he has agreed not to hold certain positions following termination of his employment with us. For a 12-month period following termination of his employment with us Dr. Malik has agreed not to solicit our employees, customers, suppliers or vendors, under the terms set forth in his agreement.

Gregory J. Mossinghoff

We entered into an executive employment agreement with Mr. Mossinghoff with respect to his service as Chief Business Officer on February 1, 2015. Under the terms of the agreement, Mr. Mossinghoff is entitled to an initial annual base salary of \$240,000 and his current base salary is \$254,500. Mr. Mossinghoff is eligible to receive an annual bonus of up to 20% of his then-current base salary based on achievement of certain individual and corporate targets in the sole discretion of our board of directors. Half of Mr. Mossinghoff's bonus is payable in cash, and the other half may be paid in the form of options to purchase shares of our common stock, at the discretion of our board of directors. Upon the closing of this offering, Mr. Mossinghoff's base salary will be increased to \$300,000 and his target bonus percentage will be increased to 35% of his then-current base salary. Pursuant to the agreement, Mr. Mossinghoff is entitled to six months of his then-current base salary in the event we terminate his employment without Cause, as defined below, or Mr. Mossinghoff terminates his employment with us for Good Reason, as defined below, subject to Mr. Mossinghoff's execution of a release satisfactory to us following such termination. In addition, Mr. Mossinghoff has agreed not to engage in any business competitive with or adverse to our business during his employment with us, and he has agreed not to hold certain positions following termination of his employment with us. For a 12-month period following termination of his employment with us Mr. Mossinghoff has agreed not to solicit our employees, customers, suppliers or vendors, under the terms set forth in his agreement.

The following definitions apply to Dr. Velleca's, Dr. Malik's and Mr. Mossinghoff's executive employment agreements:

Cause is defined in each agreement as the employee's (i) fraud, embezzlement or misappropriation with respect to the Company, (ii) material breach of fiduciary duties to the Company, (iii) willful or negligent misconduct that has or may reasonably be expected to have a material adverse effect on the property, business, or reputation of the Company, (iv) material breach of the agreement, (v) willful failure or refusal to perform material duties under the agreement or failure to follow specific lawful instructions of our board of directors, in the case of Dr. Velleca and Dr. Malik, and the Chief Executive Officer, in the case of Mr. Mossinghoff, (vi) conviction or plea of *nolo contendere* in respect of a felony or misdemeanor involving moral turpitude, (vii) alcohol or substance abuse that has a material adverse effect on the ability to perform duties under the agreement, or (viii) engagement in a form of discrimination or harassment prohibited by law.

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Good Reason is defined in each agreement as (i) a material reduction of base salary not generally applicable to other executive-level employees of the Company, (ii) a material diminution of authority, duties or responsibilities, (iii) the Company's material breach of the agreement, or (iv) in the case of Dr. Malik and Mr. Mossinghoff, a relocation of employee's primary workplace to a location that is more than 50 miles from the location of the employee's primary workplace as of the date of the agreement.

Outstanding equity awards at 2016 fiscal year end

The following table shows grants of stock options outstanding on the last day of the fiscal year ended December 31, 2016, to each of the executive officers named in the Summary Compensation Table.

Name	Option Awards(1)			
	Number of securities underlying unexercised options (#) exercisable	Number of securities underlying unexercised options (#) unexercisable	Option exercise price (\$)	Option expiration date
Mark A. Velleca, M.D., Ph.D.	792,985(2)	434,875(2)	0.13	5/9/2024
	336,870(3)	398,130(3)	0.10	2/27/2025
	142,075(4)	426,225(4)	1.24	12/21/2025
	—	850,000(5)	1.39	5/10/2026
Rajesh K. Malik, M.D.	20,000(6)	—	0.10	8/29/2023
	12,500(7)	—	0.13	12/5/2023
	203,261(8)	133,173(8)	0.13	7/11/2024
	103,120(9)	121,880(9)	0.10	2/27/2025
	43,000(10)	129,000(10)	1.24	12/21/2025
Gregory J. Mossinghoff	—	300,000(11)	1.39	5/10/2026
	171,900(12)	—	0.13	7/11/2024
	174,160(13)	205,840(13)	0.10	2/27/2025
	39,950(14)	119,850(14)	1.24	12/21/2025
	—	250,000(15)	1.39	5/10/2026

(1) Each of the outstanding equity awards in the table above was granted pursuant to our 2011 Equity Incentive Plan, as amended.

(2) Represents an option to purchase shares of our common stock granted on May 9, 2014. The shares underlying this option vest as follows: subject to continued service, one-fourth (1/4th) vested on May 19, 2015, and on the same day of each succeeding calendar month thereafter, an additional one thirty-sixth (1/36th) of the remaining unvested shares will vest until all of the shares underlying the option are vested. Fifty percent of any unvested portion of the option will vest immediately upon a Change in Control, and any remaining unvested portion of the option will immediately vest if employee is terminated by us without Cause, as defined above under the "—Narrative Disclosure to Summary Compensation Table" section, within 90 days following a Change in Control. A Change in Control is defined as a (i) merger or consolidation of the Company with or into another entity such that the stockholders of the Company prior to the transaction do not or are not expected to own a majority of the voting stock of the surviving entity, (ii) the sale or other disposition of all or substantially all of the assets of the Company, or (iii) the sale or other disposition of greater than 50% of the then-outstanding voting stock of the Company by holders thereof to one or more persons or entities who are not then stockholders of the Company.

(3) Represents an option to purchase shares of our common stock granted on February 27, 2015. The shares underlying this option vest as follows: subject to continued service, one-fourth (1/4th) vests on February 28, 2016, and on the same day of each succeeding calendar month thereafter, an additional one thirty-sixth (1/36th) of the remaining unvested shares will vest until all of the shares underlying the option are vested. Fifty percent of any unvested portion of the option will vest immediately upon a Change in Control, as defined in footnote (2) above, and any remaining unvested portion of the option will immediately vest if employee is terminated by us without Cause, as defined above under the "—Narrative Disclosure to Summary Compensation Table" section within 90 days following a Change in Control, as defined in footnote (2) above.

(4) Represents an option to purchase shares of our common stock granted on December 21, 2015. The shares underlying this option vest as follows: subject to continued service, one-fourth (1/4th) vests on December 21, 2016, and on the same day of each succeeding calendar month thereafter, an additional one thirty-sixth (1/36th) of the remaining unvested shares will vest until all of the shares underlying the option are vested. Fifty percent of any unvested portion of the option will vest immediately upon a Change in Control, as defined in footnote (2) above, and any remaining unvested portion of the option will immediately vest if employee is terminated by us without Cause, as defined above under the "—Narrative Disclosure to Summary Compensation Table" section within 90 days following a Change in Control, as defined in footnote (2) above.

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- (5) Represents an option to purchase shares of our common stock granted on May 10, 2016. The shares underlying this option vest as follows: subject to continued service, one-fourth (1/4th) vests on May 10, 2017, and on the same day of each succeeding calendar month thereafter, an additional one thirty-sixth (1/36th) of the remaining unvested shares will vest until all of the shares underlying the option are vested. Fifty percent of any unvested portion of the option will vest immediately upon a Change in Control, as defined in footnote (2) above, and any remaining unvested portion of the option will immediately vest if employee is terminated by us without Cause, as defined above under the "—Narrative Disclosure to Summary Compensation Table" section within 90 days following a Change in Control, as defined in footnote (2) above.
- (6) Represents an option to purchase shares of our common stock granted on August 29, 2013. The shares underlying this option vested as follows: subject to continued service, one-fourth (1/4th) vested on July 1, 2013; on the same day of each of the two succeeding calendar months thereafter, an additional one-fourth (1/4th) vested; and the final one-fourth (1/4th) vested on achievement of a performance condition on September 30, 2013, as determined by our board of directors.
- (7) Represents an option to purchase shares of our common stock granted on December 5, 2013. The shares underlying this option vested as follows: 5,000 vested on the date of grant, 5,000 vested upon achievement of a performance milestone in June 2014, as determined by our board of directors, and 2,500 vested upon achievement of a performance milestone in February 2014, as determined by our board of directors.
- (8) Represents an option to purchase shares of our common stock granted on July 11, 2014. The shares underlying this option vest as follows: subject to continued service, one-fourth (1/4th) vested on July 1, 2015, and on the same day of each succeeding calendar month thereafter, an additional one thirty-sixth (1/36th) of the remaining unvested shares will vest until all of the shares underlying the option are vested. Fifty percent of any unvested portion of the option will vest immediately upon a Change in Control, as defined in footnote (2) above, and any remaining unvested portion of the option will immediately vest if employee is terminated by us without Cause, as defined above under the "—Narrative Disclosure to Summary Compensation Table" section within 90 days following a Change in Control, as defined in footnote (2) above.
- (9) Represents an option to purchase shares of our common stock granted on February 27, 2015. The shares underlying this option vest as follows: subject to continued service, one-fourth (1/4th) vests on February 28, 2016, and on the same day of each succeeding calendar month thereafter, an additional one thirty-sixth (1/36th) of the remaining unvested shares will vest until all of the shares underlying the option are vested. Fifty percent of any unvested portion of the option will vest immediately upon a Change in Control, as defined in footnote (2) above, and any remaining unvested portion of the option will immediately vest if employee is terminated by us without Cause, as defined above under the "—Narrative Disclosure to Summary Compensation Table" section within 90 days following a Change in Control, as defined in footnote (2) above.
- (10) Represents an option to purchase shares of our common stock granted on December 21, 2015. The shares underlying this option vest as follows: subject to continued service, one-fourth (1/4th) vests on December 21, 2016, and on the same day of each succeeding calendar month thereafter, an additional one thirty-sixth (1/36th) of the remaining unvested shares will vest until all of the shares underlying the option are vested. Fifty percent of any unvested portion of the option will vest immediately upon a Change in Control, as defined in footnote (2) above, and any remaining unvested portion of the option will immediately vest if employee is terminated by us without Cause, as defined above under the "—Narrative Disclosure to Summary Compensation Table" section within 90 days following a Change in Control, as defined in footnote (2) above.
- (11) Represents an option to purchase shares of our common stock granted on May 10, 2016. The shares underlying this option vest as follows: subject to continued service, one-fourth (1/4th) vests on May 10, 2017, and on the same day of each succeeding calendar month thereafter, an additional one thirty-sixth (1/36th) of the remaining unvested shares will vest until all of the shares underlying the option are vested. Fifty percent of any unvested portion of the option will vest immediately upon a Change in Control, as defined in footnote (2) above, and any remaining unvested portion of the option will immediately vest if employee is terminated by us without Cause, as defined above under the "—Narrative Disclosure to Summary Compensation Table" section within 90 days following a Change in Control, as defined in footnote (2) above.
- (12) Represents an option to purchase shares of our common stock granted on July 11, 2014. The shares underlying this option vested as follows: subject to continued service, one-fourth (1/4th) vested on September 1, 2014, and on the same day of each succeeding calendar quarter thereafter, an additional one-fourth (1/4th) vested until all of the shares underlying the option vested.
- (13) Represents an option to purchase shares of our common stock granted on February 27, 2015. The shares underlying this option vest as follows: subject to continued service, one-fourth (1/4th) vests on February 28, 2016, and on the same day of each succeeding calendar month thereafter, an additional one thirty-sixth (1/36th) of the remaining unvested shares will vest until all of the shares underlying the option are vested. Fifty percent of any unvested portion of the option will vest immediately upon a Change in Control, as defined in footnote (2) above, and any remaining unvested portion of the option will immediately vest if employee is terminated by us without Cause, as defined above under the "—Narrative Disclosure to Summary Compensation Table" section within 90 days following a Change in Control, as defined in footnote (2) above.
- (14) Represents an option to purchase shares of our common stock granted on December 21, 2015. The shares underlying this option vest as follows: Subject to continued service, one-fourth (1/4th) vests on December 21, 2016, and on the same day of each succeeding calendar month thereafter, an additional one thirty-sixth (1/36th) of the remaining unvested shares will vest until all of the shares underlying the option are vested. Fifty percent of any unvested portion of the option will vest immediately upon a Change in Control, as defined in footnote (2) above, and any remaining unvested portion of the option will immediately vest if employee is terminated by us without Cause, as defined above under the "—Narrative Disclosure to Summary Compensation Table" section within 90 days following a Change in Control, as defined in footnote (2) above.
- (15) Represents an option to purchase shares of our common stock granted on May 10, 2016. The shares underlying this option vest as follows: subject to continued service, one-fourth (1/4th) vests on May 10, 2017, and on the same day of each succeeding calendar month thereafter, an additional one thirty-sixth (1/36th) of the remaining unvested shares will vest until all of the shares underlying the option are vested. Fifty percent of any unvested portion of the option will vest immediately upon a Change in Control, as defined in footnote (2) above, and any remaining unvested portion of the option will immediately vest if employee is terminated by us without Cause, as defined above under the "—Narrative Disclosure to Summary Compensation Table" section within 90 days following a Change in Control, as defined in footnote (2) above.

Director compensation

The following table shows the total compensation paid or accrued during the fiscal year ended December 31, 2016, to each of our non-employee directors. Directors who are employed by us are not compensated for their service on our board of directors.

Name	Option awards (\$)(1)	All other compensation (\$)	Total (\$)
Seth A. Rudnick, M.D.(2)	321,722(3)(4)	13,500(5)	335,222
Fredric N. Eshelman, Pharm.D.	—	—	—
Michael J. Gutch, Ph.D.	—	—	—
Peter Kolchinsky, Ph.D.	—	—	—
Ron Laufer, M.D.(6)	—	—	—
Glenn P. Muir(7)	—	—	—
Christy L. Shaffer, Ph.D.	—	—	—
Timothy E. Sullivan	—	—	—

(1) Unless otherwise stated in the footnotes below, none of the non-employee directors held options to purchase our common stock or any other stock awards as of December 31, 2016.

(2) Dr. Rudnick serves as the Chairman of our board of directors and as a member of our scientific and clinical advisory boards.

(3) This amount represents the fair value of the option computed in accordance with ASC 825 and is marked to market at the end of each reporting period. Changes in fair value are recorded as unrealized gains or losses in the consolidated statement of operations in accordance with ASC 320.

(4) We granted Dr. Rudnick an option to purchase 175,000 shares of our common stock on May 10, 2016, which option grant was made at the discretion of our board of directors as compensation for his service as a chairman of our Board.

(5) All Other Compensation reflects compensation earned or received by Dr. Rudnick for service as a member of our scientific and clinical advisory boards, which includes \$13,500 in cash for his service on our advisory boards for the year ended December 31, 2016. As of December 31, 2016, Dr. Rudnick held options to purchase 490,581 shares of our common stock.

(6) Dr. Laufer resigned as a director on September 22, 2016.

(7) As of December 31, 2016, Mr. Muir held an option to purchase a total of 150,000 shares of our common stock.

Agreements with non-employee directors

Seth A. Rudnick, M.D.

On July 1, 2014, we entered into a director agreement with Dr. Rudnick with respect to his service as the Chairman of our board of directors, which expired on June 30, 2016, or the 2014 Director Agreement. Following the expiration of the 2014 Director Agreement, we entered into a director agreement with Dr. Rudnick with respect to his service as the Chairman of our board of directors on July 15, 2016, or the 2016 Director Agreement. The term of the 2016 director Agreement is July 1, 2016, through June 30, 2018; however, the agreement may be terminated by Dr. Rudnick or by us at any time on at least 30 days' written notice.

On July 1, 2014, we entered into an advisory board member agreement with Dr. Rudnick with respect to his service as a member of our scientific and clinical advisory boards, which expired on June 30, 2016. On July 15, 2016, we entered into a subsequent advisory board member agreement with Dr. Rudnick with a term of July 1, 2016 through June 30, 2018; however, it may be terminated by Dr. Rudnick or by us at any time on at least 30 days' written notice. Under the terms of the agreement, Dr. Rudnick is entitled to receive cash compensation in the amount of \$6,000 annually and \$3,000 for each advisory board meeting attended in person and \$1,500 for each advisory board meeting attended telephonically. All fees are payable by us upon receipt of an invoice from Dr. Rudnick.

During the terms of the agreements, Dr. Rudnick is obligated to refrain from disclosing or using any of our proprietary information received in connection with his service and to assign to us any inventions conceived or

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developed in connection with his service. In addition, during the terms of the agreements, Dr. Rudnick is required to provide us with prior written notice of any consulting projects or employment he undertakes with companies whose business would directly competitive with our business, after receipt of which we may terminate the agreements effective immediately.

Non-employee director compensation policy

We plan to adopt a policy with respect to the compensation payable to our non-employee directors, which will become effective upon the closing of the offering. Under this policy, each non-employee director will be eligible to receive compensation for his or her service consisting of annual cash retainers and equity awards. Our non-employee directors will receive the following annual retainers for their service:

Position	Retainer
Board Member	\$35,000
Board Chairperson	25,000
Audit Committee Chair	15,000
Compensation Committee Chair	10,000
Nominating and Governance Committee Chair	7,000
Audit Committee Member	7,500
Compensation Committee Member	5,000
Nominating and Governance Committee Member	3,500

Equity awards for non-employee directors will consist of (i) an initial equity award consisting of options to purchase shares equal to 0.073% of our outstanding common stock, which shall initially equal 60,000 shares, upon first appointment to our board of directors and vesting monthly over a period of three years, subject to the non-employee director's continued service on the Board, and (ii) annual equity awards consisting of options to purchase shares equal to 0.037% of our outstanding common stock, which shall initially equal 30,000 shares, vesting 12 months after the grant date, subject to the non-employee director's continued service on the Board.

Directors may be reimbursed for travel, food, lodging and other expenses directly related to their service as directors. Directors are also entitled to the protection provided by their indemnification agreements and the indemnification provisions in our current certificate of incorporation and by-laws, as well as the certificate of incorporation and by-laws that will become effective upon the completion of this offering.

Equity compensation plans and other benefit plans

2017 Employee, director and consultant equity plan

We plan to adopt a 2017 Employee, Director and Consultant Equity Plan, or the 2017 Plan, which will become effective upon the closing of the offering made hereby. The 2017 Plan will expire in 2027. Under the 2017 Plan, we may grant incentive stock options, non-qualified stock options, restricted and unrestricted stock awards and other stock-based awards. Each of the share numbers that follows in this description of the 2017 Plan are fixed and are not subject to change based on our reverse stock split. There will be (1) shares of our common stock authorized for issuance under the 2017 Plan plus (2) shares of our common stock represented by awards granted under our 2011 Plan that are forfeited, expire or are cancelled without delivery of shares or which result in the forfeiture of shares of our common stock back to us on or after the date that the 2017 Plan becomes effective.

In addition, the 2017 Plan contains an "evergreen" provision, which allows for an annual increase in the number of shares of our common stock available for issuance under the 2017 Plan on the first day of each fiscal year

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during the period beginning in fiscal year 2018 and ending in fiscal year 2027. The annual increase in the number of shares shall be equal to the lowest of:

- shares of our common stock;
- % of the number of shares of our common stock outstanding as of such date; and
- an amount determined by our board of directors or compensation committee.

Our board of directors has authorized our compensation committee to administer the 2017 Plan. In accordance with the provisions of the plan, the compensation committee will determine the terms of options and other awards, including the following:

- which employees, directors and consultants shall be granted awards;
- the number of shares of our common stock subject to options and other awards;
- the exercise price of each option, which generally shall not be less than fair market value on the date of grant;
- the termination or cancellation provisions applicable to options;
- the terms and conditions of other awards, including conditions for repurchase, termination or cancellation, issue price and repurchase price; and
- all other terms and conditions upon which each award may be granted in accordance with our plan.

No participant may receive awards for more than _____ shares of our common stock in any fiscal year.

In addition, our board of directors or any committee to which the board of directors delegates authority may, with the consent of the affected plan participants, re-price or otherwise amend outstanding awards consistent with the terms of our plan.

Upon a merger, consolidation or sale of all or substantially all of our assets, our board of directors or any committee to which the board of directors delegates authority, or the board of directors of any corporation assuming our obligations, may, in its sole discretion, take any one or more of the following actions pursuant to our 2017 Plan, as to some or all outstanding awards, to the extent not otherwise agreed under any individual optionholder's option or employment agreement:

- provide that outstanding options will be assumed or substituted for options of the successor corporation;
- provide that the outstanding options must be exercised within a certain number of days, either to the extent the options are then exercisable, or at our board of directors' discretion, any such options being made partially or fully exercisable;
- terminate outstanding options in exchange for a cash payment of an amount equal to the difference between (a) the consideration payable upon consummation of the corporate transaction to a holder of the number of shares into which such option would have been exercisable to the extent then exercisable, or in our board of directors' discretion, any such options being made partially or fully exercisable, and (b) the aggregate exercise price of those options;
- provide that outstanding stock grants will be substituted for shares of the successor corporation or consideration payable with respect to our outstanding stock in connection with the corporate transaction; and

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- terminate outstanding stock grants in exchange for payment of an amount equal to the consideration payable upon consummation of the corporate transaction to a holder of the same number of shares comprising the stock grant, to the extent the stock grant is no longer subject to any forfeiture or repurchase rights, or at our board of directors' discretion, all forfeiture and repurchase rights being waived upon the corporation transaction.

2011 Equity Incentive Plan

Our 2011 Equity Incentive Plan, as amended, or the 2011 Plan, was approved by our board of directors and our stockholders on March 3, 2011, and was most recently amended on November 7, 2016. The 2011 Plan provides for the issuance of up to 13,201,925 shares of our common stock. The 2011 Plan allows us to make grants of stock options, restricted stock, restricted stock units and stock appreciation rights to our employees, directors and consultants. As of March 31, 2017, under the 2011 Plan, options to purchase 11,207,814 shares of our common stock were outstanding, 1,608,511 shares of our common stock had been issued and were outstanding pursuant to the exercise of options, and 385,600 shares of our common stock were available for future awards. We anticipate that in connection with the completion of this offering, we will terminate the 2011 Plan.

Under the 2011 Plan, in the event of a consolidation, merger or other reorganization event, our compensation committee or the successor board of directors may, in its sole discretion, provide that all outstanding awards shall be assumed, converted or replaced by the successor corporation, or unless otherwise required by an award agreement, provide that all outstanding awards shall terminate, without accelerating vesting, immediately prior to the consummation of such reorganization event. In the event of an acquisition or any other transaction involving another entity, we may substitute or assume outstanding awards granted by another entity.

Other compensation

We currently maintain broad-based benefits that are provided to all employees, including health insurance, life and long-term disability insurance and dental insurance.

401(k) Plan

We maintain a 401(k) plan for employees. The 401(k) plan is intended to qualify under Section 401(k) of the Internal Revenue Service Code of 1986, as amended, so that contributions to the 401(k) plan by employees or by us, and the investment earnings thereon, are not taxable to the employees until withdrawn from the 401(k) plan, and so that contributions by us, if any, will be deductible by us when made. Under the 401(k) plan, employees may elect to reduce their current compensation by up to the statutorily prescribed annual limit and to have the amount of such reduction contributed to the 401(k) plan. The 401(k) plan permits us to make contributions up to the limits allowed by law on behalf of all eligible employees. Since January 1, 2016, we make matching contributions of 50% of the first 6% contributed by employees to our 401(k) plan.

Rule 10b5-1 sales plans

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 officer when entering into the plan, without further direction from the director or officer. The director or officer may amend or terminate the plan in limited circumstances. Our directors and executive officers may also buy or sell additional shares of our common stock outside of a Rule 10b5-1 plan when they are not in possession of material, nonpublic information.

Certain relationships and related party transactions

The following is a description of transactions since January 1, 2014, to which we have been a party, in which the amount involved exceeds \$120,000, and in which any of our directors, executive officers or holders of more than 5% of our capital stock, or an affiliate or immediate family member thereof, had or will have a direct or indirect material interest. We refer to such transactions as “related party transactions” and such persons as “related parties.” With the approval of our board of directors, we have engaged in the related party transactions described below. We believe the terms obtained or consideration that we paid or received, as applicable, in connection with the transactions described below were comparable to terms available or the amounts that would be paid or received, as applicable, from unaffiliated third parties.

Other than as described below, there have not been, nor are there any currently proposed, transactions or series of similar transactions to which we have been or will be a party other than compensation arrangements, which are described where required under the “Executive and Director Compensation” section.

Equity financings

Series A financing

In October 2013 and May 2014, we issued an aggregate of 14,996,692 Series A Preferred Stock at a purchase price of \$0.84 per share for aggregate consideration of \$12.6 million. The Series A Preferred Stock was issued in two tranches of 7,509,696 shares and 7,486,996 shares, respectively.

The table below sets forth the aggregate number and purchase price of shares of Series A Preferred Stock issued to our directors, executive officers or holders of more than 5% of our capital stock, or an affiliate or immediate family member thereof:

Name	Shares	Aggregate purchase price
MedImmune Ventures, Inc.	7,142,857	\$ 5,999,999.99
Hatteras Venture Partners IV SBIC, LP	5,970,829	\$ 5,015,496.02
Hatteras NC Fund, LP	597,698	\$ 502,066.55

Series B financing

In February 2015 and December 2015, we issued an aggregate of 22,928,234 shares of our Series B Preferred Stock at a purchase price of \$1.4507 per share for an aggregate consideration of \$33.3 million. The Series B Preferred Stock was issued in two tranches of 11,382,087 shares and 11,546,147 shares, respectively.

The table below sets forth the aggregate number of shares of Series B Preferred Stock issued to our directors, executive officers or holders of more than 5% of our capital stock, or an affiliate or immediate family member thereof:

Name	Shares	Aggregate purchase price
MedImmune Ventures, Inc.	2,412,628	\$ 3,499,999.44
Hatteras Venture Partners IV SBIC, LP	2,412,628	\$ 3,499,999.44
Eshelman Ventures, LLC	6,893,224	\$ 10,000,000.06
RA Capital Healthcare Fund, L.P.	5,169,916	\$ 7,499,997.16
Lumira Capital II, L.P.	3,154,882	\$ 4,576,787.32
Lumira Capital II (International), L.P.	291,728	\$ 423,209.82

Series C financing

In April 2016, May 2016 and June 2016, we issued an aggregate of 16,828,217 shares of our Series C Preferred Stock at a purchase price of \$2.9712 per share for an aggregate consideration of \$50 million. The Series C Preferred Stock was issued in three closings of 14,892,972 shares, 925,552 shares and 1,009,693 shares, respectively.

The table below sets forth the aggregate number of shares of Series C Preferred Stock issued to our directors, executive officers or holders of more than 5% of our capital stock, or an affiliate or immediate family member thereof:

Name	Shares	Aggregate purchase price
MedImmune Ventures, Inc.	673,128	\$ 1,999,997.91
Hatteras Venture Partners IV SBIC, LP	883,481	\$ 2,624,998.75
Eshelman Ventures, LLC	2,524,233	\$ 7,500,001.09
RA Capital Healthcare Fund, L.P.	1,361,403	\$ 4,045,000.59
L2 Ventures, LLC	126,212	\$ 375,001.09
Lumira Capital II, L.P.	770,192	\$ 2,288,394.47
Lumira Capital II (International), L.P.	71,218	\$ 211,602.92
Glenn Muir	302,908	\$ 900,000.25

Transfer of Series B preferred stock

On March 24, 2016, Carolina Research Ventures, LLC transferred 172,331 shares of Series B Preferred Stock to L2 Ventures, LLC, an affiliate of Hatteras Venture Partners IV SBIC, LP.

Agreements with stockholders

In connection with the Series C Preferred Stock financing, we entered into the Third Amended and Restated Stockholders Agreement, dated as of April 27, 2016, or Stockholders Agreement, with certain of our stockholders, including our principal stockholders. The Stockholders Agreement will terminate immediately upon completion of the offering.

Also in connection with the Series C Preferred Stock financing, we entered into a Second Amended and Restated Registration Rights Agreement, dated as of April 27, 2016, with certain of our stockholders, including our principal stockholders, pursuant to which these stockholders will have, among other things, registration rights under the Securities Act of 1933, as amended, with respect to common stock that they will hold following this offering. See the "Description of Capital Stock—Registration Rights" section for a further description of the terms of this agreement.

Director and executive officer compensation

Please see the "Executive and Director Compensation" section for a discussion of payments and options granted to our named executive officers and non-employee directors.

Employment agreements

We have entered into employment agreements with our executive officers. For more information regarding these agreements, see the "Director and Executive Compensation—Narrative Disclosure to Summary Compensation Table" section.

Indemnification agreements with officers and directors and directors' and officers' liability insurance

In connection with this offering, we have entered into indemnification agreements with each of our executive officers and directors. The indemnification agreements, our restated certificate of incorporation and our restated by-laws to be in effect upon completion of this offering will require us to indemnify our directors to the fullest extent not prohibited by Delaware law. Subject to certain limitations, our restated by-laws also require us to advance expenses incurred by our directors and officers. We also maintain a general liability insurance policy which covers certain liabilities of directors and officers of our company arising out of claims based on acts or omissions in their capacities as directors or officers.

Policies and procedures for related party transactions

In connection with this offering, we plan to adopt a written policy, effective upon completion of this offering, that requires all future transactions between us and any director, executive officer, holder of 5% or more of any class of our capital stock or any member of the immediate family of, or entities affiliated with, any of them, or any other related persons, as defined in Item 404 of Regulation S-K, or their affiliates, in which the amount involved is equal to or greater than \$120,000, be approved in advance by our audit committee. Any request for such a transaction must first be presented to our audit committee for review, consideration and approval. In approving or rejecting any such proposal, our audit committee is to consider the relevant facts and circumstances available and deemed relevant to the audit committee, including, but not limited to, the extent of the related party's interest in the transaction, and whether the transaction is on terms no less favorable to us than terms we could have generally obtained from an unaffiliated third party under the same or similar circumstances.

Principal stockholders

The following table sets forth certain information with respect to the beneficial ownership of our common stock at March 31, 2017, and as adjusted to reflect the sale of our common stock in this offering, for:

- each of our directors;
- each of our named executive officers;
- all of our current directors and executive officers as a group; and
- each person, or group of affiliated persons, who beneficially owned more than 5% of our common stock.

The number of shares of our common stock beneficially owned by each entity, person, director or executive officer is determined in accordance with the rules of the SEC, and the information is not necessarily indicative of beneficial ownership for any other purpose. Under such rules, beneficial ownership includes any shares over which the individual has sole or shared voting power or investment power as well as any shares that the individual has the right to acquire within 60 days of March 31, 2017, through the exercise of any stock option, warrants or other rights. Except as otherwise indicated, and subject to applicable community property laws, the persons named in the table have sole voting and investment power with respect to all shares of common stock held by that person.

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The percentage of shares beneficially owned is computed on the basis of 61,241,607 shares of our common stock outstanding as of March 31, 2017, which reflects the assumed conversion of all outstanding shares of our preferred stock into an aggregate of 56,799,234 shares of our common stock. Shares of our common stock that a person has the right to acquire within 60 days of March 31, 2017, are deemed outstanding for purposes of computing the percentage ownership of the person holding such rights, but are not deemed outstanding for purposes of computing the percentage ownership of any other person, except with respect to the percentage ownership of all directors and executive officers as a group.

Name and address of beneficial owner(1)	Number of shares of common stock beneficially owned	Percentage of shares of common stock beneficially owned	
		Before offering	After offering
More than 5% stockholders:			
Hatteras Venture Partners IV SBIC, LP(2)	12,121,202	19.79%	
MedImmune Ventures, Inc.(3)	10,228,613	16.70%	
Eshelman Ventures, LLC(4)	9,417,457	15.38%	
RA Capital Healthcare Fund, L.P.(5)	6,531,319	10.66%	
Lumira Capital II, L.P.(6)	4,288,020	7.00%	
Directors and named executive officers:			
Mark A. Velleca, M.D., Ph.D.(7)	1,748,085	2.78%	
Rajesh K. Malik, M.D.(7)	533,726	*	
Gregory J. Mossinghoff(7)	504,735	*	
Seth A. Rudnick, M.D.(8)	319,011	*	
Fredric N. Eshelman, Pharm.D.(4)	9,417,457	15.38%	
Peter Kolchinsky, Ph.D.(5)	6,531,319	10.66%	
Glenn P. Muir(9)	386,236	*	
Tyrell J. Rivers, Ph.D.	—	—	
Christy L. Shaffer, Ph.D.(10)	298,543	*	
Timothy Sullivan.	—	—	
All executive officers and directors as a group (12 persons)(11)	20,515,746	31.55%	

* Represents beneficial ownership of less than one percent of our outstanding common stock.

- (1) Unless otherwise indicated, the address for each beneficial owner listed is c/o G1 Therapeutics, Inc., 79 T.W. Alexander Drive, 4501 Research Commons, Suite 100, Research Triangle Park, NC 27709.
- (2) Consists of (a) 599,781 shares of our common stock, 1,318,681 shares of our Series 1 Preferred Stock, 5,970,829 shares of our Series A Preferred Stock, 2,412,628 shares of our Series B Preferred Stock, and 883,481 shares of our Series C Preferred Stock held by Hatteras Venture Partners IV SBIC, LP; (b) 39,561 shares of our common stock and 597,698 shares of our Series A Preferred Stock held by Hatteras NC Fund, LP, an affiliate of Hatteras Venture Partners IV SBIC, LP; and (c) 172,331 shares of Series B Preferred Stock and 126,212 shares of Series C Preferred Stock held by L2 Ventures, LLC, an affiliate of Hatteras Venture Partners IV SBIC, LP. The general partner of Hatteras Venture Partners IV SBIC, LP is Hatteras Venture Advisors IV SBIC, LLC; the general partner of Hatteras NC Fund, LP is Hatteras Venture Advisors IV, LLC and the general partner of L2 Ventures, LLC is Hatteras Venture Advisors V, LLC. Each of Hatteras Venture Advisors IV SBIC, LLC and Hatteras Venture Advisors IV, LLC is owned by Clay B. Thorp, John Crumpler, Douglas Reed, Kenneth B. Lee and Robert A. Ingram. Hatteras Venture Advisors V, LLC is owned by Clay B. Thorp, John Crumpler, Douglas Reed, Christy Shaffer and Robert A. Ingram. Each of Hatteras Venture Advisors IV SBIC, LLC, Hatteras Venture Advisors IV, LLC, Clay B. Thorp, John Crumpler, Douglas Reed, Kenneth B. Lee and Robert A. Ingram may be deemed to beneficially own the shares held by Hatteras Venture Partners IV SBIC, LP. Each of Hatteras Venture Advisors V, LLC, Clay B. Thorp, John Crumpler, Douglas Reed, Christy Shaffer and Robert A. Ingram may be deemed to own the shares held by L2 Ventures, LLC. The address of each entity and individual listed in this note is 280 S. Magnum Street, Suite 350, Durham, NC 27701.
- (3) Consists of 7,142,857 shares of our Series A Preferred Stock, 2,412,628 shares of our Series B Preferred Stock and 673,128 shares of our Series C Preferred Stock held by MedImmune Ventures, Inc. MedImmune Ventures, Inc. is wholly owned by AstraZeneca plc, and AstraZeneca plc may be deemed to beneficially own the shares held by MedImmune Ventures, Inc. The address of MedImmune Ventures, Inc. is One MedImmune Way, Gaithersburg, MD 20878. The address of AstraZeneca plc is 2 Kingdom Street, London W2 6BD.
- (4) Consists of 6,893,224 shares of our Series B Preferred Stock and 2,524,233 shares of our Series C Preferred Stock held by Eshelman Ventures, LLC. Dr. Fredric Eshelman, a member of our board of directors and the founder and principal of Eshelman Ventures, LLC, may be deemed to

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beneficially own the shares held by Eshelman Ventures, LLC. The address of Eshelman Ventures, LLC and Dr. Eshelman is 319 N. Third Street, Suite 301, Wilmington, NC 28401.

- (5) Consists of 5,169,916 shares of our Series B Preferred Stock and 1,361,403 shares of our Series C Preferred Stock held by RA Capital Healthcare Fund, L.P. Dr. Peter Kolchinsky, a member of our board of directors, is the managing member of RA Capital Management, LLC, the general partner of RA Capital Healthcare Fund, L.P. Dr. Kolchinsky and RA Capital Management, LLC may be deemed to beneficially own the shares held by RA Capital Healthcare Fund, L.P. The address of each entity and individual listed in this note is 20 Park Plaza, Suite 1200, Boston, MA 02116.
- (6) Consists of shares of 3,154,882 shares of our Series B Preferred Stock and 770,192 shares of our Series C Preferred Stock held by Lumira Capital II, L.P. and 291,728 shares of our Series B Preferred Stock and 71,218 shares of our Series C Preferred Stock held by Lumira Capital II (International), L.P., an affiliate of Lumira Capital II, L.P. Lumira Capital GP, L.P., the general partners of which are Lumira GP Inc. and Lumira GP Holdings Co., is the general partner of each of Lumira Capital II, L.P. and Lumira Capital II (International), L.P. Each of Lumira Capital II, L.P. and Lumira Capital II (International), L.P. is managed by Lumira Capital Investment Management Inc. Each of Lumira Capital GP, L.P., Lumira GP Inc., Lumira GP Holdings Co. and Lumira Capital Investment Management Inc. may be deemed to beneficially own the shares held by Lumira Capital II, L.P. The address of each entity listed in this note is 141 Adelaide Street West, Suite 770, Toronto, Ontario, Canada M5H 3L5.
- (7) Consists of options to purchase shares of our common stock that are exercisable as of March 31, 2017, or will become exercisable within 60 days after such date.
- (8) Consists of options to purchase shares of our common stock held by Dr. Seth Rudnick that are exercisable as of March 31, 2017, or will become exercisable within 60 days after such date. This number does not include 166,577 shares of our common stock and 8,271 shares of our Series B Preferred Stock held by the Seth A. Rudnick 2014 Irrevocable GST Trust U/A Dated 3/1/2014, because Dr. Rudnick has neither voting nor investment power over these shares.
- (9) Consists of 83,328 options to purchase shares of our common stock that are exercisable as of March 31, 2017, or will become exercisable within 60 days after such date and 302,908 shares of Series C Preferred Stock.
- (10) Consists of 172,331 shares of Series B Preferred Stock and 126,212 shares of Series C Preferred Stock held by L2 Ventures, LLC. Dr. Christy Shaffer, a member of our board of directors may be deemed to beneficially own the shares held by L2 Ventures, LLC. See note 2 above.
- (11) See notes, 4, 5, 7, 8 and 9 above. Also Includes Jay Strum and Jennifer K. Moses, who are executive officers but not named executive officers.

Description of capital stock

General

Upon the completion of this offering, our authorized capital stock will consist of _____ shares of common stock, par value \$0.0001 per share, and _____ shares of preferred stock, par value \$0.0001 per share, all of which will be undesignated, and there will be _____ shares of common stock outstanding and no shares of preferred stock outstanding. As of March 31, 2017, we had approximately 40 record holders of our capital stock. All of our outstanding shares of preferred stock will automatically convert into shares of our common stock upon the completion of this offering.

The following description of our capital stock and provisions of our amended and restated certificate of incorporation and amended and restated by-laws are summaries of material terms and provisions and are qualified by reference to our amended and restated certificate of incorporation and amended and restated by-laws, copies of which have been filed with the SEC as exhibits to the registration statement of which this prospectus is a part. The descriptions of our common stock and preferred stock reflect the content of the amended and restated certificate of incorporation and amended and restated by-laws that will become effective immediately prior to the completion of this offering.

Common stock

Upon the completion of this offering, we will be authorized to issue one class of common stock. Holders of our common stock are entitled to one vote for each share of common stock held of record for the election of directors and on all matters submitted to a vote of stockholders. Holders of our common stock are entitled to receive dividends ratably, if any, as may be declared by our board of directors out of legally available funds, subject to any preferential dividend rights of any preferred stock then outstanding. Upon our dissolution, liquidation or winding up, holders of our common stock are entitled to share ratably in our net assets legally available after the payment of all our debts and other liabilities, subject to the preferential rights of any preferred stock then outstanding. Holders of our common stock have no preemptive, subscription, redemption or conversion rights. The rights, preferences and privileges of holders of common stock are subject to, and may be adversely affected by, the rights of the holders of shares of any series of preferred stock that we may designate and issue in the future. Except as described under the “—Anti-Takeover Effects of Delaware Law, Our Amended and Restated Certificate of Incorporation and Our Amended and Restated By-Laws” section below, a majority vote of the holders of common stock is generally required to take action under our amended and restated certificate of incorporation and amended and restated by-laws.

Preferred stock

Upon the completion of this offering, our board of directors will be authorized, without action by the stockholders, to designate and issue up to an aggregate of _____ shares of preferred stock in one or more series. Our board of directors can designate the rights, preferences and privileges of the shares of each series and any of its qualifications, limitations or restrictions. Our board of directors may authorize the issuance of preferred stock with voting or conversion rights that could adversely affect the voting power or other rights of the holders of common stock. The issuance of preferred stock, while providing flexibility in connection with possible future financings and acquisitions and other corporate purposes could, under certain circumstances, have the effect of restricting dividends on our common stock, diluting the voting power of our common stock, impairing the liquidation rights of our common stock, or delaying, deferring or preventing a change in control of our company, which might harm the market price of our common stock. See also the “—Anti-Takeover Effects of

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Delaware Law, Our Amended and Restated Certificate of Incorporation and Our Amended and Restated By-Laws" section below.

Our board of directors will make any determination to issue such shares based on its judgment as to our company's best interests and the best interests of our stockholders. Upon the completion of this offering, we will have no shares of preferred stock outstanding and we have no current plans to issue any shares of preferred stock following completion of this offering.

Warrants

As of March 31, 2017, the following three warrants were outstanding: (i) a warrant to purchase 65,934 shares of our Series 1 Preferred Stock, which has an exercise price of \$0.455 per share, expires on November 18, 2022, and will be converted into warrants to purchase 65,934 shares of common stock upon completion of this offering, (ii) a warrant to purchase 10,400 shares of our common stock, which has an exercise price of \$0.10 per share and expires on March 31, 2018, and (iii) a warrant to purchase 50,000 shares of our common stock, which has an exercise price of \$0.01 per share and expires on August 29, 2021.

Registration rights

We entered into a Second Amended and Restated Registration Rights Agreement, dated as of April 27, 2016, or the Registration Rights Agreement, with certain holders of our capital stock. These shares will represent approximately % of our outstanding common stock after this offering, or % if the underwriters exercise their option to purchase additional shares in full. These shares also may be sold under Rule 144 under the Securities Act of 1933, as amended, depending on their holding period and subject to restrictions in the case of shares held by persons deemed to be our affiliates.

Under the Registration Rights Agreement, holders of registrable shares can demand that we file a registration statement or request that their shares be included on a registration statement that we are otherwise filing, in either case, registering the resale of their shares of common stock. These registration rights are subject to conditions and limitations, including the right, in certain circumstances, of the underwriters of an offering to limit the number of shares included in such registration and our right, in certain circumstances, not to effect a requested S-1 registration within 60 days before or 180 days following any offering of our securities, including this offering, or a requested S-3 registration within 30 days before or 90 days following any offering of our securities, including this offering.

Demand registration rights

Following the date that is 180 days after the date of this prospectus, the holders of (i) at least 60% of our Series B Preferred Stock prior to the automatic conversion of the Series B Preferred Stock upon consummation of this offering and (ii) at least 65% of our Series C Preferred Stock prior to the automatic conversion of the Series C Preferred Stock upon consummation of this offering, may require us to file a registration statement under the Securities Act on a Form S-1 at our expense, subject to certain exceptions, with respect to the resale of their registrable shares, and we are required to use commercially reasonable efforts to effect the registration. Any time after we are eligible to use a registration statement under the Securities Act on Form S-3, the holders of at least 10% of our registrable securities under the Registration Rights Agreement may require us to file a registration statement on Form S-3 at our expense, subject to certain exceptions, with respect to the resale of their registrable shares, and we are required to use commercially reasonable efforts to effect the registration.

Piggyback registration rights

If we propose to register any of our securities under the Securities Act for our own account or the account of any other holder, the holders of registrable shares are entitled to notice of such registration and to request that we include registrable shares for resale on such registration statement, subject to the right of any underwriter to limit the number of shares included in such registration.

We will pay all registration expenses, other than underwriting discounts and commissions, related to any demand or piggyback registration. The Registration Rights Agreement contains customary cross-indemnification provisions, pursuant to which we are obligated to indemnify the selling stockholders, in the event of misstatements or omissions in the registration statement attributable to us except in the event of fraud, and they are obligated to indemnify us for misstatements or omissions attributable to them.

The registration rights will terminate upon the later of the date on which all registrable shares have been sold, the closing of certain liquidation events, and the fifth anniversary of the closing date of this offering.

Stockholders agreement

We entered into a Third Amended and Restated Stockholders Agreement, dated as of April 27, 2016, or Stockholders Agreement, with certain holders of our capital stock. This agreement provides for certain rights and obligations, such as board composition requirements and stock transfer restrictions. This agreement will terminate upon the completion of this offering; however, the lock-up provision under the Stockholders Agreement will survive termination pursuant to the terms of the agreement. See the “Shares Eligible for Future Sale—Lock-Up Agreements” section.

Anti-takeover effects of Delaware law, our amended and restated certificate of incorporation and our amended and restated by-laws

Our amended and restated certificate of incorporation and amended and restated by-laws that will take effect in connection with the closing of this offering include a number of provisions that may have the effect of encouraging persons considering unsolicited tender offers or other unilateral takeover proposals to negotiate with our board of directors rather than pursue non-negotiated takeover attempts. These provisions include the items described below.

Board composition and filling vacancies

In accordance with our amended and restated certificate of incorporation, our board of directors is divided into three classes serving three-year terms, with one class being elected each year. Our amended and restated certificate of incorporation also provides that directors may be removed only for cause and then only by the affirmative vote of the holders of 75% or more of the shares then entitled to vote at an election of directors. Furthermore, any vacancy on our board of directors, however occurring, including a vacancy resulting from an increase in the size of our board of directors, may only be filled by the affirmative vote of a majority of our directors then in office, even if less than a quorum.

No written consent of stockholders

Our amended and restated certificate of incorporation provides that all stockholder actions are required to be taken by a vote of the stockholders at an annual or special meeting, and that stockholders may not take any action by written consent in lieu of a meeting.

Meetings of stockholders

Our amended and restated by-laws provide that only a majority of the members of our board of directors then in office may call special meetings of stockholders and only those matters set forth in the notice of the special meeting may be considered or acted upon at a special meeting of stockholders. Our amended and restated by-laws limit the business that may be conducted at an annual meeting of stockholders to those matters properly brought before the meeting.

Advance notice requirements

Our amended and restated by-laws establish advance notice procedures with regard to stockholder proposals relating to the nomination of candidates for election as directors or new business to be brought before meetings of our stockholders. These procedures provide that notice of stockholder proposals must be timely given in writing to our corporate secretary prior to the meeting at which the action is to be taken. Generally, to be timely, notice must be received at our principal executive offices not less than 90 days or more than 120 days prior to the first anniversary date of the annual meeting for the preceding year. The notice must contain certain information specified in the amended and restated by-laws. These provisions may have the effect of precluding the conduct of certain business at a meeting if the proper procedures are not followed. These provisions may also discourage or deter a potential acquirer from conducting a solicitation of proxies to elect the acquirer's own slate of directors or otherwise attempting to obtain control of our company.

Amendment to by-laws and certificate of incorporation

As required by the Delaware General Corporation Law, any amendment of our amended and restated certificate of incorporation must first be approved by a majority of our board of directors and, if required by law or our amended and restated certificate of incorporation, thereafter be approved by a majority of the outstanding shares entitled to vote on the amendment, and a majority of the outstanding shares of each class entitled to vote thereon as a class, except that the amendment of the provisions relating to stockholder action, directors, limitation of liability, exclusive jurisdiction of Delaware Courts and the amendment of our amended and restated by-laws and amended and restated certificate of incorporation must be approved by not less than 75% of the outstanding shares entitled to vote on the amendment, and not less than 75% of the outstanding shares of each class entitled to vote thereon as a class. Our amended and restated by-laws may be amended by the affirmative vote of a majority of the directors then in office, subject to any limitations set forth in the amended and restated by-laws; and may also be amended by the affirmative vote of at least 75% of the outstanding shares entitled to vote on the amendment, or, if the board of directors recommends that the stockholders approve the amendment, by the affirmative vote of the majority of the outstanding shares entitled to vote on the amendment, in each case voting together as a single class.

Blank check preferred stock

Our amended and restated certificate of incorporation provides for _____ authorized shares of preferred stock. The existence of authorized but unissued shares of preferred stock may enable our board of directors to render more difficult or to discourage an attempt to obtain control of us by means of a merger, tender offer, proxy contest or otherwise. For example, if in the due exercise of its fiduciary obligations, our board of directors were to determine that a takeover proposal is not in the best interests of us or our stockholders, our board of directors could cause shares of preferred stock to be issued without stockholder approval in one or more private offerings or other transactions that might dilute the voting or other rights of the proposed acquirer or insurgent stockholder or stockholder group. In this regard, our amended and restated certificate of incorporation grants our board of directors broad power to establish the rights and preferences of authorized

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and unissued shares of preferred stock. The issuance of shares of preferred stock could decrease the amount of earnings and assets available for distribution to holders of shares of common stock. The issuance may also adversely affect the rights and powers, including voting rights, of these holders and may have the effect of delaying, deterring or preventing a change in control of us.

Section 203 of the Delaware General Corporation Law

Upon completion of this offering, we will be subject to the provisions of Section 203 of the Delaware General Corporation Law. In general, Section 203 prohibits a publicly-held Delaware corporation from engaging in a "business combination" with an "interested stockholder" for a three-year period following the time that this stockholder becomes an interested stockholder, unless the business combination is approved in a prescribed manner. A "business combination" includes, among other things, a merger, asset or stock sale or other transaction resulting in a financial benefit to the interested stockholder. An "interested stockholder" is a person who, together with affiliates and associates, owns, or did own within three years prior to the determination of interested stockholder status, 15% or more of the corporation's voting stock.

Under Section 203, a business combination between a corporation and an interested stockholder is prohibited unless it satisfies one of the following conditions:

- before the stockholder became interested, the board of directors approved either the business combination or the transaction that resulted in the stockholder becoming an interested stockholder;
- 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 the corporation outstanding at the time the transaction commenced, excluding for purposes of determining the voting stock outstanding, shares owned by persons who are directors and also officers, and employee stock plans, in some instances; or
- at or after the time the stockholder became interested, the business combination was approved by the board of directors of the corporation and authorized at an annual or special meeting of the stockholders by the affirmative vote of at least two-thirds of the outstanding voting stock that is not owned by the interested stockholder.

A Delaware corporation may "opt out" of these provisions with an express provision in its original certificate of incorporation or an express provision in its amended and restated certificate of incorporation or by-laws resulting from a stockholders' amendment approved by at least a majority of the outstanding voting shares. We have not opted out of these provisions. As a result, mergers or other takeover or change in control attempts of us may be discouraged or prevented.

Exclusive jurisdiction of certain actions

Our amended and restated certificate of incorporation requires, to the fullest extent permitted by law, that derivative actions brought in our name, actions against our directors, officers and employees for breach of fiduciary duty and other similar actions may be brought only in the Court of Chancery in the State of Delaware, unless we otherwise consent. Although we believe this provision benefits us by providing increased consistency in the application of Delaware law in the types of lawsuits to which it applies, the provision may have the effect of discouraging lawsuits against our directors and officers.

NASDAQ Global Market Listing

We have submitted an application to list our common stock on The NASDAQ Global Market under the trading symbol "GTHX."

Transfer agent and registrar

The transfer agent and registrar for our common stock will be Computershare Trust Company, N.A. The transfer agent and registrar's address is 250 Royall Street, Canton, MA 02021.

Shares eligible for future sale

Prior to this offering, there has been no public market for our common stock. Future sales of our common stock, including shares issued upon the exercise of outstanding options or warrants, in the public market after this offering, or the perception that those sales may occur, could cause the prevailing market price for our common stock to fall or impair our ability to raise equity capital in the future. As described below, only a limited number of shares of our common stock will be available for sale in the public market for a period of several months after completion of this offering due to contractual and legal restrictions on resale described below. Future sales of our common stock in the public market either before (to the extent permitted) or after restrictions lapse, or the perception that those sales may occur, could adversely affect the prevailing market price of our common stock at such time and our ability to raise equity capital at a time and price we deem appropriate.

Sale of restricted shares

Upon the closing of this offering, based on the number of shares of our common stock outstanding as of March 31, 2017, and assuming (1) the conversion of our outstanding preferred stock into common stock, (2) no exercise of the underwriters' option to purchase additional shares of common stock and (3) no exercise of outstanding options or warrants, we will have outstanding an aggregate of approximately _____ shares of common stock. Of these shares, all of the _____ shares of common stock to be sold in this offering, and any shares sold upon exercise of the underwriters' option to purchase additional shares will be freely tradable in the public market without restriction or further registration under the Securities Act of 1933, as amended, or the Securities Act, unless the shares are held by any of our "affiliates" as such term is defined in Rule 144 of the Securities Act. All remaining shares of common stock held by existing stockholders immediately prior to the completion of this offering will be "restricted securities" as such term is defined in Rule 144. These restricted securities were issued and sold by us, or will be issued and sold by us, in private transactions and are eligible for public sale only if registered under the Securities Act or if they qualify for an exemption from registration under the Securities Act, including the exemptions provided by Rule 144 or Rule 701, which rules are summarized below.

As a result of the lock-up agreements referred to below and the provisions of Rule 144 and Rule 701 under the Securities Act, the shares of our common stock (excluding the shares sold in this offering) that will be available for sale in the public market are as follows:

- beginning on the date of this prospectus, the _____ shares of common stock sold in this offering will be immediately available for sale in the public market;
- beginning 90 days after the date of this prospectus, _____ additional shares of common stock may become eligible for sale in the public market upon the satisfaction of certain conditions as set forth in the "—Lock-Up Agreements" section, of which _____ shares would be held by affiliates and subject to the volume and other restrictions of Rule 144, as described below;
- beginning 181 days after the date of this prospectus, _____ additional shares of common stock will become eligible for sale in the public market, of which _____ shares will be held by affiliates and subject to the volume and other restrictions of Rule 144, as described below; and
- the remainder of the shares of common stock will be eligible for sale in the public market from time to time thereafter, subject in some cases to the volume and other restrictions of Rule 144, as described below.

Lock-up agreements

In connection with this offering, we, our directors, our executive officers and stockholders holding substantially all of our shares of common stock outstanding as of March 31, 2017 (assuming conversion of all of our outstanding shares of preferred stock), and substantially all of our option holders who are not also stockholders have agreed, subject to certain exceptions, with the underwriters not to dispose of or hedge any shares of our common stock or securities convertible into or exchangeable for shares of common stock during the period from the date of the lock-up agreement continuing through the date 180 days after the date of this prospectus, except with the prior written consent of J.P. Morgan Securities LLC and Cowen and Company, LLC, as the representatives of the underwriters and certain other exceptions. The representatives of the underwriters have advised us that they have no current intent or arrangement to release any of the shares subject to the lock-up agreements prior to the expiration of the lock-up period.

Following the lock-up periods set forth in the agreements described above, and assuming that the representatives of the underwriters do not release any parties from these agreements, all of the shares of our common stock that are restricted securities or are held by our affiliates as of the date of this prospectus will be eligible for sale in the public market in compliance with Rule 144 under the Securities Act.

In addition, pursuant to our Second Amended and Restated Stockholders Agreement, as amended, the stockholders that are parties thereto have agreed that they will not sell, make any short sale of, grant any option for the purchase of, or otherwise dispose of any shares of our stock during the same 180-day restricted period referred to above.

Rule 144

In general, under Rule 144, as currently in effect, once we have been subject to the public company reporting requirements of the Securities Exchange Act of 1934, as amended, or the Exchange Act, for at least 90 days, a person (or persons whose shares are required to be aggregated) who is not deemed to have been one of our "affiliates" for purposes of Rule 144 at any time during the three months preceding a sale, and who has beneficially owned restricted securities within the meaning of Rule 144 for at least six months, including the holding period of any prior owner other than one of our "affiliates," is entitled to sell those shares in the public market (subject to the lock-up agreement referred to above, if applicable) without complying with the manner of sale, volume limitations or notice provisions of Rule 144, but subject to compliance with the public information requirements of Rule 144. If such a person has beneficially owned the shares proposed to be sold for at least one year, including the holding period of any prior owner other than "affiliates," then such person is entitled to sell such shares in the public market without complying with any of the requirements of Rule 144 (subject to the lock-up agreement referred to above, if applicable). In general, under Rule 144, as currently in effect, once we have been subject to the public company reporting requirements of the Exchange Act for at least 90 days, our "affiliates," as defined in Rule 144, who have beneficially owned the shares proposed to be sold for at least six months are entitled to sell in the public market, upon expiration of any applicable lock-up agreements and within any three-month period, a number of those shares of our common stock that does not exceed the greater of:

- 1% of the number of common shares then outstanding, which will equal approximately _____ shares of common stock immediately after this offering (calculated on the basis of the number of shares of our common stock outstanding as of March 31, 2017, the assumptions described above and assuming no exercise of the underwriters' option to purchase additional shares and no exercise of outstanding options or warrants); or
- the average weekly trading volume of our common stock on The NASDAQ Global Market during the four calendar weeks preceding the filing of a notice on Form 144 with respect to such sale.

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Such sales under Rule 144 by our “affiliates” or persons selling shares on behalf of our “affiliates” are also subject to certain manner of sale provisions, notice requirements and to the availability of current public information about us. Notwithstanding the availability of Rule 144, the holders of substantially all of our restricted securities have entered into lock-up agreements as referenced above and their restricted securities will become eligible for sale (subject to the above limitations under Rule 144) upon the expiration of the restrictions set forth in those agreements.

Rule 701

In general, under Rule 701 as currently in effect, any of our employees, directors, officers, consultants or advisors who acquired common stock from us in connection with a written compensatory stock or option plan or other written agreement in compliance with Rule 701 under the Securities Act before the effective date of the registration statement of which this prospectus is a part (to the extent such common stock is not subject to a lock-up agreement) is entitled to rely on Rule 701 to resell such shares beginning 90 days after we become subject to the public company reporting requirements of the Exchange Act in reliance on Rule 144, but without compliance with the holding period requirements contained in Rule 144. Accordingly, subject to any applicable lock-up agreements, beginning 90 days after we become subject to the public company reporting requirements of the Exchange Act, under Rule 701 persons who are not our “affiliates,” as defined in Rule 144, may resell those shares without complying with the minimum holding period or public information requirements of Rule 144, and persons who are our “affiliates” may resell those shares without compliance with Rule 144’s minimum holding period requirements (subject to the terms of the lock-up agreement referred to below, if applicable).

Equity incentive plans

We intend to file with the SEC a registration statement under the Securities Act covering the shares of common stock that we may issue upon exercise of outstanding options reserved for issuance under the 2011 Equity Incentive Plan and the 2017 Employee, Director and Consultant Equity Plan. Such registration statement is expected to be filed and become effective as soon as practicable after the completion of this offering. Accordingly, shares registered under such registration statement will be available for sale in the open market following its effective date, subject to Rule 144 volume limitations and the lock-up agreements described above, if applicable.

Material U.S. federal income and estate tax consequences to non-U.S. holders

The following is a summary of the material U.S. federal income tax consequences of the ownership and disposition of our common stock to Non-U.S. Holders (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 Internal Revenue Code of 1986, as amended, or the Code, Treasury regulations promulgated thereunder, administrative rulings and judicial decisions, all as of the date hereof. These authorities may be changed or subject to differing interpretations, possibly with retroactive effect, so as to result in U.S. federal income tax consequences different from those set forth below. We have not sought and will not 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 U.S. state or local or any non-U.S. jurisdiction, the 3.8% Medicare tax on net investment income or any alternative minimum tax consequences. In addition, this discussion does not address tax considerations applicable to a Non-U.S. Holder's particular circumstances or to a Non-U.S. Holder that may be subject to special tax rules, including, without limitation:

- banks, insurance companies or other financial institutions;
- tax-exempt or government organizations;
- brokers of or dealers in securities or currencies;
- traders in securities that elect to use a mark-to-market method of accounting for their securities holdings;
- persons that own, or are deemed to own, more than five percent of our capital stock;
- certain U.S. expatriates, citizens or former long-term residents of the United States;
- persons who hold our common stock as a position in a hedging transaction, "straddle," "conversion transaction," synthetic security, other integrated investment, or other risk reduction transaction;
- persons who do not hold our common stock as a capital asset within the meaning of Section 1221 of the Code (generally, for investment purposes);
- persons deemed to sell our common stock under the constructive sale provisions of the Code;
- real estate investment trusts or regulated investment companies;
- pension plans;
- partnerships, or other entities or arrangements treated as partnerships for U.S. federal income tax purposes, or investors in any such entities;
- persons for whom our stock constitutes "qualified small business stock" within the meaning of Section 1202 of the Code;
- integral parts or controlled entities of foreign sovereigns;
- tax-qualified retirement plans;
- controlled foreign corporations;

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- passive foreign investment companies and corporations that accumulate earnings to avoid U.S. federal income tax; or
- persons that acquire our common stock as compensation for services.

In addition, if a partnership, including any entity or arrangement classified as a partnership for U.S. federal income tax purposes, holds our common stock, the tax treatment of a partner generally will depend on the status of the partner the activities of the partnership, and certain determinations made at the partner level. Accordingly, partnerships that hold our common stock, and partners in such partnerships, should consult their tax advisors regarding the U.S. federal income tax consequences to them of the purchase, ownership, and disposition of our common stock.

You are urged to consult your tax advisor with respect to the application of the U.S. federal income tax laws to your particular situation, as well as any tax consequences of the purchase, ownership and disposition of our common stock arising under the U.S. federal estate or gift tax rules or under the laws of any U.S. state or local or any non-U.S. or other taxing jurisdiction or under any applicable tax treaty.

Definition of a non-U.S. holder

For purposes of this summary, a “Non-U.S. Holder” is any beneficial owner of our common stock that is not a “U.S. person,” and is not a partnership, or an entity disregarded from its owner, each for U.S. federal income tax purposes. A U.S. person is any person that, for U.S. federal income tax purposes, is or is treated as any of the following:

- an individual who is a citizen or resident of the United States;
- a corporation (or other entity taxable as a corporation for U.S. federal income tax purposes) created or organized under the laws of the United States, any state thereof, or the District of Columbia;
- an estate, the income of which is subject to U.S. federal income tax regardless of its source; or
- a trust that (1) is subject to the primary supervision of a U.S. court and the control of one or more U.S. persons (within the meaning of Section 7701(a)(30) of the Code), or (2) has a valid election in effect to be treated as a U.S. person for U.S. federal income tax purposes.

Distributions

As discussed under the “Dividend Policy” section, above, we do not anticipate paying any dividends on our capital stock in the foreseeable future. If we make distributions on our common stock, those payments will constitute dividends for U.S. 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, they will constitute a return of capital and will first reduce a Non-U.S. Holder’s basis in our common stock, but not below zero. Any excess will be treated as capital gain and will be treated as described below under the “—Gain on Sale or Other Disposition of Common Stock” section. Any such distributions would be subject to the discussions below regarding back-up withholding and FATCA.

Subject to the discussion below on effectively connected income, any dividend paid to a Non-U.S. Holder generally will be subject to U.S. 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. In order to receive a reduced treaty rate, a Non-U.S. Holder must provide us or our agent with an IRS Form W-8BEN (generally including a U.S.

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taxpayer identification number), IRS Form W-8-BEN-E or another appropriate version of IRS Form W-8 (or a successor form), which must be updated periodically, and which, in each case, must certify qualification for the reduced rate. Non-U.S. Holders should consult their tax advisors regarding their entitlement to benefits under any applicable income tax treaty.

Dividends paid to a Non-U.S. Holder that are effectively connected with the Non-U.S. Holder's conduct of a U.S. trade or business within the United States (and, if required by an applicable income tax treaty, are attributable to a permanent establishment maintained by the Non-U.S. Holder in the United States) generally are exempt from the withholding tax described above. In order to obtain this exemption, the Non-U.S. Holder must provide the applicable withholding agent with an IRS Form W-8ECI or successor form or other applicable IRS Form W-8 certifying that the dividends are effectively connected with the Non-U.S. Holder's conduct of a trade or business within the United States. Such effectively connected dividends, although not subject to withholding tax, are taxed at the same graduated rates applicable to U.S. persons, net of certain deductions and credits, subject to an applicable income tax treaty providing otherwise. In addition, if you are Non-U.S. Holder that is a corporation, dividends you receive that are effectively connected with your conduct of a U.S. trade or business (and, if an income tax treaty applies, are attributable to a permanent establishment maintained by the you in the United States) 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) on such effectively connected dividends, as adjusted for certain items.

If you are eligible for a reduced rate of withholding tax pursuant to a tax treaty, you may be able to obtain a refund of any excess amounts currently withheld if you timely file an appropriate claim for refund with the IRS.

Gain on sale or other disposition of common stock

Subject to the discussion below regarding backup withholding and FATCA, a Non-U.S. Holder 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 the Non-U.S. Holder's conduct of a trade or business within the United States (and, if an income tax treaty applies, the gain is attributable to a permanent establishment maintained by the Non-U.S. Holder in the United States), in which case the Non-U.S. Holder will be required to pay tax on the net gain derived from the sale under regular graduated U.S. federal income tax rates, and for a Non-U.S. Holder that is a corporation, such Non-U.S. Holder 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) on such effectively connected dividends, as adjusted for certain items;
- the Non-U.S. Holder is 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, in which case the Non-U.S. Holder will be required to pay a flat 30% tax on the gain derived from the sale, which tax may be offset by U.S. source capital losses (even though the Non-U.S. Holder is not considered a resident of the United States) (subject to applicable income tax or other treaties); or
- our common stock constitutes a U.S. real property interest by reason of our status as a "U.S. real property holding corporation" for U.S. federal income tax purposes, aUSRPHC, at any time within the shorter of the five-year period preceding the disposition or the Non-U.S. Holder's holding period for our common stock. We believe we are not currently and do not anticipate becoming aUSRPHC. However, because the determination of whether we are aUSRPHC depends on the fair market value of our U.S. real property interests relative to the fair market value of our other business assets, there can be no assurance that we will not become aUSRPHC in the future. Even if we become aUSRPHC, however, gain arising from the sale or other taxable

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disposition by a Non-U.S. Holder of our common stock will not be subject to U.S. federal income tax as long as our common stock is regularly traded on an established securities market and such Non-U.S. Holder does not, actually or constructively, hold more than five percent of our common stock at any time during the applicable period that is specified in the Code. If the foregoing exception does not apply, then if we are or were to become a USRPHC a purchaser may be required to withhold 15% of the proceeds payable to a Non-U.S. Holder from a sale of our common stock and such Non-U.S. Holder generally will be taxed on its net gain derived from the disposition at the graduated U.S. federal income tax rates applicable to United States persons (as defined in the Code).

Backup withholding and information reporting

Generally, we must file information returns annually to the IRS in connection with any dividends on our common stock paid to a Non-U.S. Holder, regardless of whether any tax was actually withheld. A similar report will be sent to the Non-U.S. Holder. Pursuant to applicable income tax treaties or other agreements, the IRS may make these reports available to tax authorities in the Non-U.S. Holder's country of residence.

Payments of dividends or of proceeds on the disposition of stock made to a Non-U.S. Holder may be subject to additional information reporting and backup withholding at a current rate of 28% unless such Non-U.S. Holder establishes an exemption, for example by properly certifying its non-U.S. status on an IRS Form W-8BEN, IRS Form W-8BEN-E, IRS Form W-8ECI, or another appropriate version of IRS Form W-8 (or a successor form). 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 a holder is a U.S. person.

Backup withholding is not an additional tax; rather, the U.S. income tax liability of persons subject to backup withholding will be reduced by the amount of tax withheld. If withholding results in an overpayment of taxes, a refund or credit may generally be obtained from the IRS, provided that the required information is furnished to the IRS in a timely manner.

Foreign account tax compliance act

The Foreign Account Tax Compliance Act, or FATCA, imposes withholding tax on certain types of payments made to foreign financial institutions and certain other non-U.S. entities. The legislation imposes a 30% withholding tax on dividends on, or, on or after January 1, 2019, gross proceeds from the sale or other disposition of, our common stock paid to a "foreign financial institution" or to certain "non-financial foreign entities" (each as defined in the Code), unless (i) the foreign financial institution undertakes certain diligence and reporting obligations, (ii) the non-financial foreign entity either certifies it does not have any "substantial United States owners" (as defined in the Code) or furnishes identifying information regarding each substantial United States owner, or (iii) the foreign financial institution or non-financial foreign entity otherwise qualifies for an exemption from these rules. If the payee is a foreign financial institution and is subject to the diligence and reporting requirements in (i) above, it must enter into an agreement with the U.S. Treasury requiring, among other things, that it undertake to identify accounts held by "specified United States persons" or "United States-owned foreign entities" (each as defined in the Code), annually report certain information about such accounts, and withhold 30% on payments to account holders whose actions prevent it from complying with these reporting and other requirements. If the country in which a payee is resident has entered into an "intergovernmental agreement" with the United States regarding FATCA, that agreement may permit the payee to report to that country rather than to the U.S. Department of the Treasury. Prospective investors should consult their own tax advisors regarding the possible impact of these rules on their investment in our common stock, and the possible impact of these rules on the entities through which they hold our common stock, including, without limitation, the process and deadlines for meeting the applicable requirements to prevent the imposition of this 30% withholding tax under FATCA.

Federal estate tax

Common stock owned (or treated as owned) by an individual who is not a citizen or a resident of the United States (as defined for U.S. federal estate tax purposes) at the time of death will be included in the individual's gross estate for U.S. federal estate tax purposes unless an applicable estate or other tax treaty provides otherwise, and therefore may be subject to U.S. federal estate tax.

The preceding discussion of U.S. federal tax considerations is for general information only. It is not tax advice. Each prospective investor should consult its tax advisor regarding the particular U.S. federal, state and local and non-U.S. tax consequences of purchasing, holding and disposing of our common stock, including the consequences of any proposed change in applicable laws.

Underwriting

We and the underwriters for the offering named below have entered into an underwriting agreement with respect to the shares of common stock being offered. Subject to the terms and conditions of the underwriting agreement, each underwriter has severally agreed to purchase from us the number of shares of common stock set forth opposite its name below. J.P. Morgan Securities LLC and Cowen and Company, LLC are the representatives of the underwriters.

Underwriter	Number of shares
J.P. Morgan Securities LLC	
Cowen and Company, LLC	
Needham & Company, LLC	
Wedbush Securities Inc.	
Total	

The underwriting agreement provides that the obligations of the underwriters are subject to certain conditions precedent and that the underwriters have agreed, severally and not jointly, to purchase all of the shares of common stock sold under the underwriting agreement if any of these shares are purchased, other than those shares covered by the overallotment option described below. 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 against specified liabilities, including liabilities under the Securities Act of 1933, as amended, or the Securities Act, and to contribute to payments the underwriters may be required to make in respect thereof.

The underwriters are offering the shares of common stock, subject to prior sale, when, as and if issued to and accepted by them, subject to approval of legal matters by their counsel and other conditions specified in the underwriting agreement. The underwriters reserve the right to withdraw, cancel or modify offers to the public and to reject orders in whole or in part.

Overallotment option to purchase additional shares

We have granted to the underwriters an option to purchase up to _____ additional shares of common stock at the public offering price, less the underwriting discount. This option is exercisable for a period of 30 days. The underwriters may exercise this option solely for the purpose of covering overallotments, if any, made in connection with the sale of shares offered hereby. To the extent that the underwriters exercise this option, the underwriters will purchase additional shares from us in approximately the same proportion as shown in the table following the first paragraph of this section.

Discounts and commissions

The following table shows the public offering price, underwriting discount and proceeds, before expenses, to us. These amounts are shown assuming both no exercise and full exercise of the underwriters' option to purchase additional shares of common stock.

We estimate that our total expenses of the offering, excluding the underwriting discount, will be approximately \$ _____ million and are payable by us. We also have agreed to reimburse the underwriters for certain of their expenses, in an amount of up to \$ _____, as set forth in the underwriting agreement, including an amount of up to \$ _____, that may be incurred in connection with the review by the Financial Industry Regulatory Authority, Inc., or FINRA, of the terms of the offering.

	Per share	With overallotment	Total Without overallotment
Public offering price	\$ _____	\$ _____	\$ _____
Underwriting discount	\$ _____	\$ _____	\$ _____
Proceeds, before expenses, to us	\$ _____	\$ _____	\$ _____

The underwriters propose to offer the shares of common stock to the public at the public offering price set forth on the cover of this prospectus. The underwriters may offer the shares to securities dealers at the public offering price less a concession not in excess of \$ _____ per share. The underwriters may allow, and the dealers may reallow, a discount not in excess of \$ _____ per share to other dealers. If all of the shares are not sold at the public offering price, the underwriters may change the offering price and other selling terms.

Discretionary accounts

The underwriters do not intend to confirm sales of the shares of common stock to any accounts over which they have discretionary authority.

Market information

Prior to this offering, there has been no public market for our common stock. The initial public offering price will be determined by negotiations between us and the representatives of the underwriters. In addition to prevailing market conditions, the factors to be considered in these negotiations include:

- the history of, and prospects for, our company and the industry in which we compete;
- our past and present financial information;
- an assessment of our management; its past and present operations, and the prospects for, and timing of, our future revenues;
- the present state of our development; and
- the above factors in relation to market values and various valuation measures of other companies engaged in activities similar to ours.

An active trading market for our common stock may not develop, or if such a market develops, may not be sustained. It is also possible that after the offering, the shares will not trade in the public market at or above the initial public offering price.

We have applied to list our common stock on The NASDAQ Global Market under the symbol "GTHX."

Price stabilization, short positions and penalty bids

Stabilization

In connection with this offering, the underwriters may engage in stabilizing transactions, overallotment transactions, syndicate covering transactions, penalty bids and purchases to cover positions created by short sales.

- Stabilizing transactions permit bids to purchase shares of our common stock so long as the stabilizing bids do not exceed a specified maximum, and are engaged in for the purpose of preventing or retarding a decline in the market price of our common stock while the offering is in progress.
- Overallotment transactions involve sales by the underwriters of shares of our common stock in excess of the number of shares the underwriters are obligated to purchase. This creates a syndicate short position that may be either a covered short position or a naked short position. In a covered short position, the number of shares overallotted by the underwriters is not greater than the number of shares that they may purchase in the overallotment option. In a naked short position, the number of shares involved is greater than the number of shares in the overallotment option. The underwriters may close out any short position by exercising the overallotment option and/or purchasing shares of common stock in the open market.
- Syndicate covering transactions involve purchases of shares of our common stock in the open market after the distribution has been completed in order to cover syndicate short positions. In determining the source of shares of common stock to close out the short position, the underwriters will consider, among other things, the price of shares available for purchase in the open market as compared with the price at which they may purchase shares through exercise of the overallotment option. If the underwriters sell more shares than could be covered by exercise of the overallotment option and, therefore, have a naked short position, the position can be closed out only by buying securities in the open market. A naked short position is more likely to be created if the underwriters are concerned that after pricing there could be downward pressure on the price of our common stock in the open market that could adversely affect investors who purchase in the offering.
- Penalty bids permit the underwriters to reclaim a selling concession from a syndicate member when the shares of common stock originally sold by that syndicate member are purchased in stabilizing or syndicate covering transactions to cover syndicate short positions.

These stabilizing transactions, syndicate covering transactions and penalty bids 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 in the open market may be higher than it would otherwise be in the absence of these transactions. Neither we nor the underwriters make any representation or prediction as to the effect that the transactions described above may have on the price of shares of our common stock. These transactions may be effected on The NASDAQ Global Market, in the over-the-counter market or otherwise and, if commenced, may be discontinued at any time.

In connection with this offering, the underwriters may engage in passive market making transactions in the common stock on The NASDAQ Global Market in accordance with Rule 103 of Regulation M under the Exchange Act during a period before the commencement of offers or sales of common stock 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

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maker's bid, that bid must then be lowered when specified purchase limits are exceeded. Passive market making may cause the price of our common stock to be higher than the price that otherwise would exist in the open market in the absence of those transactions. The underwriters are not required to engage in passive market making and may end passive market making activities at any time.

Lock-up agreements

Pursuant to certain "lock-up" agreements, we and our executive officers, directors and stockholders holding substantially all of our shares of common stock outstanding as of March 31, 2017 (assuming conversion of all of our outstanding shares of preferred stock), and substantially all of our option holders who are not also stockholders, or the locked-up parties, have agreed, subject to certain exceptions, not to offer, sell, contract to sell, assign, transfer, pledge, or otherwise dispose of or announce the intention to otherwise dispose of, or enter into any swap, hedge or similar agreement or arrangement that transfers, in whole or in part, the economic consequence of ownership of, directly or indirectly, or make any demand or request or exercise any right with respect to the registration of, or engage in any short selling of, any of our common stock or securities convertible into or exchangeable or exercisable for any of our common stock without the prior written consent of both of the representatives of the underwriters, for a period of 180 days after the date of the pricing of the offering.

This lock-up provision applies to our common stock and to securities convertible into or exchangeable or exercisable for common stock. It also applies to common stock owned now or acquired later by the person executing the agreement or for which the person executing the agreement later acquires the power of disposition. The exceptions to the lock-up for the locked-up parties include: (a) transfers made as a bona fide gift to an immediate family member, to a trust the beneficiaries of which are exclusively the locked-up party or the locked-up party's immediate family member, or to a charity or educational institution; each of which is subject to certain conditions set forth in the lock-up agreement; (b) transfers made by will or intestate succession upon the death of the locked-up party; each of which is subject to certain conditions set forth in the lock-up agreement; (c) if the locked-up party is a corporation, partnership, limited liability company or other business entity, transfers not for value to a stockholder, partner or member of, or owner of a similar equity interest in, the locked-up party executing the agreement; each of which is subject to certain conditions set forth in the lock-up agreement; (d) if the locked-up party is a corporation, partnership, limited liability company or other business entity, transfers made by the locked-up party in connection with the sale of all or substantially all of its assets or equity interests; (e) if the locked-up party is a corporation, partnership, limited liability company or other business entity, transfers not for value to an affiliate of the locked-up party; each of which is subject to certain conditions set forth in the lock-up agreement; (f) the locked-up party's net exercise or cashless exercise of our options or warrants; (g) any transfers made by a locked-up party to satisfy tax withholding obligations in connection with our equity incentive plans or other arrangements disclosed in this prospectus; (h) the establishment of a trading plan in accordance with Rule 10b5-1(c) under the Exchange Act, provided, that no sales or other disposition under such trading plan may occur during the 180-day restricted period; (i) sales of shares acquired in this offering or in open market transactions after this offering so long as no public announcement or filing under Section 16(a) of the Exchange Act shall be required or voluntarily made; (j) transfers made through the operation of law, such as pursuant to a qualified domestic order or in connection with a divorce settlement; and (k) transfers, sales, tenders or other dispositions of our common stock pursuant to a tender offer for our securities or any other transaction, including, without limitation, consolidation or other business combination, involving a change of control that has been approved by our board of directors. The exceptions to the lock-up for us are: (i) our sale of shares in this offering; (ii) the issuance of common stock or options to acquire common stock pursuant to any of our director or employee stock option plans, stock ownership plans or dividend reinvestment plans, as described in this prospectus; (iii) the issuance of common stock pursuant to the conversion or exercise of existing securities outstanding on the date hereof; and (iv) the

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adoption of a new equity incentive plan; each of which is subject to certain conditions set forth in the underwriting agreement.

The representatives may, acting together, in their sole discretion and at any time or from time to time before the termination of the lock-up period, release all or any portion of the securities subject to lock-up agreements; provided, however, that, subject to limited exceptions, at least three business days before the release or waiver or any lock-up agreement, the representatives must notify us of the impending release or waiver and we will announce the impending release or waiver through a major news service at least two business days before the effective date of the release or waiver.

Electronic offer, sale and distribution of shares

A prospectus in electronic format may be made available on the websites maintained by one or more of the underwriters or selling group members, if any, participating in this offering and one or more of the underwriters participating in this offering may distribute prospectuses electronically. The representatives may agree to allocate a number of shares to underwriters and selling group members for sale to their online brokerage account holders. Internet distributions will be allocated by the underwriters and selling group members that will make Internet distributions on the same basis as other allocations. Other than the prospectus in electronic format, the information on these websites is not part of this prospectus or the registration statement of which this prospectus forms a part, has not been approved or endorsed by us or any underwriter in its capacity as underwriter, and should not be relied upon by investors.

Other relationships

Certain of the underwriters and their affiliates have provided, and may in the future provide, various investment banking, commercial banking and other financial services for us and our affiliates for which they have received, and may in the future receive, customary fees.

Selling restrictions

No action has been taken in any jurisdiction except the United States that would permit a public offering of our common stock, or the possession, circulation or distribution of this prospectus or any other material relating to us or our common stock in any jurisdiction where action for that purpose is required. Accordingly, the shares may not be offered or sold, directly or indirectly, and neither this prospectus nor any other offering material or advertisements in connection with the shares may be distributed or published, in or from any country or jurisdiction except in compliance with any applicable rules and regulations of any such country or jurisdiction.

Canada

The securities may be sold only to purchasers purchasing, or deemed to be purchasing, as principal that are accredited investors, as defined in National Instrument 45-106 *Prospectus Exemptions* or subsection 73.3(1) of the *Securities Act* (Ontario), and are permitted clients, as defined in National Instrument 31-103 *Registration Requirements, Exemptions and Ongoing Registrant Obligations*. Any resale of the securities must be made in accordance with an exemption from, or in a transaction not subject to, the prospectus requirements of applicable securities laws.

Securities legislation in certain provinces or territories of Canada may provide a purchaser with remedies for rescission or damages if this prospectus (including any amendment thereto) contains a misrepresentation, provided that the remedies for rescission or damages are exercised by the purchaser within the time limit

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prescribed by the securities legislation of the purchaser's province or territory. The purchaser should refer to any applicable provisions of the securities legislation of the purchaser's province or territory for particulars of these rights or consult with a legal advisor.

Pursuant to section 3A.3 of National Instrument 33-105 *Underwriting Conflicts* (NI 33-105), the underwriters are not required to comply with the disclosure requirements of NI 33-105 regarding underwriter conflicts of interest in connection with this offering.

United Kingdom

Each of the underwriters has, separately and not jointly, represented and agreed that:

- it has not made or will not make an offer of the securities to the public in the United Kingdom within the meaning of Section 102B of the Financial Services and Markets Act 2000 (as amended), or the FSMA, except to legal entities which are authorized or regulated to operate in the financial markets or, if not so authorized or regulated, whose corporate purpose is solely to invest in securities or otherwise in circumstances which do not require the publication by us of a prospectus pursuant to the Prospectus Rules of the Financial Services Authority, or FSA;
- it has only communicated or caused to be communicated and will only communicate or cause to be communicated an invitation or inducement to engage in investment activity (within the meaning of Section 21 of FSMA) to persons 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 or in circumstances in which Section 21 of FSMA does not apply to us; and
- it has complied with and will comply with all applicable provisions of FSMA with respect to anything done by it in relation to the securities in, from or otherwise involving the United Kingdom.

Switzerland

The securities will not be offered, directly or indirectly, to the public in Switzerland and this prospectus does not constitute a public offering prospectus as that term is understood pursuant to article 652a or 1156 of the Swiss Federal Code of Obligations.

European Economic Area

In relation to each Member State of the European Economic Area (Iceland, Norway and Lichtenstein in addition to the member states of the European Union) that has implemented the Prospectus Directive (each, a Relevant Member State), each underwriter has, separately and not jointly, represented and agreed that with effect from and including the date on which the Prospectus Directive is implemented in that Relevant Member State, or the Relevant Implementation Date, it has not made and will not make an offer of the securities to the public in that Relevant Member State prior to the publication of a prospectus in relation to the securities that has been approved by the competent authority in that Relevant Member State or, where appropriate, approved in another Relevant Member State and notified to the competent authority in that Relevant Member State, all in accordance with the Prospectus Directive, except that it may, with effect from and including the Relevant Implementation Date, make an offer of the securities to the public in that Relevant Member State at any time:

- to legal entities which are authorized or regulated to operate in the financial markets or, if not so authorized or regulated, whose corporate purpose is solely to invest in securities;
- to any legal entity which has two or more of (1) an average of at least 250 employees during the last financial year; (2) a total balance sheet of more than € 43,000,000 and (3) an annual net turnover of more than € 50,000,000, as shown in its last annual or consolidated accounts; and

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- in any other circumstances which do not require the publication by the issuer of a prospectus pursuant to Article 3 of the Prospectus Directive.

Each person in a Relevant Member State who receives any communication in respect of, or who acquires any securities under, the offer contemplated in this prospectus will be deemed to have represented, warranted and agreed to and with us and the underwriters that:

- it is a qualified investor within the meaning of the law in that Relevant Member State implementing Article 2(1)(e) of the Prospectus Directive; and
- in the case of any securities acquired by it as a financial intermediary, as that term is used in Article 3(2) of the Prospectus Directive, (1) the securities acquired by it in the offer have not been acquired on behalf of, nor have they been acquired with a view to their offer or resale to, persons in any Relevant Member State other than qualified investors, as that term is defined in the Prospectus Directive, or in circumstances in which the prior consent of the underwriters has been given to the offer or resale; or (2) where securities have been acquired by it on behalf of persons in any Relevant Member State other than qualified investors, the offer of those securities to it is not treated under the Prospectus Directive as having been made to such persons.

For the purposes of the provisions in the two immediately preceding paragraphs, the expression an “offer of the securities to the public” in relation to the securities in any Relevant Member State means the communication in any form and by any means of sufficient information on the terms of the offer and the securities to be offered so as to enable an investor to decide to purchase or subscribe for the securities, as the same may be varied in that Relevant Member State by any measure implementing the Prospectus Directive in that Relevant Member State, and the expression “Prospectus Directive” means Directive 2003/71/EC and includes any relevant implementing measure in each Relevant Member State.

United Arab Emirates

This document has not been reviewed, approved or licensed by the Central Bank of the United Arab Emirates, or UAE, Emirates Securities and Commodities Authority or any other relevant licensing authority in the UAE including any licensing authority incorporated under the laws and regulations of any of the free zones established and operating in the territory of the UAE, in particular the Dubai International Financial Services Authority, or DFSA, a regulatory authority of the Dubai International Financial Centre, or DIFC. The issue of shares of common stock does not constitute a public offer of securities in the UAE, DIFC and/or any other free zone in accordance with the Commercial Companies law, Federal Law No. 8 of 1984 (as amended), DFSA Offered Securities Rules and the Dubai International Financial Exchange Listing Rules, accordingly or otherwise.

The shares may not be offered to the public in the UAE and/or any of the free zones including, in particular, the DIFC. The shares may be offered and this document may be issued, only to a limited number of investors in the UAE or any of its free zones (including, in particular, the DIFC) who qualify as sophisticated investors under the relevant laws and regulations of the UAE or the free zone concerned. Management of the company and the representatives of the underwriters represent and warrant the shares will not be offered, sold, transferred or delivered to the public in the UAE or any of its free zones.

Israel

In the State of Israel this prospectus shall not be regarded as an offer to the public to purchase shares of common stock under the Israeli Securities Law, 5728 – 1968, which requires a prospectus to be published and authorized by the Israel Securities Authority, if it complies with certain provisions of Section 15 of the Israeli Securities Law, 5728 – 1968, including, inter alia, if: (i) the offer is made, distributed or directed to not more

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than 35 investors, subject to certain conditions, or the Addressed Investors; or (ii) the offer is made, distributed or directed to certain qualified investors defined in the First Addendum of the Israeli Securities Law, 5728 – 1968, subject to certain conditions, or the Qualified Investors. The Qualified Investors shall not be taken into account in the count of the Addressed Investors and may be offered to purchase securities in addition to the 35 Addressed Investors. The company has not and will not take any action that would require it to publish a prospectus in accordance with and subject to the Israeli Securities Law, 5728 – 1968. We have not and will not distribute this prospectus or make, distribute or direct an offer to subscribe for our common stock to any person within the State of Israel, other than to Qualified Investors and up to 35 Addressed Investors.

Qualified Investors may have to submit written evidence that they meet the definitions set out in of the First Addendum to the Israeli Securities Law, 5728 – 1968. In particular, we may request, as a condition to be offered common stock, that Qualified Investors will each represent, warrant and certify to us and/or to anyone acting on our behalf: (i) that it is an investor falling within one of the categories listed in the First Addendum to the Israeli Securities Law, 5728 – 1968; (ii) which of the categories listed in the First Addendum to the Israeli Securities Law, 5728 – 1968 regarding Qualified Investors is applicable to it; (iii) that it will abide by all provisions set forth in the Israeli Securities Law, 5728 – 1968 and the regulations promulgated thereunder in connection with the offer to be issued common stock; (iv) that the shares of common stock that it will be issued are, subject to exemptions available under the Israeli Securities Law, 5728 – 1968: (a) for its own account; (b) for investment purposes only; and (c) not issued with a view to resale within the State of Israel, other than in accordance with the provisions of the Israeli Securities Law, 5728 – 1968; and (v) that it is willing to provide further evidence of its Qualified Investor status. Addressed Investors may have to submit written evidence in respect of their identity and may have to sign and submit a declaration containing, inter alia, the Addressed Investor's name, address and passport number or Israeli identification number.

Notice to prospective investors in Russia

The shares to which this prospectus relates will not be offered, advertised, transferred or sold as part of their initial distribution or at any time thereafter to or for the benefit of any persons (including legal entities) resident, incorporated, established or having their usual residence in Russia or to any person located within the territory of Russia who is not a qualified investor in accordance with Russian law unless and to the extent otherwise permitted under Russian law.

This prospectus should not be considered as a public offer or advertisement of the shares to which this prospectus relates in Russia and is not an offer, or an invitation to make offers, to purchase any such shares in Russia. Neither the shares nor any prospectus or other document relating to them have been registered with the Federal Service for Financial Markets of the Russian Federation and are not intended for "placement" or "public circulation" in Russia.

Legal matters

The validity of the shares of common stock offered by this prospectus will be passed upon for us by Mintz, Levin, Cohn, Ferris, Glovsky & Popeo, P.C., Boston, Massachusetts. Certain legal matters in connection with this offering will be passed upon for the underwriters by Goodwin Procter LLP, New York, New York.

Experts

The financial statements as of December 31, 2015 and December 31, 2016, and for each of the two years in the period ended December 31, 2016 included in this prospectus have been so included in reliance on the report (which contains an explanatory paragraph relating to the Company's ability to continue as a going concern as described in Note 1 to the financial statements) of PricewaterhouseCoopers LLP, an independent registered public accounting firm, given on the authority of said firm as experts in auditing and accounting.

Where you can find more information

We have filed with the SEC a registration statement on Form S-1, including exhibits and schedules, under the Securities Act that registers the shares of our common stock to be sold in this offering. This prospectus does not contain all the information contained in the registration statement and the exhibits and schedules filed as part of the registration statement. For further information with respect to us and our common stock, we refer you to the registration statement and the exhibits and schedules filed as part of the registration statement. Statements contained in this prospectus as to the contents of any contract or other document are not necessarily complete. If a contract or document has been filed as an exhibit to the registration statement, we refer you to the copies of the contract or document that has been filed. Each statement in this prospectus relating to a contract or document filed as an exhibit is qualified in all respects by the filed exhibit.

Upon the consummation of this offering, we will file annual, quarterly and current reports, proxy statements and other information with the SEC under the Exchange Act. You can read our SEC filings, including the registration statement, at the SEC's website at www.sec.gov.

You may read and copy this information at the SEC's Public Reference Room at 100 F Street, N.E., Washington D.C. 20549, at prescribed rates. You may obtain information regarding the operation of the public reference room by calling the SEC at 1-800-SEC-0330. The SEC also maintains a website (<http://www.sec.gov>) that contains reports, proxy and information statements and other information regarding issuers that file electronically with the SEC.

Our website address is www.g1therapeutics.com. The information contained in, and that can be accessed through, our website is not incorporated into and shall not be deemed to be part of this prospectus. We have included our website address in this prospectus solely as an inactive textual reference.

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Report of Independent Registered Public Accounting Firm

To the Board of Directors and Shareholders of G1 Therapeutics, Inc.:

In our opinion, the accompanying balance sheets and the related statements of operations and comprehensive loss, of redeemable convertible preferred stock and stockholders' deficit and of cash flows present fairly, in all material respects, the financial position of G1 Therapeutics, Inc. as of December 31, 2016 and December 31, 2015, and the results of their operations and their cash flows for each of the two years in the period ended December 31, 2016 in conformity with accounting principles generally accepted in the United States of America. These financial statements are the responsibility of the Company's management. Our responsibility is to express an opinion on these financial statements based on our audits. We conducted our audits of these financial statements in accordance with the standards of the Public Company Accounting Oversight Board (United States). Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements are free of material misstatement. An audit includes examining, on a test basis, evidence supporting the amounts and disclosures in the financial statements, assessing the accounting principles used and significant estimates made by management, and evaluating the overall financial statement presentation. We believe that our audits provide a reasonable basis for our opinion.

The accompanying financial statements have been prepared assuming the Company will continue as a going concern. As discussed in Note 1 to the financial statements, the Company has suffered recurring losses from operations and has an accumulated deficit that raise substantial doubt about its ability to continue as a going concern. Management's plans in regard to these matters are also described in Note 1. The financial statements do not include any adjustments that might result from the outcome of this uncertainty.

/s/ PricewaterhouseCoopers LLP

Raleigh, North Carolina
February 9, 2017

G1 Therapeutics, Inc.

Balance sheets

	December 31, 2015	December 31, 2016	March 31, 2017 (unaudited)	Pro Forma March 31, 2017 (unaudited)
Assets				
Current assets				
Cash and cash equivalents	\$ 22,937,720	\$ 47,304,820	\$ 37,726,520	\$ 37,726,520
Prepaid expenses and other assets	812,020	596,228	1,255,742	1,255,742
Total current assets	23,749,740	47,901,048	38,982,262	38,982,262
Property and equipment, net	146,885	310,873	311,557	311,557
Total assets	\$ 23,896,625	\$ 48,211,921	\$ 39,293,819	\$ 39,293,819
Liabilities, Redeemable Convertible Preferred Stock and Stockholders' Deficit				
Current liabilities				
Accounts payable	\$ 1,128,652	\$ 2,604,799	\$ 3,666,831	\$ 3,666,831
Accrued expenses	953,723	2,853,284	4,628,871	4,628,871
Warrant liability	84,998	167,229	208,119	—
Series B Purchase Option Liability	—	—	—	—
Total current liabilities	2,167,373	5,625,312	8,503,821	8,295,702
Commitments and contingencies (Note 6)				
Series C redeemable convertible preferred stock \$0.0001 par value, 17,000,000 shares authorized, 0 issued and outstanding on December 31, 2015, 16,828,217 issued and outstanding on December 31, 2016 and March 31, 2017 (unaudited), respectively; (liquidation preference of \$0, \$51,673,017 and \$52,289,456 on December 31, 2015, December 31, 2016 and March 31, 2017 (unaudited), respectively) no shares issued and outstanding as of March 31, 2017 pro forma (unaudited)	—	51,424,101	55,156,219	—
Series B redeemable convertible preferred stock \$0.0001 par value, 23,000,000 shares authorized, 22,928,234 issued and outstanding on December 31, 2015, December 31, 2016 and March 31, 2017 (unaudited); (liquidation preference of \$34,058,869, \$35,721,968 and \$36,132,047 on December 31, 2015, December 31, 2016 and March 31, 2017 (unaudited), respectively) no shares issued and outstanding as of March 31, 2017 pro forma (unaudited)	38,691,923	40,355,023	40,765,102	—
Series A redeemable convertible preferred stock \$0.0001 par value, 14,996,692 shares authorized, 14,996,692 issued and outstanding on December 31, 2015, December 31, 2016 and March 31, 2017 (unaudited), respectively; (liquidation preference of \$13,801,166, \$14,431,027 and \$14,586,335 on December 31, 2015, December 31, 2016 and March 31, 2017 (unaudited), respectively) no shares issued and outstanding as of March 31, 2017 pro forma (unaudited)	13,801,166	14,431,027	14,586,335	—
Series 1 redeemable convertible preferred stock, \$0.0001 par value, 2,112,025 shares authorized, 2,046,091 outstanding on December 31, 2015, December 31, 2016 and March 31, 2017 (unaudited), respectively; (liquidation preference of \$930,971 on December 31, 2015, December 31, 2016, and March 31, 2017 (unaudited), respectively) no shares issued and outstanding as of March 31, 2017 pro forma (unaudited)	930,971	1,369,998	1,540,525	—
Stockholders' equity (deficit)				
Common stock, \$0.0001 par value, 73,000,000 shares authorized, 4,461,687 shares issued and 4,381,687 shares outstanding on December 31, 2015, 4,514,873 shares issued and 4,434,873 shares outstanding on December 31, 2016, and 4,522,373 shares issued and 4,442,373 shares outstanding on March 31, 2017 (unaudited); 73,000,000 shares authorized, 61,321,607 shares issued and 61,241,607 shares outstanding as of March 31, 2017 pro forma (unaudited)	446	451	452	6,132
Treasury stock, 80,000 shares	(8,000)	(8,000)	(8,000)	(8,000)
Additional paid-in capital	—	—	—	112,250,620
Accumulated deficit	(31,687,254)	(64,985,991)	(81,250,635)	(81,250,635)
Total stockholders' equity (deficit)	(31,694,808)	(64,993,540)	(81,258,183)	30,998,117
Total liabilities, mezzanine equity and equity	\$ 23,896,625	\$ 48,211,921	\$ 39,293,819	\$ 39,293,819

G1 Therapeutics, Inc.

Statements of operations and comprehensive loss

	Year ended December 31,		Three months ended March 31,	
	2015	2016	2016	2017
			(unaudited)	(unaudited)
Grant revenue	\$ 522,431	\$ —	\$ —	\$ —
Operating expenses				
Research and development	12,730,335	25,161,300	3,871,476	11,084,252
General and administrative	3,215,803	5,229,640	2,074,877	1,294,097
Total operating expenses	15,946,138	30,390,940	5,946,353	12,378,349
Operating loss	(15,423,707)	(30,390,940)	(5,946,353)	(12,378,349)
Other income (expenses)				
Other income	17,781	182,372	11,789	73,875
Change in fair value in warrant liability and other liabilities	(84,998)	(82,231)	(19,522)	(40,890)
Change in fair value of Series B purchase option liability	(4,772,509)	—	—	—
Total other income (expense), net	(4,839,726)	100,141	(7,733)	32,985
Net loss	\$ (20,263,433)	\$ (30,290,799)	\$ (5,954,086)	\$ (12,345,364)
Accretion of redeemable convertible preferred stock (Note 7)	(1,426,740)	(4,405,007)	(1,009,135)	(4,468,032)
Net loss attributable to common stockholders	\$ (21,690,173)	\$ (34,695,806)	\$ (6,963,221)	\$ (16,813,396)
Basic and diluted net loss per share	\$ (5.38)	\$ (7.78)	\$ (1.57)	\$ (3.75)
Weighted average shares outstanding, basic and diluted	4,033,772	4,460,986	4,431,687	4,489,039
Pro forma basic and diluted net loss per share (Note 9) (unaudited)		\$ (0.54)		\$ (0.20)
Pro forma weighted-average basic and diluted shares outstanding (Note 9) (unaudited)		55,647,597		61,288,273

The accompanying notes are an integral part of these financial statements.

G1 Therapeutics, Inc.

Statements of redeemable convertible preferred stock and stockholders' deficit

	Preferred stock series C		Preferred stock series B		Preferred stock series A		Preferred stock series 1		Common stock		Treasury stock		Additional paid-in capital	Accumulated deficit	Total shareholders' equity
	Shares	Amount	Shares	Amount	Shares	Amount	Shares	Amount	Shares	Amount	Shares	Amount			
Balance at December 31, 2014	—	\$ —	—	\$ —	14,996,692	\$13,171,305	2,046,091	\$ 930,971	3,821,514	\$ 382	(80,000)	\$ (8,000)	2,945	\$ (10,623,241)	\$ (10,627,914)
Issuance of Series B redeemable convertible preferred stock	—	—	22,928,234	33,261,990	—	—	—	—	—	—	—	—	—	—	—
Allocation of Series B proceeds to Series B purchase option liability	—	—	—	(1,934,955)	—	—	—	—	—	—	—	—	—	—	—
Accretion of redeemable, convertible preferred stock	—	—	—	796,879	—	629,861	—	—	—	—	—	—	(626,160)	(800,580)	(1,426,740)
Exercise of common stock options	—	—	—	—	—	—	—	—	494,173	49	—	—	53,355	—	53,404
Exercise of common stock warrants	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Stock-based compensation	—	—	—	—	—	—	—	—	—	—	—	—	388,835	—	388,835
Stock financing costs	—	—	—	(139,455)	—	—	—	—	—	—	—	—	—	—	—
Issuance of common shares for license agreement	—	—	—	—	—	—	—	—	146,000	15	—	—	181,025	—	181,040
Exercise of Series B purchase option liability	—	—	—	6,707,464	—	—	—	—	—	—	—	—	—	—	—
Net loss during year	—	—	—	—	—	—	—	—	—	—	—	—	—	(20,263,433)	(20,263,433)
Balance at December 31, 2015	—	\$ —	22,928,234	\$38,691,923	14,996,692	\$13,801,166	2,046,091	\$ 930,971	4,461,687	\$ 446	(80,000)	\$ (8,000)	\$ —	\$ (31,687,254)	\$ (31,694,808)
Issuance of Series C redeemable convertible preferred stock	16,828,217	49,999,998	—	—	—	—	—	—	—	—	—	—	—	—	—
Accretion of redeemable, convertible preferred stock	—	1,673,019	—	1,663,100	—	629,861	—	439,027	—	—	—	—	(1,397,069)	(3,007,938)	(4,405,007)
Exercise of common stock options	—	—	—	—	—	—	—	—	53,186	5	—	—	6,514	—	6,519
Stock-based compensation	—	—	—	—	—	—	—	—	—	—	—	—	1,390,555	—	1,390,555
Stock financing costs	—	(248,916)	—	—	—	—	—	—	—	—	—	—	—	—	—
Issuance of common shares for license agreement	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Net loss during year	—	—	—	—	—	—	—	—	—	—	—	—	—	(30,290,799)	(30,290,799)
Balance at December 31, 2016	16,828,217	\$51,424,101	22,928,234	\$40,355,023	14,996,692	\$14,431,027	2,046,091	\$1,369,998	4,514,873	\$ 451	(80,000)	\$ (8,000)	\$ —	\$ (64,985,991)	\$ (64,993,540)

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	Preferred stock series C		Preferred stock series B		Preferred stock series A		Preferred stock series 1		Common stock		Treasury stock		Additional paid-in capital	Accumulated deficit	Total shareholders' equity
	Shares	Amount	Shares	Amount	Shares	Amount	Shares	Amount	Shares	Amount	Shares	Amount			
Balance at December 31, 2016	16,828,217	\$51,424,101	22,928,234	\$40,355,023	14,996,692	\$14,431,027	2,046,091	\$1,369,998	4,514,873	\$ 451	(80,000)	\$ (8,000)	\$ —	\$(64,985,991)	\$(64,993,540)
Accretion of redeemable, convertible preferred stock (unaudited)	—	3,732,118	—	410,079	—	155,308	—	170,527	—	—	—	—	(548,752)	(3,919,280)	(4,468,032)
Exercise of common stock options (unaudited)	—	—	—	—	—	—	—	—	7,500	1	—	—	974	—	975
Stock-based compensation (unaudited)	—	—	—	—	—	—	—	—	—	—	—	—	547,778	—	547,778
Stock financing costs (unaudited)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Issuance of common shares for license agreement (unaudited)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Net loss (unaudited)	—	—	—	—	—	—	—	—	—	—	—	—	—	(12,345,364)	(12,345,364)
Balance at March 31, 2017 (unaudited)	16,828,217	\$55,156,219	22,928,234	\$40,765,102	14,996,692	\$14,586,335	2,046,091	\$1,540,525	4,522,373	\$ 452	(80,000)	\$ (8,000)	\$ —	\$(81,250,635)	\$(81,258,183)

The accompanying notes are an integral part of these financial statements.

G1 Therapeutics, Inc.

Statements of cash flows

	Year ended December 31,		Three months ended March 31,	
	2015	2016	2016	2017
			(unaudited)	(unaudited)
Cash flows from operating activities				
Net loss	\$ (20,263,433)	\$ (30,290,799)	\$ (5,954,086)	\$ (12,345,364)
Adjustments to reconcile net loss to net cash used in operating activities				
Depreciation and amortization	42,266	67,226	12,418	12,409
Stock-based compensation	388,835	1,390,555	221,387	547,778
Purchase of license agreement	181,040	—	—	—
Gain/loss on disposal of PPE	1,579	18,527	5,900	—
Increase in fair value of warrant activity	84,998	82,231	19,522	40,890
Increase in fair value of Series B purchase option liability	4,772,509	—	—	—
Change in operating assets and liabilities				
Prepaid expenses and other assets	(787,516)	215,792	4,567	(659,515)
Accounts payable and accrued expenses	1,734,736	3,375,709	399,212	3,123,828
Net cash used in operating activities	(13,844,986)	(25,140,759)	(5,291,080)	(9,279,974)
Cash flows from investing activities				
Purchases of property and equipment	(87,263)	(249,742)	(56,263)	(13,093)
Net cash used in investing activities	(87,263)	(249,742)	(56,263)	(13,093)
Cash flows from financing activities				
Proceeds from stock options and warrants exercised	53,405	6,519	—	975
Proceeds from Series C preferred stock	—	49,999,998	—	—
Proceeds from Series B preferred stock	33,261,990	—	—	—
Issuance costs for preferred share financings	(139,455)	(248,916)	—	—
Payment of proposed public offering costs	—	—	—	(286,208)
Net cash provided by (used in) financing activities	33,175,940	49,757,601	—	(285,233)
Net change in cash and cash equivalents	19,243,691	24,367,100	(5,347,343)	(9,578,300)
Cash and cash equivalents				
Beginning of period	3,694,029	22,937,720	22,937,720	47,304,820
End of period	\$ 22,937,720	\$ 47,304,820	\$ 17,590,377	\$ 37,726,520
Non-cash investing and financing activities				
Accretion of redeemable convertible preferred stock	1,426,740	4,405,007	1,009,135	4,468,032
Exercise of Series B purchase option	6,707,464	—	—	—
Common stock issued for patent rights	181,040	—	—	—
Costs for proposed public offering in accounts payable and accrued expenses	—	—	—	478,052

The accompanying notes are an integral part of these financial statements.

G1 Therapeutics, Inc.

Notes to financial statements

1. Description of business

G1 Therapeutics, Inc. (the "Company") is a privately held clinical-stage biopharmaceutical company based in Research Triangle Park, North Carolina that focuses on the discovery and development of novel therapeutics for the treatment of cancer. The Company was incorporated on May 19, 2008 in the state of Delaware.

The Company focuses on cyclin-dependent kinases (CDKs), a family of proteins that plays an important role in the growth and proliferation of all human cells. The Company has focused its CDK research on developing potent and selective inhibitors of the kinases CDK4 and CDK6, collectively known as CDK4/6. The Company is currently advancing two CDK4/6 inhibitor product candidates that each have broad applicability across multiple cancer indications.

Trilaciclib, the Company's most advanced clinical-stage candidate, is a potential first-in-class intravenous CDK4/6 inhibitor designed to preserve hematopoietic stem cells and enhance immune system function during chemotherapy. Based on compelling response rates and favorable tolerability shown in early-stage trials, trilaciclib is currently being evaluated in three randomized Phase 1b/2a trials: two in patients with small cell lung cancer, or SCLC, and one Phase 2 in patients with triple-negative breast cancer, or TNBC.

G1T38, the Company's second clinical-stage candidate, is a potential best-in-class oral CDK4/6 inhibitor, to be used in combination with other targeted therapies to treat multiple cancers. A Phase 1 trial of G1T38 in 75 healthy volunteers showed a favorable safety profile, and the Company initiated a Phase 1/2 trial in ER+, HER2- breast cancer in January 2017. The Company's plans for G1T38 include future combinations in other cancers, such as non-small cell lung cancer, or NSCLC.

As part of the Company's strategy to develop wholly-owned proprietary combinations, the Company has exclusively in-licensed G1T48, a potential first/best-in-class oral selective estrogen receptor degrader, or SERD. The Company expects to initially develop G1T48 to be used in combination with G1T38 for the treatment of ER+, HER2- breast cancer.

The Company plans to continue to leverage its proprietary assets and knowledge of CDK4/6 biology to explore additional combination treatments and to build a fully integrated oncology company.

The Company's financial statements have been prepared assuming that the Company will continue as a going concern, which contemplates the realization of assets and the settlement of liabilities and commitments in the normal course of business. As of March 31, 2017, the Company had an accumulated deficit of \$81,250,635 (unaudited). The Company has reported a net loss in all fiscal periods since inception and expects to incur substantial losses in the future to conduct research and development and pre-commercialization activities. These factors raise substantial doubt about its ability to continue as a going concern. The Company's management plans to raise additional funds through equity financings or generate revenues from collaborative partnerships prior to the commercialization of the Company's product candidates. If the Company is unable to raise additional funds, management plans to halt the planned increases to research and development and general and administrative costs until such time as additional funds can be obtained. The accompanying financial statements do not include any adjustments to reflect the possible future effects on the recoverability and classification of assets or the amounts and classification of liabilities that may result from uncertainty related to the Company's ability to continue as a going concern.

There can be no assurance that the Company will be able to obtain additional debt or equity financing or generate revenues from collaborative partners on terms acceptable to the Company, on a timely basis, or at all.

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The failure of the Company to obtain sufficient funds on acceptable terms when needed could have a material adverse effect on the Company's results of operations and financial condition. Additionally, there is no assurance that the Company can achieve its technical milestones, or that its intellectual property rights will not be challenged.

2. Summary of significant accounting policies

Basis of presentation

The Company has prepared the accompanying financial statements in conformity with generally accepted accounting principles in the United States of America ("U.S. GAAP").

Unaudited Interim Consolidated Financial Statements

The accompanying consolidated interim balance sheet as of March 31, 2017, the statements of operations and comprehensive loss and cash flows for the three months ended March 31, 2016 and 2017, the statement of convertible preferred stock and stockholders' deficit for the three months ended March 31, 2017 and the related footnote disclosures are unaudited. These unaudited consolidated interim financial statements have been prepared in accordance with U.S. GAAP on the same basis as the audited consolidated financial statements and in the opinion of management, reflect all adjustments of a normal, recurring nature that are necessary for the fair statement of the Company's financial position as of March 31, 2017 and its results of operations and cash flows for the three months ended March 31, 2016 and 2017. The results for the three months ended March 31, 2017 are not necessarily indicative of the results expected for the full fiscal year or any future period. All references to March 31 in these footnotes are unaudited.

Unaudited pro forma information

The accompanying unaudited pro forma balance sheet as of March 31, 2017 assumes the automatic conversion of the Series 1, A, B and C redeemable convertible preferred stock into 56,799,234 shares of common stock and the conversion of a warrant to purchase 65,934 shares of Series 1 redeemable convertible preferred stock into a warrant to purchase 65,934 shares of common stock upon the completion of an initial public offering.

In the accompanying statements of operations and comprehensive loss, unaudited pro forma basic and diluted net loss per share for the three months ended March 31, 2017 have been prepared to give effect to the automatic conversion of all outstanding shares of redeemable convertible preferred stock into common stock and the reclassification of the warrant liability to additional paid-in capital, as though the proposed initial public offering had occurred at the beginning of the period presented or the issuance date of the redeemable convertible preferred stock, if later.

Use of estimates

The preparation of financial statements in conformity with U.S. GAAP requires management to make estimates and assumptions that affect the amounts reported in the financial statements and the accompanying notes. Actual results could differ from those estimates. These estimates include the Company's common stock valuation, warrant valuation and deferred tax asset valuation allowance.

Cash and cash equivalents

The Company considers all highly liquid investments purchased with an original maturity of three months or less at the date of purchase to be cash equivalents. Cash and cash equivalents at December 31, 2016 and March 31, 2017 consist of amounts on deposit in banks, including checking accounts, money market accounts and certificates of deposit. Cash deposits are all in financial institutions in the United States.

Concentration of credit risk

Financial instruments that potentially subject the Company to credit risk consist of cash and cash equivalents. Deposits with financial institutions are insured, up to certain limits, by the Federal Deposit Insurance Corporation ("FDIC"). The Company's cash deposits often exceed the FDIC insurance limit; however, all deposits are maintained with high credit quality institutions and the Company has not experienced any losses in such accounts. The financial condition of financial institutions is periodically reassessed, and the Company believes the risk of any loss is minimal. The Company believes the risk of any loss on cash due to credit risk is minimal.

Property and equipment

Property and equipment are stated at cost less accumulated depreciation. Depreciation is generally calculated using the straight-line method over the following estimated useful lives:

Computer equipment	5 years
Laboratory equipment	5 years
Furniture and fixtures	7 years
Leasehold improvements	7 years

Costs associated with maintenance and repairs are charged to expense as incurred. Property and equipment held under leasehold improvements are amortized over the shorter of the lease term or the estimated useful life of the related asset.

Impairment of long-lived assets

The Company evaluates its long-lived assets for indicators of possible impairment by comparison of the carrying amounts to future net undiscounted cash flows expected to be generated by such assets when events or changes in circumstances indicate the carrying amount of an asset may not be recoverable. Should an impairment exist, the impairment loss would be measured based on the excess carrying value of the asset over the asset's fair value based on discounted estimates of future cash flows. For the years ended December 31, 2015 and December 31, 2016 and the three months ended March 31, 2017 (unaudited), the Company's management evaluated its long-lived assets and determined no impairment charge was needed.

Warrant liability

Warrants to purchase the Company's redeemable convertible preferred stock are classified as liabilities and are recorded at their estimated fair value. In each reporting period, any change in fair value of the warrants is recorded as expense in the case of an increase in fair value and income in the case of a decrease in fair value.

Series B purchase option liability

The option to purchase shares of Series B redeemable convertible preferred stock in the second tranche has been accounted for as a free-standing instrument and classified as a liability. On February 4, 2015, upon purchase of the first tranche of Series B Preferred Stock, the option to purchase additional shares was recorded at its fair value, with the remaining cash proceeds received on that date allocated to Series B Preferred Stock. As the value of the option to purchase shares in the second tranche increased over time, a change in the fair value of the liability was recorded as "Change in fair value of Series B purchase option liability" in the accompanying statement of operations. This free-standing instrument was exercised on December 10, 2015 when the holders exercised their right to require the purchase of the second tranche shares by the holders of the outstanding shares of Series B Preferred Stock resulting in an outstanding liability of \$0 on December 31, 2015.

Research and development

Research and development expenses consist of costs incurred to further the Company's research and development activities and include salaries and related employee benefits, manufacturing of pharmaceutical active ingredients and drug products, costs associated with clinical trials, nonclinical activities, regulatory activities, research-related overhead expenses and fees paid to expert consultants, external service providers and contract research organizations which conduct certain research and development activities on behalf of the Company. Costs incurred in the research and development of products are charged to research and development expense as incurred.

Each reporting period, the Company estimates and accrues expenses, the largest of which is related to accrued research and development expenses. This process involves reviewing contracts and purchase orders, identifying services that have been performed on the Company's behalf, and estimating the level of service performed and the associated cost incurred for the service when the Company has not yet been invoiced or otherwise notified of the actual costs.

Costs for preclinical studies and clinical trial activities are recognized based on an evaluation of vendors' progress towards completion of specific tasks, using data such as patient enrollment, clinical site activations or information provided by vendors regarding their actual costs incurred. Payments for these activities are based on the terms of individual contracts and payment timing may differ significantly from the period in which the services were performed. The Company determines accrual estimates through reports from and discussions with applicable personnel and outside service providers as to the progress or state of completion of trials, or the services completed. The estimates of accrued expenses as of each balance sheet date are based on the facts and circumstances known at the time.

Revenue recognition

The Company received the majority of its revenues from grant programs authorized by Congress through the Small Business Innovation Research (SBIR) program and the Small Business Technology Transfer Act (STTR) of 1992. In addition, the Company was also awarded grant funds through other federal and state programs related to its research. Under the terms of the grants, the Company is entitled to receive reimbursement of its allowable direct expenses, allocated overhead and general and administrative expenses.

Revenue received under these grant programs is recognized as direct project costs are incurred plus a portion of the Company's indirect costs such as overhead and general and administrative expenses allocated to the project. The Company's grant agreements are fixed fee arrangements.

In the event that the granting agency provides advance funding of a grant award, the Company records deferred revenues and then recognizes revenue as costs are incurred over the life of the grant.

To date, the Company has not generated any revenue from the commercial sale of its product candidates.

Fair value of financial instruments

The Company provides disclosure of financial assets and financial liabilities that are carried at fair value based on the price that would be received upon sale of an asset or paid to transfer a liability in an orderly transaction between market participants at the measurement date. Fair value measurements may be classified based on the amount of subjectivity associated with the inputs to fair valuation of these assets and liabilities using the following three levels:

- Level 1 Inputs are unadjusted quoted prices in active markets for identical assets or liabilities that the Company has the ability to access at the measurement date.
- Level 2 Inputs include quoted prices for similar assets and liabilities in active markets, quoted prices for identical or similar assets or liabilities in markets that are not active, inputs other than quoted prices that are observable for the asset or liability and inputs that are derived principally from or corroborated by observable market data by correlation or other means.
- Level 3 Unobservable inputs that reflect the Company's estimates of the assumptions that market participants would use in pricing the asset or liability. The Company develops these inputs based on the best information available, including its own data.

The carrying amounts of cash, cash equivalents, accounts payable and accrued liabilities approximate fair value because of their short-term nature.

At December 31, 2015, December 31, 2016 and March 31, 2017 (unaudited) these financials instruments and respective fair values have been classified as follows:

	Quoted prices in active markets for identical assets (Level 1)	Significant other observable inputs (Level 2)	Significant other unobservable inputs (Level 3)	Balance at December 31, 2015
Assets				
Money market funds	\$ 22,425,174	\$ —	\$ —	\$ 22,425,174
Total assets at fair value:	\$ 22,425,174	\$ —	\$ —	\$ 22,425,174
Liabilities:				
Warrant Liability	\$ —	\$ —	\$ 84,998	\$ 84,998
Total liabilities at fair value:	\$ —	\$ —	\$ 84,998	\$ 84,998

	Quoted prices in active markets for identical assets (Level 1)	Significant other observable inputs (Level 2)	Significant other unobservable inputs (Level 3)	Balance at December 31, 2016
Assets				
Money market funds	\$ 31,730,289	\$ —	\$ —	\$ 31,730,289
Certificates of Deposit	15,040,423	—	—	15,040,423
Total assets at fair value:	\$ 46,770,712	\$ —	\$ —	\$ 46,770,712
Liabilities:				
Warrant Liability	\$ —	\$ —	\$ 167,229	\$ 167,229
Total liabilities at fair value:	\$ —	\$ —	\$ 167,229	\$ 167,229

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	Quoted prices in active markets for identical assets (Level 1) (unaudited)	Significant other observable inputs (Level 2) (unaudited)	Significant other unobservable inputs (Level 3) (unaudited)	Balance at March 31, 2017 (unaudited)
Assets				
Money market funds	\$ 22,065,437	\$ —	\$ —	\$22,065,437
Certificates of Deposit	15,068,669	—	—	15,068,669
Total assets at fair value:	\$ 37,134,106	\$ —	\$ —	\$37,134,106
Liabilities:				
Warrant Liability	\$ —	\$ —	\$ 208,119	\$ 208,119
Total liabilities at fair value:	\$ —	\$ —	\$ 208,119	\$ 208,119

The change in the fair value measurement using significant inputs (Level 3) is summarized below:

Balance at December 31, 2014	\$ —
Change in fair value in warrant liability	84,998
Allocation of Series B proceeds to Series B purchase option liability	1,934,955
Change in fair value of Series B purchase option liability	4,772,509
Exercise of Series B Purchase option	(6,707,464)
Balance at December 31, 2015	\$ 84,998
Change in fair value in warrant liability	82,231
Balance at December 31, 2016	\$ 167,229
Change in fair value in warrant liability (unaudited)	40,890
Balance at March 31, 2017 (unaudited)	\$ 208,119

Patent costs

Costs associated with the submission of patent applications are expensed as incurred given the uncertainty of the future economic benefits of the patents. Patent-related legal expenses included in general and administrative costs were approximately \$690,710 for the year ended December 31, 2015 and \$1,034,240 for the year ended December 31, 2016 and \$246,058 for the three months ended March 31, 2016 (unaudited) and \$250,280 for the three months ended March 31, 2017 (unaudited).

Income taxes

Income taxes are accounted for using the asset and liability method. Deferred tax assets and liabilities are recognized for the future tax consequences attributable to temporary differences between the financial statements carrying amounts of assets and liabilities and their respective tax bases, operating loss carryforwards, and tax credit carryforwards. Deferred tax assets and liabilities are measured using enacted tax rates expected to apply to taxable income in the years in which those temporary differences are expected to be recovered or settled. The effect on deferred tax assets and liabilities of a change in tax rates is recognized in income in the period that includes the enactment date.

In accordance with Financial Accounting Standards Board (FASB) Accounting Standards Codification (ASC) 740, *Accounting for Income Taxes*, the Company reflects in the financial statements the benefit of positions taken in a

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previously filed tax return or expected to be taken in a future tax return only when it is considered 'more-likely-than-not' that the position taken will be sustained by a taxing authority. As of December 31, 2015 and 2016, the Company had no unrecognized income tax benefits and correspondingly there is no impact on the Company's effective income tax rate associated with these items. The Company's policy for recording interest and penalties relating to uncertain income tax positions is to record them as a component of income tax expense in the accompanying statements of operations. As of December 31, 2015 and 2016, the Company had no such accruals.

Stock-based compensation

The primary type of stock-based payments utilized by the Company are stock options. The Company accounts for stock-based employee compensation arrangements by measuring the cost of employee services received in exchange for all equity awards granted based on the fair value of the award on the grant date. The fair value of each employee stock option is estimated on the date of grant using an options pricing model. The Company currently uses the Black-Scholes valuation model to estimate the fair value of its share-based payments. The model requires management to make a number of assumptions including expected volatility, expected life, risk-free interest rate and expected dividends.

The Company accounts for stock-based non-employee compensation arrangements by recording the expense of such services based on the fair value of the equity instrument as estimated using the Black-Scholes pricing model. The fair value of the equity instrument is charged to operating expense over the term of the service agreement.

Segment information

The Company manages its operations as a single segment for the purposes of assessing performance and making operating decisions. All of the Company's assets are held in the United States.

Comprehensive loss

Comprehensive loss includes net loss as well as other changes in stockholders' equity (deficit) that result from transactions and economic events other than those with stockholders. There was no difference between net loss and comprehensive loss for each of the periods presented in the accompanying financial statements.

Redeemable convertible preferred stock

The Company classifies its redeemable convertible preferred stock, for which the Company does not control the redemption, outside of permanent equity. The Company records redeemable convertible preferred stock at fair value upon issuance, net of any offering costs, and the carrying value is adjusted to the redemption value at the end of each reporting period. These adjustments are effected through charges against additional paid-in capital and accumulated deficit.

New accounting standards

In October 2016, the FASB issued ASU No. 2016-17, *Consolidation (Topic 810): Interests Held through Related Parties That Are under Common Control*, which amends the consolidation guidance on how a reporting entity that is a single decision maker of a variable interest entity should treat indirect interest in the entity held through related parties that are under common control. This guidance is effective for annual periods beginning after December 15, 2016, including interim periods within those annual periods, with early adoption permitted. The Company adopted this ASU on January 1, 2017. The adoption of this standard did not have a material impact on the Company's financial statements.

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In August 2016, the FASB issued ASU No. 2016-15, *Statement of Cash Flows (Topic 230): Classification of Certain Cash Receipts and Cash Payments*. The FASB issued ASU 2016-09 to improve U.S. GAAP by providing guidance on the cash flow statement classification of eight specific areas where there is existing diversity in practice. The FASB expects that the guidance in this ASU will reduce the current and potential future diversity in practice in such areas. This ASU is effective for annual and interim periods beginning after December 15, 2017, with early adoption permitted. The Company is currently evaluating the impact of the adoption of this ASU on the Company's financial statements.

In March 2016, the FASB issued ASU No. 2016-09, *Compensation—Stock Compensation (Topic 718): Improvements to Employee Share-Based Payment Accounting*. The FASB issued ASU 2016-09 to simplify several aspects of the accounting for share-based payment transactions, including the income tax consequences. This ASU is effective for annual and interim periods ending after December 15, 2016, with early adoption permitted. This ASU was adopted by the Company for the year ended December 31, 2016. The adoption of this standard did not have a material impact on its financial statements.

In February 2016, the FASB issued ASU No. 2016-02, *Leases (Topic 842)*. This guidance revises the accounting related to leases by requiring lessees to recognize a lease liability and a right-of-use asset for all leases. The new lease guidance also simplifies the accounting for sale and leaseback transactions. This ASU is effective for annual reporting periods beginning after December 15, 2018 and early adoption is permitted. The Company is currently evaluating the impact of the adoption of this ASU on the Company's financial statements.

In November 2014, the FASB issued ASU No. 2014-16, *Determining Whether the Host Contract in a Hybrid Financial Instrument Issued in the Form of a Share Is More Akin to Debt or to Equity*. The guidance requires an entity to determine the nature of the host contract by considering all stated and implied substantive terms and features of the hybrid financial instrument, weighing each term and feature on the basis of the relevant facts and circumstances (commonly referred to as the whole-instrument approach). ASU 2014-16 applies to all entities and is effective for annual periods beginning after December 15, 2015, and interim periods thereafter. The ASU was adopted by the Company for the year ended December 31, 2016. Adoption of this standard did not have material impact on its financial statements.

In August 2014, the FASB issued ASU No. 2014-15, *Presentation of Financial Statements—Going Concern (Subtopic 205-40): Disclosure of Uncertainties about an Entity's Ability to Continue as a Going Concern*, requiring management to evaluate whether events or conditions could impact an entity's ability to continue as a going concern for at least one year after the date that the financial statements are issued and to provide disclosures if necessary. Disclosures will be required if conditions give rise to substantial doubt and the type of disclosure will be determined based on whether management's plans will be able to alleviate the substantial doubt. The ASU will be effective for the first annual period ending after December 15, 2016, and for annual periods and interim periods thereafter with early application permitted. The ASU was adopted by the Company for the year ended December 31, 2016. Adoption of this standard did not have material impact on its financial statements.

In June 2014, the FASB issued ASU No. 2014-12, *Compensation – Stock Compensation (Topic 718): Accounting for Share-Based Payments When the Terms of an Award Provide That a Performance Target Could be Achieved* after the Requisite Service Period, which requires the Company to assess share-based awards with performance targets that could be achieved after the requisite service period for potential treatment as performance conditions. Under the ASU, compensation expense is to be recognized when the performance target is deemed probable and should represent the compensation expense attributable to the periods for which service has already been rendered. If the performance target is reached prior to achievement of the service period, the remaining unrecognized compensation cost should be recognized over the remaining service period. The ASU is effective for annual and interim periods beginning after December 15, 2015 with early adoption permitted. This ASU was adopted by the Company for the year ended December 31, 2016. The adoption of this standard did not have a material impact on its financial statements.

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In May 2014, the FASB and the International Accounting Standards Board jointly issued ASU No. 2014-09, *Revenue from Contracts with Customers*, which supersedes the revenue recognition requirements in ASC 605 and most industry-specific guidance. The new standard requires that an entity recognize revenue to depict the transfer of promised goods or services to customers in an amount that reflects the consideration to which the company expects to be entitled in exchange for those goods and services. The update also requires additional disclosures about the nature, amount, timing and uncertainty of revenue and cash flows arising from customer contracts, including significant judgements and changes in judgments and assets recognized from costs incurred to obtain or fulfill a contract. ASU 2014-09 is effective for public entities for annual and interim periods within those annual periods beginning after December 15, 2017. The Company is evaluating the method of adoption and the potential impact this standard may have on its financial position and results of operations.

3. Property and equipment

Property and equipment consists of the following:

	Year ended		Three months ended
	December 31,	December 31,	March 31,
	2015	2016	2017
			(unaudited)
Computer equipment	\$ 29,482	\$ 66,865	\$ 77,660
Laboratory equipment	129,968	206,844	206,844
Furniture and fixtures	22,427	64,203	66,501
Leasehold improvements	34,410	80,210	80,210
Accumulated depreciation	(69,402)	(107,249)	(119,658)
Property and equipment, net	\$146,885	\$ 310,873	\$ 311,557

Depreciation expenses relating to property and equipment were \$42,266 and \$67,226 for the years ended December 31, 2015 and 2016, respectively, and \$12,418 and \$12,409 for the three months ended March 31, 2016 and 2017 (unaudited), respectively.

4. Patent license agreement

On November 23, 2016, the Company entered into a license agreement with the Board of Trustees of the University of Illinois (the University) whereby the University licensed patent rights to the Company, with rights of sublicense, to make, have made, use, import, sell and offer for sale products covered by certain patent rights owned by the University. The rights licensed to the Company are exclusive, worldwide, non-transferable rights, for all fields of use. Under the terms of the agreement the Company paid a one-time only, non-refundable license issue fee in the amount of \$500,000 which was charged to research and development expense in the fourth quarter of 2016.

The Company is also obligated to pay annual maintenance fees to the University. All annual minimum payments are fully creditable against any royalty payments made by the Company. Under the terms of the agreement, the Company must pay the University a royalty percentage on all net sales of products and a share of sublicensing revenues. The University is eligible to receive milestone payments of up to \$2.625 million related to the initiation and execution of clinical trials and first commercial sale of a product in multiple countries. The Company is also responsible for all future patent prosecution costs.

The term of the license agreement will continue until the later of (i) the expiration of the last valid claim within the patent rights covering the product in such country, (ii) the expiration of market exclusivity in such country

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and (iii) the 10th anniversary of the first commercial sale in such country. The University may terminate the agreement in the event (i) the Company fails to pay any amount or make any report when required to be made and fails to cure such failure within thirty (30) days after receipt of notice from the University, (ii) is in breach of any provision of the agreement and fails to remedy within forty-five (45) days after receipt of notice, (iii) makes a report to the University under the agreement that is determined to be materially false, (iv) declares insolvency or bankruptcy or (v) takes an action that causes patent rights or technical information to be subject to lien or encumbrance and fails to remedy any such breach within forty-five (45) days of receipt of notice from the University. The Company may terminate the agreement at any time on written notice to the University at least ninety (90) days prior to the termination date specified in the notice. Upon expiration or termination of the agreement, all rights revert to the University.

On December 31, 2015 the Company entered into a non-exclusive, royalty-free license agreement for patent rights. As consideration for the patent rights, the Company issued 146,000 shares of common stock with a fair value of \$181,040, and agreed to pay past and future patent prosecution costs related to the countries in which valid claims have or will have issued. The aggregate fair value of all consideration paid was expensed as a research and development cost in 2015.

5. Accrued expenses

Accrued expenses are comprised of the following as of:

	Year ended, December 31,		Three months ended March 31,
	2015	2016	2017
			(unaudited)
Accrued professional fees	\$ 448,500	\$ 295,158	\$ 964,267
Accrued clinical and preclinical study costs	211,000	1,897,346	3,405,935
Accrued compensation expense	279,442	617,350	189,181
Deferred rent	14,781	43,430	69,488
Accrued expenses	\$ 953,723	\$ 2,853,284	\$ 4,628,871

6. Lease obligations

Operating lease commitments

Pursuant to a lease dated January 10, 2014, on April 1, 2014, the Company leased office and lab space under a lease agreement for \$5,946 per month with a free rent period and escalating rent payments; the lease was set to expire on July 31, 2017.

On January 27, 2016, the company signed an amendment to the Company's existing lease to move to a larger office and lab space beginning in August 2016 for \$16,277 per month with a discounted rent period and escalating rent payments; the lease was extended to December 31, 2022. The amendment also contained an option for a five year renewal and a right of first refusal to lease adjacent office space.

On March 27, 2017, the Company signed an amendment to the Company's existing lease to lease additional, adjacent office space. Beginning August 2017, the combined space will lease for \$24,210 per month with a discounted rent period and escalating rent payments. The lease is set to expire on December 31, 2022. The Company maintained an option for a five year renewal on the combined space.

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Rent expense amounted to \$71,352 and \$125,660 for the years ended December 31, 2015 and December 31, 2016, respectively, and \$21,503 and \$50,473 for the three months ended March 31, 2016 and 2017 (unaudited), respectively.

The following is a schedule by years of minimum future rentals on noncancelable operating leases as of December 31, 2016:

2017	\$ 173,346
2018	\$ 203,694
2019	\$ 209,805
2020	\$ 216,099
2021	\$ 222,582
2022	\$ 229,259
	\$ 1,254,785

7. Capitalization

Redeemable convertible preferred stock

The Company has determined that the Series C, Series B, Series A and Series 1 redeemable convertible preferred stock are redeemable, after a stated period of time, based on voting thresholds that vary by shareholder class, as outlined in the Company's certificate of incorporation. The Company classifies its redeemable convertible preferred stock outside of permanent equity and into mezzanine equity.

The Company records its redeemable convertible preferred stock at fair value upon issuance, net of any issuance costs or discounts, and the carrying value is increased by periodic accretion to its redemption value until the earliest possible date of redemption. These increases are recorded as charges against additional paid-in-capital until the additional paid-in-capital balance is reduced to zero. At that time, additional accretion adjustments are recorded as additions to accumulated deficit.

In November 2012, the Company issued warrants to purchase 65,934 shares of its Series 1 redeemable convertible preferred stock. The fair value of the warrants was determined using a combination of both the option pricing model and the probability weighted expected return method and was recorded as a liability. The change in the fair value of the warrant liability in the year ended December 31, 2015 and 2016 was \$84,998 and \$82,231, respectively, and \$19,522 and \$40,890 for the three months ended March 31, 2016 and 2017 (unaudited), respectively, and has been recorded as "Change in the fair value in warrant liability" in the accompanying statement of operations. The Company used significant assumptions in estimating fair value of the warrant liability including volatility, risk free interest rate, estimated fair value of the redeemable convertible preferred stock and the estimated life of the warrant.

In 2013, the Company issued 80,500 shares of Series 1 redeemable convertible preferred stock for a total of \$36,627 in exchange for consulting and professional services.

In April 2013, the Company entered into a bridge financing agreement that was amended in July and August 2013 for total advances up to \$1,250,000. In conjunction with this bridge financing agreement, the Company issued warrants to purchase 583,862 shares of common stock which became immediately exercisable upon execution of the bridge financing agreement. The warrants have a 10 year life and were to expire during 2023. As of December 31, 2013, all shares of common stock have been purchased under the warrants, and there is no outstanding balance on the bridge financing agreement as it was converted into Series A redeemable convertible preferred stock.

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The fair value of the warrants upon execution of the bridge financing agreement was determined to be approximately \$68,800, which was recognized as noncash interest expense in 2013. The Company calculated the fair value of the warrants using the Black-Scholes valuation model with the following assumptions: volatility of 97%, dividend rate of 0%, risk-free interest rate of 2.99% and a warrant life of 10 years.

In October 2013, the Company authorized the issuance of up to 17,108,717 shares of its preferred stock, of which 2,112,025 was to be designated as Series 1 redeemable convertible preferred stock and 14,996,692 as Series A redeemable convertible preferred stock. At this time, the Company also issued 7,509,696 shares of its Series A redeemable convertible preferred stock for cash consideration and conversion of promissory notes at a price of \$0.84 per share. Total gross proceeds, including the cancellation of indebtedness of \$1,308,145, amounted to \$6,308,145.

In May 2014, the Company issued 7,486,996 shares of its Series A redeemable convertible preferred stock for cash consideration of \$0.84 per share. Total proceeds, including cancellation of indebtedness of \$39,077, amounted to \$6,289,077.

In February 2015, the Company's Board of Directors and stockholders approved the Fourth Amended and Restated Certification of Incorporation, which increased the authorized number of shares of its redeemable convertible preferred stock to 39,908,717, of which 2,112,025 were designated as Series 1 redeemable convertible preferred stock, 14,996,692 as Series A redeemable convertible preferred stock and 22,800,000 as Series B redeemable convertible preferred stock. At the same time, the Company issued 11,382,087 shares of its Series B redeemable convertible preferred stock for cash consideration and cancellation of indebtedness at a price of \$1.4507 per share. Total proceeds, including cancellation of indebtedness of \$12,000, amounted to \$16,511,995.

In December 2015, the Company approved a Certificate of Amendment to the Fourth Amended and Restated Certification of Incorporation which increased the authorized number of shares of its redeemable convertible preferred stock to 40,108,717, of which 2,112,025 were be designated as Series 1 redeemable convertible preferred stock, 14,996,692 as Series A redeemable convertible preferred stock and 23,000,000 as Series B redeemable convertible preferred stock. At the same time, the Company authorized and issued 11,546,147 shares of its Series B redeemable convertible preferred stock for cash consideration at a price of \$1.4507 per share. Total additional proceeds amounted to \$16,749,995.

In April 2016, the Company's Board of Directors and stockholders approved the Fifth Amended and Restated Certification of Incorporation which increased the authorized number of shares of its redeemable convertible preferred stock to 57,108,717, of which 2,112,025 were be designated as Series 1 redeemable convertible preferred stock, 14,996,692 as Series A redeemable convertible preferred stock, 23,000,000 as Series B redeemable convertible preferred stock and 17,000,000 as Series C redeemable convertible preferred stock. In the second quarter of 2016, the Company authorized and issued 16,828,217 shares of its Series C redeemable convertible preferred stock for cash consideration at a price of \$2.97 per share. Total additional proceeds amounted to \$49,999,998.

The following is a summary of the rights, preferences and terms of the Company's Series C, Series B, Series A and Series 1 redeemable convertible preferred stock:

Voting

The holders of the redeemable convertible preferred stock are entitled to vote, together with the holders of common stock, on all matters submitted to stockholders for a vote. Each holder of redeemable convertible preferred stock is entitled to the number of votes equal to the number of shares of common stock into which each share of redeemable convertible preferred stock is convertible at the time of such vote.

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According to the Fifth Amended and Restated Certificate of Incorporation, the holders of Series C Preferred Stock shall be entitled to elect one director of the Company's Board of Directors. The other seven board members are elected as follows; two by Series B Preferred Stockholders, two by Series A Stockholders, with the remaining three being elected by the Common Stock and preferred stockholders voting as one class.

Dividends

Dividends on the Series C redeemable convertible preferred stock, Series B redeemable convertible preferred stock and Series A redeemable convertible preferred stock are payable simultaneously or prior and in preference to any declaration, payment or set aside of any dividend on the Series 1 redeemable convertible preferred stock or common stock (other than dividends on shares of common stock payable in shares of common stock). A dividend of \$0.149 per annum for each share of Series C redeemable convertible preferred stock has to be accrued but is only payable when, as and if declared by the Board of directors, a dividend of \$0.073 per annum for each share of Series B redeemable convertible preferred stock has to be accrued but is payable only when, as and if declared by the Board of Directors and a dividend of \$0.042 per annum for each share of Series A redeemable convertible preferred stock has to be accrued but is payable only when, as and if declared by the Board of Directors (the "Accruing Dividends").

Any additional dividend declared after the payment in full of the Accruing Dividends shall be distributed among all of the holders of preferred and common stock in proportion to the number of shares common stock that would be held by each holder if all shares of redeemable convertible preferred stock were converted to common stock.

Liquidation

In the event of a sale, lease, transfer, exclusive license, conveyance or other disposition of all or substantially all of the Company's assets or all or substantially all of the Company's intellectual property (unless at least a majority of the then outstanding redeemable convertible preferred stock, 65% of the then outstanding shares of Series C redeemable convertible preferred stock and 60% of the then outstanding shares of Series B redeemable convertible preferred stock elect otherwise), or the acquisition of the Company by another entity, group or person (unless at least a majority of the then outstanding redeemable convertible preferred stock, 65% of the then outstanding Series C redeemable convertible preferred stock holders and 60% of the then outstanding Series B redeemable convertible preferred stock holders elect otherwise), or the liquidation, dissolution or winding up of the Company (each, a "Liquidation Event"), holders of Series C redeemable convertible preferred stock shall be entitled to receive, prior and in preference to the holders of Series B redeemable convertible preferred stock, Series A redeemable convertible preferred stock, Series 1 redeemable convertible preferred stock, common stock and any other class of capital stock ranking junior to the Series C redeemable convertible preferred stock, an amount equal to the original purchase price plus any accrued but unpaid dividends minus any Special Distribution (as defined in the Company's Fifth Amended and Restated Certificate of Incorporation, as amended) (the "Series C Liquidation Preference Amount"). Notwithstanding the foregoing, in no event shall the Series C Liquidation Preference Amount be a negative amount as a result of Special Distributions. If the assets of the Company available for distribution upon liquidation are not sufficient to pay the Series C Liquidation Preference Amount, the assets will be distributed ratably among the holders of the Series C redeemable convertible preferred stock in proportion to the full amount of the Series C Liquidation Preference Amount such holder is otherwise entitled to receive.

After the payment of the Series C Liquidation Preference Amount to the holders of Series C redeemable convertible preferred stock, holders of Series B redeemable convertible preferred stock shall be entitled to receive, prior and in preference to the holders of Series A redeemable convertible preferred stock, Series 1

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redeemable convertible preferred stock, common stock and any other class of capital stock ranking junior to the Series B redeemable convertible preferred stock, an amount equal to the original purchase price plus any accrued but unpaid dividends minus any Special Distribution (the "Series B Liquidation Preference Amount"). Notwithstanding the foregoing, in no event shall the Series B Liquidation Preference Amount be a negative amount as a result of Special Distributions. If the assets of the Company available for distribution upon liquidation are not sufficient to pay the Series B Liquidation Preference Amount, the assets will be distributed ratably among the holders of the Series B redeemable convertible preferred stock in proportion to the full amount of the Series B Liquidation Preference Amount such holder is otherwise entitled to receive.

After the payment of the Series B Liquidation Preference Amount to the holders of Series B redeemable convertible preferred stock, holders of Series A redeemable convertible preferred stock shall be entitled to receive, prior and in preference to the holders of Series 1 redeemable convertible preferred stock, common stock and any other class of capital stock ranking junior to the Series A redeemable convertible preferred stock, an amount equal to the original purchase price plus any accrued but unpaid dividends minus any Special Distribution (the "Series A Liquidation Preference Amount"). Notwithstanding the foregoing, in no event shall the Series A Liquidation Preference Amount be a negative amount as a result of Special Distributions. If the assets of the Company available for distribution upon liquidation are not sufficient to pay the Series A Liquidation Preference Amount, the assets will be distributed ratably among the holders of the Series A redeemable convertible preferred stock in proportion to the full amount of the Series A Liquidation Preference Amount such holder is otherwise entitled to receive.

After the payment of the Series B Liquidation Preference Amount and the Series A Liquidation Preference Amount to the holders of Series B redeemable convertible preferred stock and Series A redeemable convertible preferred stock, respectively, the holders of Series 1 redeemable convertible preferred stock shall be entitled to receive, prior and in preference to holders of common stock and any other class of capital stock ranking junior to the Series 1 redeemable convertible preferred stock, an amount equal to the original purchase price for such series of redeemable convertible preferred stock of \$0.455 plus any accrued but unpaid dividends minus any Special Distribution ("Series 1 Liquidation Preference Amount"). Notwithstanding the foregoing, in no event shall the Series 1 Liquidation Preference Amount be a negative amount as a result of Special Distributions. If the assets of the Company available for distribution upon liquidation are not sufficient to pay the Series 1 Liquidation Preference Amount, the assets will be distributed ratably among the holders of the Series 1 redeemable convertible preferred stock in proportion to the full amount of Series 1 Liquidation Preference Amount such holder is otherwise entitled to receive.

Any proceeds remaining after the distribution of the Series C Liquidation Preference Amount in full, Series B Liquidation Preference Amount in full, the Series A Liquidation Preference Amount in full and the Series 1 Liquidation Preference Amount in full to the holders of redeemable convertible preferred stock shall be distributed pro rata to the holders the redeemable convertible preferred stock, assuming full conversion of all such shares, and the holders of common stock.

Redemption

The holders of at least sixty-five (65%) of the then outstanding shares of Series C redeemable convertible preferred stock may, after April 27, 2022, by delivery of written notice to the Company and all holders of Series C redeemable convertible preferred stock, require the Company to redeem and purchase all outstanding shares of Series C redeemable convertible preferred stock in three equal installments (the first within 90 days of the redemption date, the second on the first anniversary of the redemption date and the third on the second anniversary of the redemption date) at a redemption price equal to the greater of (i) the Series C Liquidation Preference Amount, as defined above, or (ii) the fair market value per share of the Series C redeemable

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convertible preferred stock as determined by the agreement of the Company and the holders of at least sixty-five percent (65%) of the then outstanding shares of Series C redeemable convertible preferred stock (or a third party appraiser if no agreement can be reached).

The holders of at least sixty percent (60%) of the then outstanding shares of Series B redeemable convertible preferred stock may, at any time after all outstanding shares of Series C redeemable convertible preferred stock have been redeemed, by a vote of and by delivery of written notice to the Company and all holders of Series B redeemable convertible preferred stock, require the Company to redeem and purchase all outstanding shares of Series B redeemable convertible preferred stock in three equal installments (the first within 90 days of the redemption date, the second on the first anniversary of the redemption date and the third on the second anniversary of the redemption date) at a redemption price equal to the greater of (i) the Series B Liquidation Preference Amount, as defined above, or (ii) the fair market value per share of the Series B redeemable convertible preferred stock as determined by the agreement of the Company and the holders of at least sixty-five percent (60%) of the then outstanding shares Series B redeemable convertible preferred stock (or an third party appraiser if no agreement can be reached).

The holders of at least sixty-five percent (65%) of the then outstanding shares of Series A redeemable convertible preferred stock may, at any time after all outstanding shares of Series B redeemable convertible preferred stock have been redeemed, by a vote of and by delivery of written notice to the Company and all holders of Series A redeemable convertible preferred stock, require the Company to redeem and purchase all outstanding shares of Series A redeemable convertible preferred stock in three equal installments (the first within 90 days of the redemption date, the second on the first anniversary of the redemption date and the third on the second anniversary of the redemption date) at a redemption price equal to the greater of (i) the Series A Liquidation Preference Amount, as defined above, or (ii) the fair market value per share of the Series A redeemable convertible preferred stock as determined by the agreement of the Company and the holders of at least sixty-five percent (65%) of the then outstanding shares Series A redeemable convertible preferred stock (or an third party appraiser if no agreement can be reached).

The holders of a majority of the then outstanding shares of Series 1 redeemable convertible preferred stock may, any time after all outstanding shares of Series A redeemable convertible preferred stock have been redeemed, by delivery of written notice to the Company and all holders of Series 1 redeemable convertible preferred stock, require the Company to redeem and purchase all outstanding shares the Series 1 redeemable convertible preferred stock in three equal installments (the first within 90 days of the redemption date, the second on the first anniversary of the redemption date and the third on the second anniversary of the redemption date) at a redemption price equal to the greater of (i) the Series 1 Liquidation Preference Amount, as defined above, or (ii) the fair market value per share of the Series 1 redeemable convertible preferred stock as determined by the agreement of the Company and the holders of at least a majority of the then outstanding shares of Series 1 redeemable convertible preferred stock (or an third party appraiser if no agreement can be reached).

The Company may redeem the redeemable convertible preferred stock from any source of funds legally available on the applicable redemption date. If no funds or insufficient funds are legally available on the applicable redemption date, the Company shall redeem a pro rata portion of each holder's redeemable shares of such series of redeemable convertible preferred stock out of funds legally available, based on the respective amounts which would otherwise be payable in respect of the shares to be redeemed if the legally available funds were sufficient to redeem all such shares. The remaining shares shall be redeemed as soon as practicable after the Company has funds legally available. The redeemable convertible preferred stock that has not yet been redeemed shall continue to have the rights, benefits and privileges associated with such series of redeemable convertible preferred stock.

Conversion

Each share of redeemable convertible preferred stock shall be convertible at any time, at the option of the holder, into shares of the Company's common stock at a conversion price equal to the original purchase price (subject to anti-dilution adjustments, discussed below), which is \$2.9712 per share for each share of Series C redeemable convertible preferred stock, \$1.4507 per share for each share of Series B redeemable convertible preferred stock, \$0.84 per share for each share of Series A redeemable convertible preferred stock and \$0.455 per share for each share of Series 1 redeemable convertible preferred stock. The redeemable convertible preferred stock will automatically convert at the then applicable conversion rate upon the closing of a firm commitment underwritten public offering of shares of the Company's common stock, the public offering price per share of which is not less than two times the Series C Original Issue Price (as adjusted for any stock splits, stock dividends, combinations, subdivisions, recapitalizations or the like) resulting in aggregate cash proceeds of at least \$40,000,000. Additionally, the redeemable convertible preferred stock will be automatically converted into common stock, at the then applicable conversion rate, upon the written consent of a majority of the then outstanding redeemable convertible preferred stock, at least sixty-five percent (65%) of the then outstanding shares of Series C redeemable convertible preferred stock and at least sixty percent (60%) of the then outstanding shares of Series B redeemable convertible preferred stock.

Anti-dilution protection

The redeemable convertible preferred stock have proportional anti-dilution protection for share splits, share dividends and similar recapitalizations. Subject to certain exclusions, anti-dilution price protection for additional sales of securities by the Company for consideration per share (or exercise, conversion or exchange price per share) less than the applicable conversion price per share of any series of redeemable convertible preferred stock, shall be on a broad-based weighted average basis.

Protective rights

The holders of redeemable convertible preferred stock have certain protective rights, including, without limitation, regarding the authorization, alteration, redemption, or sale of any class of stock; the declaration of any dividends; changes to the Company's governing documents or in the size of the Board of Directors or certain transactions that exceed a certain dollar threshold. Such actions must be approved by a majority of the then outstanding redeemable convertible preferred stock (voting as a single class and on an as-converted basis), holders of at least 65% of the then outstanding shares of Series C redeemable convertible preferred stock and holders of at least 60% of the then outstanding shares of Series B redeemable convertible preferred stock, as specified in the Fifth Amended and Restated Certificate of Incorporation.

Series B preferred stock purchase agreement

Pursuant to the terms of the Series B Preferred Stock Purchase Agreement, the purchasers of Series B redeemable convertible preferred stock at the initial closing also committed to purchase an aggregate of 11,373,816 shares of Series B redeemable convertible preferred stock at \$1.4507 per share (the "Second Tranche Shares") at a second closing, subject to certain conditions, upon the achievement of one of the following milestones (i) the Company's enrollment of ten patients in an IV trilaciclib SCLC chemoprotection clinical trial with resulting data trending positively against historical controls or (ii) successful completion of IND-enabling studies for an oral trilaciclib antineoplastic program; provided, that either milestone is achieved prior to the earliest to occur of (i) a qualified initial public offering, (ii) a liquidation event or (iii) 12 months after the initial closing. Holders of at least sixty percent (60%) of the then-outstanding shares of Series B redeemable convertible preferred stock may elect to waive the foregoing conditions and to require the purchasers of Series

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B redeemable convertible preferred stock to purchase their pro rata portion of the Second Tranche Shares. Each purchaser also had the option, but not the obligation, to purchase all of its allocation of the Second Tranche Shares at any time prior to the earlier to occur of (i) the second closing, and (ii) 12 months after the initial closing.

The option to purchase shares of Series B redeemable convertible preferred stock in the second tranche has been accounted for as a free-standing instrument and classified as a liability. On February 4, 2015, upon purchase of the first tranche of Series B redeemable convertible preferred stock, the option to purchase additional shares was recorded at its fair value, with the remaining cash proceeds received on that date allocated to Series B redeemable convertible preferred stock. As the value of the option to purchase shares in the second tranche increased over time, a change in the fair value of the liability was recorded as "Change in fair value of Series B purchase option liability" in the accompanying statement of operations. This free-standing instrument was exercised on December 10, 2015 when the holders of at least sixty percent (60%) of the then-outstanding shares of Series B redeemable convertible preferred stock elected to waive the conditions set forth above and required the purchasers of Series B redeemable convertible preferred stock to purchase their pro rata portion of the second tranche shares resulting in an outstanding liability of \$0 on December 31, 2015. The Company relied on an independent third party valuation in estimating the fair value of its Series B purchase option liability. The valuations used significant assumptions including the estimated volatility range of 68%-71%, risk free interest rate range of 0.47%-0.94%, estimated fair value of the redeemable convertible preferred stock and a 2-year estimated life of the purchase option. These assumptions were used in the option pricing method and the probability weighted expected return method, a blend of which were considered in establishing fair value.

Common stock

In 2008, the founders of the Company purchased 2,080,000 shares of common stock at par value.

In February 2010, the Company issued 104,000 shares of common stock at par value as part of a license agreement. Par value of the stock issued was considered to be equal to the fair value of the license received in this transaction.

In October 2013, the Company filed the Third Amended and Restated Certification of Incorporation which increased the authorized number of shares of its common stock to 24,800,000.

In February 2015, the Company filed the Fourth Amended and Restated Certification of Incorporation which increased the authorized number of shares of its common stock to 52,000,000.

In November 2015, the Company filed an amendment to the Fourth Amended and Restated Certification of Incorporation which increased the authorized number of shares of its common stock to 53,500,000.

In April 2016, the Company filed the Fifth Amended and Restated Certification of Incorporation which increased the authorized number of shares of its common stock to 73,000,000.

8. Stock option plan

In March 2011, the Company adopted the 2011 Equity Incentive Plan (the "Plan"). The Plan provided for the direct award or sale of the Company's common stock and for the grant of up to 1,000,000 stock options to employees, directors, officers, consultants and advisors of the Company. On August 27 2012, the Plan was amended to increase the number of options authorized for grant up to 1,719,780. On October 8, 2013, the Plan was amended again to increase the number of options authorized for grant up to 4,700,217. On February 4, 2015, the Plan was amended to increase the number of options authorized for grant up to 8,051,925. On

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December 10, 2015, the Plan was amended to increase the number of options authorized for grant up to 10,051,925. On April 27, 2016, the Plan was amended to increase the number of options authorized for grant up to 12,601,925. On November 7, 2016, the Plan was amended to increase the number of options authorized for grant up to 13,201,925. Options granted under the Plan may be either incentive stock options, non-statutory stock options or restricted stock. Incentive stock options ("ISO") may be granted to Company employees. Nonqualified stock options ("NSO") may be granted to Company employees, non-employee directors, officers, consultants and advisors. As of March 31, 2017 (unaudited), the Company had 385,600 shares available for grant under the Plan.

Stock option activity during 2016 and the first three months of 2017 (unaudited) is as follows:

	Options outstanding	Weighted average exercise price	Remaining contractual life (Years)	Weighted average Aggregate intrinsic value
Balance as of December 31, 2015	7,825,500	\$ 0.40	9.0	\$ 6,599,856
Cancelled	—	—		
Granted	3,298,000	1.45		
Exercised	(53,186)	0.12		
Balance as of December 31, 2016	11,070,314	\$ 0.71	8.4	\$17,462,554
Cancelled (unaudited)	—	\$ —		
Granted (unaudited)	145,000	2.29		
Exercised (unaudited)	(7,500)	0.13		
Balance as of March 31, 2017 (unaudited)	11,207,814	\$ 0.73	8.2	\$25,628,058
Exercisable at December 31, 2016	4,188,573	0.28	7.8	\$ 8,410,470
Vested at December 31, 2016 and expected to vest	11,070,314	0.71	8.4	\$17,462,554
Exercisable at March 31, 2017 (unaudited)	4,661,094	0.31	7.6	\$12,645,252
Vested at March 31, 2017 and expected to vest (unaudited)	11,207,814	0.73	8.2	\$25,628,058

Employee stock-based compensation expense amounted to \$907,135 for the year ended December 31, 2016. As of December 31, 2016, there were total unrecognized stock-based compensation costs of approximately \$3,773,733 related to outstanding employee stock options. The cost is expected to be recognized over a weighted-average period of 3.14 years.

Employee stock-based compensation expense amounted to \$320,499 for the three months ended March 31, 2017 (unaudited). As of March 31, 2017 (unaudited), there were total unrecognized stock-based compensation costs of approximately \$3,682,847 related to outstanding employee stock options. The cost is expected to be recognized over a weighted-average period of 2.95 years.

The Company estimated the fair value of stock options using the Black-Scholes option valuation model. The fair value of employee stock options is being amortized on a straight-line basis over the requisite service period of the awards. The weighted-average grant-date fair value of employee options granted during 2016 was \$0.98 per share. The weighted-average grant-date fair value of employee options granted during the first three months of 2017 (unaudited) was \$1.58 per share.

The fair value of employee stock options was estimated using the following weighted-average assumptions for the year ended December 31, 2016 and the three months ended March 31, 2017 (unaudited).

Stock options—employee Black-Scholes inputs

	Year ended December 31, 2016	Three months ended March 31, 2017 (unaudited)
Expected volatility	74.8 - 78.8%	79.2 - 79.3%
Weighted-average risk free rate	1.28 - 2.08%	2.12%
Dividend yield	0%	0%
Expected term (in years)	6.07	6.06

The expected term of stock options represents the weighted-average period the stock options are expected to remain outstanding and is based on the option vesting term, contractual terms and industry peers as the Company did not have sufficient historical information to develop reasonable expectations about future exercise patterns and post-vesting employment termination behavior.

The expected stock price volatility assumptions for the Company's stock options were determined by examining the historical volatilities for industry peers.

The risk-free interest rate assumption at the date of grant is based on the U.S. Treasury instruments whose term was consistent with the expected term of the Company's stock options.

The expected dividend assumption is based on the Company's history and expectation of dividend payouts.

In connection with the Company's 2015 audit, the Company reassessed the determination of the fair value of the common shares underlying stock options granted throughout 2015. As a result, the Company determined that the fair value of the common shares was \$0.25, \$0.80 and \$0.91 per share at February 27, 2015, July 15, 2015 and September 7, 2015, respectively, which was higher than the fair value as initially determined by the Board of Directors on the dates of grant. The use of this higher share price increased both recognized and unrecognized share-based compensation expense and also impacted the valuation of the non-employee share-based compensation expense which is marked to market at each reporting date.

In connection with the Company's proposed initial public offering and after preliminary discussions with our underwriters, the Company reassessed the determination of the fair value of the common shares underlying the 3,298,000 stock options granted throughout 2016 and the 145,000 options granted during the first three months of 2017 (unaudited) and determined that no adjustment was necessary.

During the year ended December 31, 2016, the Company granted 375,000 stock options, to non-employees at a weighted-average exercise price of \$1.39 per share, respectively, in exchange for consulting services. Stock-based compensation expense related to stock options granted to non-employees is recognized as the stock options are earned. The Company believes that the estimated fair value of the stock options is more readily measurable than the fair value of the services rendered.

There were no stock options granted to non-employees during the first three months of 2017 (unaudited).

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The fair value of the stock options granted to non-employees is calculated at each reporting date using the Black-Scholes options pricing model using the following weighted-average assumptions for the year ended December 31, 2016:

Stock options—non-employee Black-Scholes inputs

	Year ended December 31, 2016	Three months ended March 31, 2017 (unaudited)
Expected volatility	75.3 - 83.9%	N/A
Weighted-average risk free rate	1.21 - 1.80%	N/A
Dividend yield	0%	N/A
Expected term (in years)	9.01	N/A

Stock-based compensation expense will fluctuate as the fair value of the common stock fluctuates. In connection with the grant of stock options to non-employees, the Company recorded stock-based compensation expense of \$483,420, for the year ended December 31, 2016. As of December 31, 2016, there was total unrecognized non-employee, stock-based compensation of approximately \$1,301,201. The cost is expected to be recognized over a weighted-average period of 1.87 years.

Non-employee stock based compensation expense amounted to \$227,279 for the three months ended March 31, 2017 (unaudited). As of March 31, 2017 (unaudited), there was total unrecognized non-employee, stock-based compensation expense of approximately \$1,504,478. The cost is expected to be recognized over a weighted-average period of 1.64 years.

The Company has reserved authorized shares of common stock for future issuance at December 31, 2016 and March 31, 2017 (unaudited) as follows:

	December 31, 2016	March 31, 2017 (unaudited)
Conversion of Series C Preferred Stock on a fully-diluted basis	16,828,217	16,828,217
Conversion of Series B Preferred Stock on a fully-diluted basis	22,928,234	22,928,234
Conversion of Series A Preferred Stock on a fully-diluted basis	14,996,692	14,996,692
Conversion of Series 1 Preferred Stock on a fully-diluted basis	2,046,091	2,046,091
Common stock warrants issued with promissory notes	50,000	50,000
Other common stock warrants	10,400	10,400
Series 1 Preferred Stock warrants issued with promissory notes	65,934	65,934
Common stock options outstanding	11,070,314	11,207,814
Options available for grant under Equity Incentive Plan	530,600	385,600
	68,526,482	68,518,982

9. Net loss per common share and unaudited pro forma net loss per common share

Net loss per common share

Basic net loss per common share is computed using the weighted average number of common shares outstanding during the period including nominal issuances of common stock warrants. Diluted net loss per common share is computed using the sum of the weighted average number of common shares outstanding during the period and, if dilutive, the weighted average number of potential shares of common stock, including the assumed exercise of stock options, stock warrants and unvested restricted common stock. For the years

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ended December 31, 2015 and 2016 and for the three months ended March 31, 2016 and 2017 (unaudited), the following potentially dilutive securities have been excluded from the computations of diluted weighted-average shares outstanding because the effect would be anti-dilutive:

	Year ended December 31,		Three months ended March 31,	
	2015	2016	2016	2017
			(unaudited)	(unaudited)
Stock options issued and outstanding	5,602,067	9,674,165	7,825,500	11,180,536
Stock warrants	76,334	76,334	76,334	76,334
	5,678,401	9,750,499	7,901,834	11,256,870

Amounts in the table above reflect the common stock equivalents of the noted instruments.

The following table summarizes the calculation of the basic and diluted net loss per common shares:

	Year ended December 31,		Three months ended March 31, (unaudited)	
	2015	2016	2016	2017
Numerator:				
Loss from operations	\$ (20,263,433)	\$ (30,290,799)	\$ (5,954,086)	\$ (12,345,364)
Less: accretion of redeemable convertible preferred stock	(1,426,740)	(4,405,007)	(1,009,135)	(4,468,032)
Net loss attributable to common stockholders	\$ (21,690,173)	\$ (34,695,806)	\$ (6,963,221)	\$ (16,813,396)
Denominator:				
Weighted-average basic and diluted common shares	4,033,772	4,460,986	4,431,687	4,489,039
Basic and diluted net loss per common share	\$ (5.38)	\$ (7.78)	\$ (1.57)	\$ (3.75)

Unaudited pro forma net loss per common share

The unaudited pro forma basic and diluted net loss per common share for the year ended December 31, 2016 and the three months ended March 31, 2017 (unaudited) gives effect to adjustments arising upon the closing of a qualified initial public offering. The unaudited pro forma net loss attributable to common stockholders used in the calculation of unaudited basic and diluted pro forma net loss per common share does not include the effects of deemed preferred dividends on the common stock because the calculation assumes that the conversion of the redeemable convertible preferred stock into common stock had occurred on the later of January 1, 2016, or the issuance date of the redeemable convertible preferred stock.

The unaudited pro forma basic and diluted weighted-average common shares outstanding used in the calculation of unaudited pro forma basic and diluted net loss per common share for the year ended December 31, 2016 and the three months ended March 31, 2017 (unaudited) give effect to the automatic conversion upon a qualified initial public offering of all shares of redeemable convertible preferred stock outstanding as of December 31, 2016 and March 31, 2017 (unaudited) into 56,799,234 shares of common stock, as if the proposed initial public offering had occurred on the later of January 1, 2016 or the respective issuance dates of the redeemable convertible preferred stock.

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Unaudited pro forma basic and diluted net loss per common share was calculated as follows:

	December 31, 2016	March 31, 2017 (unaudited)
Numerator:		
Net loss and comprehensive loss	\$ (30,290,799)	\$ (12,345,364)
Less: increase in fair value of warrant liability	82,231	40,890
Pro forma net loss and comprehensive loss	\$ (30,208,568)	\$ (12,304,474)
Denominator:		
Weighted-average basic and diluted common shares	4,460,986	4,489,039
Pro forma adjustment to reflect assumed automatic conversion of all shares of preferred stock upon the closing of the proposed initial public offering	51,186,611	56,799,234
Pro forma weighted-average common shares outstanding — basic and diluted	55,647,597	61,288,273
Pro forma basic and diluted net loss per common share	\$ (0.54)	\$ (0.20)

10. Income taxes

The components of income tax expense (benefit) attributable to continuing operations are as follows:

	Year ended December 31,	
	2015	2016
Current Expense:		
Federal	\$ —	\$ —
State	—	—
Deferred Expense:		
Federal	—	—
State	—	—
	\$ —	\$ —

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The differences between the company's income tax expense attributable to continuing operation and the expense computed at the 34% U.S. statutory income tax rate were as follows:

	Year ended December 31,	
	2015	2016
Federal income tax expense at statutory rate:	\$ (6,890,000)	\$ (10,299,000)
Increase (reduction) in income tax resulting from:		
State Income Taxes	(335,000)	(397,000)
Increase in Valuation Allowance	6,109,000	10,936,000
Increase in fair value of Series B purchase option liability	1,623,000	—
Equity Financing Expenses	—	371,000
Stock Compensation	48,000	200,000
Research and Development Credit	(509,000)	(803,000)
Other	(46,000)	(8,000)
	\$ —	\$ —

The tax effects of temporary differences and operating loss carryforwards that gave rise to significant portions of the deferred tax assets and deferred tax liabilities were as follows at December 31, 2015 and December 31, 2016:

	2015	2016
Deferred tax assets		
Accrued expenses	\$ 158,000	\$ 751,000
Deferred rent	5,000	16,000
Stock compensation	125,000	386,000
Charitable Contributions		1,000
Capitalized patents and licenses	939,000	1,474,000
R&D credits	635,000	1,451,000
Net operating loss carryforwards	8,116,000	16,844,000
Deferred tax assets	9,978,000	20,923,000
Deferred tax liabilities		
Property, plant and equipment, primarily due to differences in depreciation	(4,000)	(13,000)
Deferred tax liabilities	(4,000)	(13,000)
Valuation allowance	(9,974,000)	(20,910,000)
Net deferred tax assets	\$ —	\$ —

At December 31, 2015 and December 31, 2016, the Company evaluated all significant available positive and negative evidence, including the existence of losses in recent years and management's forecast of future taxable income, and, as a result, determined it was more likely than not that federal and state deferred tax assets, including benefits related to net operating loss carryforwards, would not be realized. The valuation allowance was increased from \$9,974,000 at December 31, 2015 to \$20,910,000 at December 31, 2016. The increase in valuation allowance was due primarily to the increase in net operating loss carryforwards and income tax credits.

At December 31, 2016, the Company has federal net operating loss carryforwards of approximately \$46,817,000, which are available to offset future taxable income. The federal net operating loss carryforwards

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begin to expire in 2028. In addition, the Company has state net operating loss carryforwards totaling approximately \$46,814,000, which are available to offset future state taxable income. State net operating losses begin to expire in 2023. Because the Company has incurred cumulative net operating losses since inception, all tax years remain open to examination by U.S. federal and state income tax authorities.

In accordance with FASB ASC 740, *Accounting for Income Taxes*, the Company reflects in the financial statements the benefit of positions taken in a previously filed tax return or expected to be taken in a future tax return only when it is considered 'more-likely-than-not' that the position taken will be sustained by a taxing authority. As of December 31, 2015 and 2016, the Company had no unrecognized income tax benefits and correspondingly there is no impact on the Company's effective income tax rate associated with these items. The Company's policy for recording interest and penalties relating to uncertain income tax positions is to record them as a component of income tax expense in the accompanying statements of income. As of December 31, 2015 and 2016, the Company had no such accruals.

The Company's ability to utilize its net operating loss (NOL) and research and development (R&D) credit carryforwards may be substantially limited due to ownership changes that may have occurred or that could occur in the future, as required by Section 382 of the Internal Revenue Code of 1986, as amended (the Code), as well as similar state provisions. These ownership changes may limit the amount of NOL and R&D credit carryforwards that can be utilized annually to offset future taxable income and tax, respectively. In general, an "ownership change," as defined by Section 382 of the Code, results from a transaction or series of transactions over a three-year period resulting in an ownership change of more than 50 percent of the outstanding stock of a company by certain stockholders or public groups.

The Company has not completed a study to assess whether one or more ownership changes have occurred since the Company became a loss corporation under the definition of Section 382. If the Company has experienced an ownership change, utilization of the NOL or R&D credit carryforwards would be subject to an annual limitation, which is determined by first multiplying the value of the Company's stock at the time of the ownership change by the applicable long-term, tax-exempt rate, and then could be subject to additional adjustments, as required. Any such limitation may result in the expiration of a portion of the NOL or R&D credit carryforwards before utilization. Until a study is completed and any limitation known, no amounts are being considered as an uncertain tax position or disclosed as an unrecognized tax benefit under ASC-740. Any carryforwards that expire prior to utilization as a result of such limitations will be removed from deferred tax assets with a corresponding reduction of the valuation allowance. Due to the existence of the valuation allowance, it is not expected that any possible limitation will have an impact on the results of operations of the Company.

11. Related party transactions

Two co-founders and shareholders of the Company have consulting agreements with the Company for their continued development work. The founders received consulting fees of approximately \$104,400 and \$108,000 for the years ended December 31, 2015 and December 31, 2016 respectively and \$27,000 for the three months ended March 31, 2016 and March 31, 2017 (unaudited), under the agreement.

The Company paid approximately \$20,405 and \$13,500 to the Chairman of the Board of Directors for consulting services during the years ended December 31, 2015 and December 31, 2016, respectively and \$4,500 and \$6,000 for the three months ended March 31, 2016 and March 31, 2017 (unaudited), respectively.

12. Subsequent events

The Company evaluated the effect subsequent events would have on the financial statements through February 9, 2017, which is the date the financial statements were available to be issued.

shares



G1 Therapeutics, Inc.

Common stock

Prospectus

J.P. Morgan

Cowen and Company

Needham & Company

Wedbush PacGrow

, 2017

Until , 2017 (the 25th day after the date of this prospectus), all dealers that effect transactions in these securities, whether or not participating in this offering, may be required to deliver a prospectus. This requirement is in addition to the dealers' obligation to deliver a prospectus when acting as underwriters and with respect to their unsold allotments or subscriptions.

Part II

Information not required in prospectus

Item 13. Other expenses of issuance and distribution.

The following table sets forth all costs and expenses, other than underwriting discounts and commissions, paid or payable by the Registrant in connection with the sale of the common stock being registered. All amounts shown are estimates except for the SEC registration fee and the FINRA filing fee:

	Amount paid or to be paid
SEC registration fee	\$ 13,328.50
FINRA filing fee	17,100.00
Initial NASDAQ Global Market listing fee	*
Blue sky qualification fees and expenses	*
Printing and engraving expenses	*
Legal fees and expenses	*
Accounting fees and expenses	*
Transfer agent and registrar fees and expenses	*
Miscellaneous expenses	*
Total	\$ *

* To be filed by amendment.

Item 14. Indemnification of directors and officers.

Section 145(a) of the Delaware General Corporation Law provides, in general, that a corporation may 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 (other than an action by or in the right of the corporation), because he or she is or was a director, officer, employee or agent of the corporation, or is or was serving at the request of the corporation as a director, officer, employee or agent of another corporation, partnership, joint venture, trust or other enterprise, against expenses (including attorneys' fees), judgments, fines and amounts paid in settlement actually and reasonably incurred by the person in connection with such action, suit or proceeding, if he or she acted in good faith and in a manner he or she reasonably believed to be in or not opposed to the best interests of the corporation and, with respect to any criminal action or proceeding, had no reasonable cause to believe his or her conduct was unlawful.

Section 145(b) of the Delaware General Corporation Law provides, in general, that a corporation may indemnify any person who was or is a party or is threatened to be made a party to any threatened, pending or completed action or suit by or in the right of the corporation to procure a judgment in its favor because the person is or was a director, officer, employee or agent of the corporation, or is or was serving at the request of the corporation as a director, officer, employee or agent of another corporation, partnership, joint venture, trust or other enterprise, against expenses (including attorneys' fees) actually and reasonably incurred by the person in connection with the defense or settlement of such action or suit if he or she acted in good faith and in a manner he or she reasonably believed to be in or not opposed to the best interests of the corporation, except that no indemnification shall be made with respect to any claim, issue or matter as to which he or she shall have been adjudged to be liable to the corporation unless and only to the extent that the Court of Chancery or other adjudicating court determines that, despite the adjudication of liability but in view of all of the circumstances of the case, he or she is fairly and reasonably entitled to indemnity for such expenses that the Court of Chancery or other adjudicating court shall deem proper.

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Section 145(g) of the Delaware General Corporation Law provides, in general, that a corporation may purchase and maintain insurance on behalf of any person who is or was a director, officer, employee or agent of the corporation, or is or was serving at the request of the corporation as a director, officer, employee or agent of another corporation, partnership, joint venture, trust or other enterprise against any liability asserted against such person and incurred by such person in any such capacity, or arising out of his or her status as such, whether or not the corporation would have the power to indemnify the person against such liability under Section 145 of the Delaware General Corporation Law.

Our Sixth Amended and Restated Certificate of Incorporation, or the Charter, which will become effective upon completion of the offering, provides that no director of our company shall be personally liable to us or our stockholders for monetary damages for any breach of fiduciary duty as a director, except for liability (1) for any breach of the director's duty of loyalty to us or our stockholders, (2) for acts or omissions not in good faith or which involve intentional misconduct or a knowing violation of law, (3) in respect of unlawful dividend payments or stock redemptions or repurchases, or (4) for any transaction from which the director derived an improper personal benefit. In addition, our Charter provides that if the Delaware General Corporation Law is amended to authorize the further elimination or limitation of the liability of directors, then the liability of a director of our company shall be eliminated or limited to the fullest extent permitted by the Delaware General Corporation Law, as so amended.

The Charter further provides that any repeal or modification of such article by our stockholders or amendment to the Delaware General Corporation Law will not adversely affect any right or protection existing at the time of such repeal or modification with respect to any acts or omissions occurring before such repeal or modification of a director serving at the time of such repeal or modification.

Our Amended and Restated By-Laws, or the By-Laws, which will become effective upon completion of the offering, provide that we will indemnify each of our directors and officers and, in the discretion of our board of directors, certain employees, to the fullest extent permitted by the Delaware General Corporation Law as the same may be amended (except that in the case of amendment, only to the extent that the amendment permits us to provide broader indemnification rights than the Delaware General Corporation Law permitted us to provide prior to such the amendment) against any and all expenses, judgments, penalties, fines and amounts reasonably paid in settlement that are incurred by the director, officer or such employee or on the director's, officer's or employee's behalf in connection with any threatened, pending or completed proceeding or any claim, issue or matter therein, to which he or she is or is threatened to be made a party because he or she is or was serving as a director, officer or employee of our company, or at our request as a director, partner, trustee, officer, employee or agent of another corporation, partnership, joint venture, trust, employee benefit plan or other enterprise, if he or she acted in good faith and in a manner he or she reasonably believed to be in or not opposed to the best interests of our company and, with respect to any criminal proceeding, had no reasonable cause to believe his or her conduct was unlawful. Article _____ of the By-Laws further provides for the advancement of expenses to each of our directors and, in the discretion of the board of directors, to certain officers and employees.

In addition, the By-Laws provide that the right of each of our directors and officers to indemnification and advancement of expenses shall be a contract right and shall not be exclusive of any other right now possessed or hereafter acquired under any statute, provision of the Charter or By-Laws, agreement, vote of stockholders or otherwise. Furthermore, Article _____ of the By-Laws authorizes us to provide insurance for our directors, officers and employees, against any liability, whether or not we would have the power to indemnify such person against such liability under the Delaware General Corporation Law or the provisions of Article _____ of the By-Laws.

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In connection with the sale of common stock being registered hereby, we have entered into indemnification agreements with each of our directors and our executive officers. These agreements will provide that we will indemnify each of our directors and such officers to the fullest extent permitted by law and the Charter and By-Laws.

We also maintain a general liability insurance policy, which covers certain liabilities of directors and officers of our company arising out of claims based on acts or omissions in their capacities as directors or officers.

In any underwriting agreement we enter into in connection with the sale of common stock being registered hereby, the underwriters will agree to indemnify, under certain conditions, us, our directors, our officers and persons who control us within the meaning of the Securities Act of 1933, as amended, against certain liabilities.

Item 15. Recent sales of unregistered securities.

In the three years preceding the filing of this registration statement, we have issued the following securities that were not registered under the Securities Act of 1933, as amended, or the Securities Act:

In October 2013 and May 2014, we issued an aggregate of 14,996,692 shares of our Series A Preferred Stock at a purchase price of \$0.84 per share to eight investors for aggregate consideration of \$12.6 million, which consideration included conversion of outstanding promissory notes in the principal amount of \$1,276,884 and payment for services in the amount of \$70,338.

In May 2014, we issued 120,000 shares of our common stock to a third-party vendor as compensation for legal services valued at \$15,600.

In February and December 2015, we issued an aggregate of 22,928,234 shares of our Series B Preferred Stock at a purchase price of \$1.4507 per share to 11 investors for aggregate consideration of \$33.3 million, which consideration included professional services valued at \$12,000.

In December 2015, we issued 146,000 shares of our common stock in connection with a license agreement for aggregate consideration of \$181,040. From January 1, 2014 through March 31, 2017, we granted to our employees, directors and consultants options to purchase 2,855,000 shares of our common stock with an exercise price of \$0.10 per share, options to purchase 2,837,894 shares of our common stock with an exercise price of \$0.13 per share, options to purchase 1,966,400 shares of our common stock with an exercise price of \$1.24 per share, options to purchase 3,068,000 shares of our common stock with an exercise price of \$1.39 per share and options to purchase 375,000 shares of our common stock with an exercise price of \$2.29 per share, all under our 2011 Equity Incentive Plan, as amended. In this same period, we issued 837,446 shares of common stock upon the exercise of stock options by our employees, directors and consultants at per share exercise prices ranging from \$0.10 to \$0.13 per share.

In April, May and June 2016, we issued an aggregate of 16,828,217 shares of our Series C Preferred Stock at a purchase price of \$2.9712 per share to 21 investors for aggregate consideration of \$50.0 million.

No underwriters were used in the foregoing transactions, and no discounts or commissions were paid. All sales of securities described above were exempt from the registration requirements of the Securities Act in reliance on Section 4(a)(2) of the Securities Act, Rule 701 promulgated under the Securities Act or Regulation D promulgated under the Securities Act, relating to transactions by an issuer not involving a public offering. All of the foregoing securities are deemed restricted securities for purposes of the Securities Act.

Item 16. Exhibits and financial statement schedules.

(a) Exhibits.

See the Exhibit Index attached to this registration statement, which is incorporated by reference herein.

(b) Financial Statement Schedules.

No financial statement schedules are provided because the information called for is not required or is shown either in the financial statements or notes.

Item 17. Undertakings.

The undersigned Registrant hereby undertakes to provide to the underwriters at the closing specified in the underwriting agreement certificates in such denominations and registered in such names as required by the underwriters to permit prompt delivery to each purchaser.

Insofar as indemnification for liabilities arising under the Securities Act may be permitted to directors, officers and controlling persons of the registrant pursuant to the foregoing provisions, or otherwise, the registrant has been advised that in the opinion of the SEC 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 Registrant hereby undertakes that:

(a) 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 shall be deemed to be part of this registration statement as of the time it was declared effective.

(b) 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.

Signatures

Pursuant to the requirements of the Securities Act of 1933, as amended, the Registrant has duly caused this Amendment No. 1 to the registration statement on Form S-1 to be signed on its behalf by the undersigned, thereunto duly authorized, in Research Triangle Park, North Carolina, on the 26th day of April, 2017.

G1 THERAPEUTICS, INC.

/s/ Mark A. Velleca, M.D., Ph.D.

Mark A. Velleca, M.D., Ph.D.

President and Chief Executive Officer

Signatures

Pursuant to the requirements of the Securities Act of 1933, as amended, this Amendment No. 1 to the registration statement on Form S-1 has been signed by the following persons in the capacities and on the dates indicated.

Signature	Title	Date
<u>/s/ Mark A. Velleca, M.D., Ph.D.</u> Mark A. Velleca, M.D., Ph.D.	Chief Executive Officer, President and Director (<i>principal executive officer</i>)	April 26, 2017
<u>/s/ Gregory J. Mossinghoff</u> Gregory J. Mossinghoff	Chief Business Officer (<i>principal financial officer</i>)	April 26, 2017
<u>/s/ Jennifer K. Moses</u> Jennifer K. Moses	Vice President of Finance and Administration (<i>principal accounting officer</i>)	April 26, 2017
<u>*</u> Seth A. Rudnick, M.D.	Chairman of the Board	April 26, 2017
<u>*</u> Fredric N. Eshelman, Pharm.D.	Director	April 26, 2017
<u>*</u> Peter Kolchinsky, Ph.D.	Director	April 26, 2017
<u>*</u> Glenn P. Muir	Director	April 26, 2017
<u>*</u> Tyrell J. Rivers, Ph.D.	Director	April 26, 2017

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Signature	Title	Date
<hr/> * Christy L. Shaffer, Ph.D.	Director	April 26, 2017
<hr/> * Timothy E. Sullivan	Director	April 26, 2017
<hr/> * /s/ Gregory J. Mossinghoff Attorney-in-fact		April 26, 2017

Exhibit index

Exhibit number	Description of exhibit
1.1*	Form of Underwriting Agreement.
3.1**	Fifth Amended and Restated Certificate of Incorporation.
3.2*	Form of Amended and Restated Certificate of Incorporation (to be effective upon completion of this offering).
3.3**	By-Laws of the Registrant.
3.4*	Form of Amended and Restated By-Laws (to be effective upon completion of this offering).
4.1*	Specimen Common Stock Certificate.
4.2**	Form of March 2011 Common Stock Warrant.
4.3**	Form of August 2011 Common Stock Warrant.
4.4**	Form of Series 1 Preferred Stock Warrant.
4.5**	Third Amended and Restated Stockholders Agreement, dated as of April 27, 2016, by and among the Registrant and the Stockholders listed therein.
4.6**	Second Amended and Restated Registration Rights Agreement, dated as of April 27, 2016, by and among the Registrant and the Stockholders listed therein.
5.1*	Opinion of Mintz, Levin, Cohn, Ferris, Glovsky and Popeo, P.C.
10.1*	Form of Indemnification Agreement.
10.2**+	2011 Equity Incentive Plan, as amended, and forms of award agreements thereunder.
10.3*+	2017 Employee, Director and Consultant Equity Plan, to become effective on the date immediately prior to the date the registration statement is declared effective, and forms of award agreements.
10.4**+	Executive Employment Agreement, by and between the Registrant and Mark A. Velleca, M.D., Ph.D., dated May 19, 2014, as amended on February 1, 2015 and May 10, 2016.
10.5**+	Executive Employment Agreement, by and between the Registrant and Rajesh K. Malik, M.D., dated July 1, 2014.
10.6**+	Executive Employment Agreement, by and between the Registrant and Gregory J. Mossinghoff, dated February 1, 2015.
10.7**+	Consulting Agreement, by and between the Registrant and Gregory J. Mossinghoff, dated June 3, 2014.
10.8**+	Director Agreement, by and between the Registrant and Seth A. Rudnick, M.D., dated July 15, 2016.
10.9**+	Advisory Board Member Agreement, by and between the Registrant and Seth A. Rudnick, M.D., dated July 15, 2016.
10.10**	Office Lease, by and between the Registrant and Highwoods Realty Limited Partnership as assigned to Raleigh RC Green, LLC, dated January 10, 2014, as amended.
10.11**#	Exclusive License Agreement, by and between the Registrant and The Board Of Trustees Of The University Of Illinois, dated November 23, 2016.
10.12**#	Amendment No. 1 to Exclusive License Agreement, by and between the Registrant and The Board Of Trustees of The University of Illinois, dated March 24, 2017.
10.13*+	Non-Employee Director Compensation Policy (to be effective upon the completion of this offering).
21.1**	Subsidiaries of Registrant.
23.1	Consent of PricewaterhouseCoopers LLP.
23.2*	Consent of Mintz, Levin, Cohn, Ferris, Glovsky and Popeo, P.C. (included in Exhibit 5.1).
24.1**	Power of Attorney (included on signature page).

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* To be filed by amendment.

** Previously filed.

+ Indicates a management contract or compensatory plan.

Confidential treatment has been requested for portions of this exhibit. These portions have been omitted from the registration statement and have been filed separately with the U.S. Securities and Exchange Commission.

CONSENT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

We hereby consent to the use in this Amendment No. 1 to the Registration Statement (Form S-1 No. 333-217285) of G1 Therapeutics, Inc. of our report dated February 9, 2017 relating to the financial statements, which appear in such Registration Statement. We also consent to the reference to us under the heading "Experts" in such Registration Statement.

/s/ PricewaterhouseCoopers LLP
Raleigh, North Carolina
April 26, 2017