

As confidentially submitted to the Securities and Exchange Commission on June 7, 2019.  
This draft registration statement has not been filed publicly with the Securities and Exchange Commission and all information contained herein remains confidential.

Registration No. 333-

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

FORM S-1  
REGISTRATION STATEMENT  
UNDER  
THE SECURITIES ACT OF 1933

**SPRINGWORKS THERAPEUTICS, INC.**

(Exact name of registrant as specified in its charter)

**Delaware**  
(State or other jurisdiction of  
incorporation or organization)

**2836**  
(Primary Standard Industrial  
Classification Code Number)

**83-4066827**  
(I.R.S. Employee  
Identification Number)

**100 Washington Blvd  
Stamford, CT 06902  
(203) 883-9490**

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

**Saqib Islam  
Chief Executive Officer  
100 Washington Blvd  
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(203) 883-9490**

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

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

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, as amended, check the following box.

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

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

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

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

Large Accelerated Filer   
Non-Accelerated Filer

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 to Section 7(a)(2)(B) of the Securities Act.

**CALCULATION OF REGISTRATION FEE**

Title of each Class of Securities to be Registered	Proposed Maximum Aggregate Offering Price <sup>(1)(2)</sup>	Amount of Registration Fee <sup>(3)</sup>
Common Stock, par value \$0.0001 per share	\$	\$

(1) Estimated solely for the purpose of calculating the registration fee pursuant to Rule 457(o) under the Securities Act of 1933, as amended.

(2) Includes the offering price of shares that the underwriters may purchase pursuant to an option to purchase additional shares.

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

**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 that specifically states that this registration statement shall thereafter become effective in accordance with Section 8(a) of the Securities Act of 1933, as amended, or until this registration statement shall become effective on such date as the Commission, acting pursuant to said Section 8(a), may determine.**

The information in this preliminary prospectus is not complete and may be changed. These securities may not be sold until the registration statement filed with the Securities and Exchange Commission is effective. This preliminary prospectus is not an offer to sell these securities 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 \_\_\_\_\_, 2019

Preliminary prospectus

shares



## Common stock

This is an initial public offering of shares of common stock by SpringWorks Therapeutics, Inc. We are offering \_\_\_\_\_ shares of our common stock. The initial public offering price is expected to be between \$ \_\_\_\_\_ and \$ \_\_\_\_\_ per share.

Prior to this offering, there has been no public market for our common stock. We intend to apply to list our common stock on \_\_\_\_\_ under the symbol "\_\_\_\_\_."

We are an "emerging growth company" as defined under U.S. federal securities laws and will be subject to reduced public company reporting requirements.

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

(1) See "Underwriting" for a description of compensation payable to the underwriters.

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

**Investing in our common stock involves risks. See "Risk factors" beginning on page 12 of this prospectus.**

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

The underwriters expect to deliver the shares of common stock to purchasers on or about \_\_\_\_\_, 2019.

**J.P. Morgan**

**Goldman Sachs & Co. LLC**

**Cowen**

**Wedbush PacGrow**

, 2019

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We and the underwriters 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 and the underwriters take no responsibility for, and can provide no assurance as to the reliability of, any other information that others may provide you. We are offering to sell, and seeking offers to buy, shares of common stock only in jurisdictions where offers and sales are permitted. The information contained in this prospectus is accurate only as of the date of this prospectus, regardless of the time of delivery of this prospectus or of any sale of the common stock.

**Through and including [redacted], 2019 (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 is in addition to the dealers' obligation to deliver a prospectus when acting as underwriters and with respect to their unsold allotments or subscriptions.**

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.

## **Presentation of financial information**

Pursuant to the applicable provisions of the Fixing America's Surface Transportation Act, we are omitting our condensed consolidated financial statements as of and for the three months ended March 31, 2018 and 2019. While the financial information for the three months ended March 31, 2018 and 2019 is otherwise required by Regulation S-X, we reasonably believe that it will not be required to be included in the Form S-1 filing at the time of the contemplated offering. We intend to amend the registration statement to include all financial information required by Regulation S-X at the date of such amendment before distributing a preliminary prospectus to investors.

## Prospectus summary

*This summary highlights information contained elsewhere in this prospectus. This summary does not contain all of the information you should consider before investing in our common stock. Before investing in our common stock, you should carefully read this entire prospectus, including our consolidated financial statements and the related notes included elsewhere in this prospectus. You should also consider, among other things, the matters described in the sections entitled "Risk factors" and "Management's discussion and analysis of financial condition and results of operations." As used in this prospectus, unless the context otherwise requires, references to the "company," "we," "us" and "our" refer to SpringWorks Therapeutics, Inc. together with its consolidated subsidiaries.*

### Overview

We are a clinical-stage biopharmaceutical company applying a precision medicine approach to acquiring, developing and commercializing life-changing medicines for underserved patient populations suffering from devastating rare diseases and cancer. We have a differentiated portfolio of small molecule targeted oncology product candidates and are advancing two potentially registrational clinical trials in rare tumor types, as well as several other programs addressing highly prevalent, genetically defined cancers. Our strategic approach and operational excellence in clinical development have enabled us to rapidly advance our two lead product candidates into late-stage clinical trials while simultaneously entering into multiple shared-value partnerships with industry leaders to expand our portfolio. From this foundation, we are continuing to build a differentiated global biopharmaceutical company intensely focused on understanding patients and their diseases in order to develop transformative targeted medicines.

Our most advanced product candidate, nirogacestat, is an oral, small molecule gamma secretase inhibitor, or GSI, initially in development for the treatment of desmoid tumors, a rare and often debilitating and disfiguring soft tissue tumor for which there are currently no therapies approved by the U.S. Food and Drug Administration, or FDA. We believe nirogacestat may address the significant limitations associated with existing treatment options and has the potential to become the first therapy approved by the FDA for both newly diagnosed and previously treated desmoid tumors. Since we licensed nirogacestat from Pfizer Inc., or Pfizer, in August 2017, the FDA has granted us both Orphan Drug Designation and Fast Track Designation for this indication. In May 2019, we announced the initiation of the DeFi trial, a potentially registrational Phase 3 clinical trial of nirogacestat for patients with desmoid tumors. We expect to provide an update on the DeFi trial in 2020.

Our second product candidate is PD-0325901, an oral, small molecule MEK inhibitor initially in development for the treatment of neurofibromatosis type 1-associated plexiform neurofibromas, or NF1-PN, a rare tumor of the peripheral nerve sheath that causes significant pain and disfigurement, and that most often manifests in children. We believe that PD-0325901 has the potential to offer a best-in-class combination of tolerability and efficacy to enable the long-term treatment required for this patient population, as compared to other MEK inhibitors. As with nirogacestat, we licensed PD-0325901 from Pfizer in August 2017; since then, the FDA has granted us both Orphan Drug Designation and Fast Track Designation for NF1-PN. We expect to commence a potentially registrational Phase 2b clinical trial of PD-0325901 for patients with NF1-PN in the third quarter of 2019.

In addition to our late-stage programs in rare oncology indications, we have expanded our portfolio to develop targeted therapies for the treatment of highly prevalent, genetically defined cancers. To advance this strategy, we are taking a precision medicine approach in collaboration

with industry leaders, including BeiGene, Ltd., or BeiGene, to develop combination therapies with nirogacestat and PD-0325901, as well as new standalone medicines. The first of these efforts is our ongoing collaboration with BeiGene, under which patients with advanced or refractory solid tumors harboring *RAS* mutations, *RAF* mutations and other MAPK pathway aberrations are being enrolled in a Phase 1b clinical trial evaluating the combination of PD-0325901 and BeiGene's investigational *RAF* dimer inhibitor lifirafenib.

Furthermore, we intend to continue to expand our portfolio by licensing additional programs with strong biological rationales and validated mechanisms of action. We also plan to continue using shared-value partnerships to maximize the potential of our therapies to serve patients. We believe that our clinical development capabilities and innovative partnership approach will continue to allow us to expand our shared-value relationships with innovators and maximize the potential of our existing and future portfolio.

## Our portfolio

The following table summarizes our current portfolio of product candidates:

	Indication	Preclinical	Phase 1	Phase 2	Phase 3	FDA Regulatory Designations	Key Anticipated Milestones	Partner / Collaborator
<b>Nirogacestat</b> <i>Gamma secretase inhibitor</i>	Desmoid Tumors	PHASE 3 (DeFi Trial)				<ul style="list-style-type: none"> <li>Orphan Drug Designation</li> <li>Fast Track Designation</li> </ul>	<ul style="list-style-type: none"> <li>Trial update: 2020</li> </ul>	
<b>PD-0325901</b> <i>MEK 1/2 inhibitor (MEKi)</i>	NF1-Associated Plexiform Neurofibromas	PHASE 2B				<ul style="list-style-type: none"> <li>Orphan Drug Designation</li> <li>Fast Track Designation</li> </ul>	<ul style="list-style-type: none"> <li>Potentially registrational trial start: 3Q19</li> </ul>	
<b>PD-0325901 + Lifirafenib</b> <i>MEKi + RAF dimer inhibitor</i>	<i>RAS/RAF</i> Mutant and Other MAPK Pathway Aberrant Solid Tumors	PHASE 1B					<ul style="list-style-type: none"> <li>Trial update: 2020</li> </ul>	BeiGene
<b>BGB-3245<sup>(1)</sup></b> <i>RAF dimer inhibitor</i>	<i>RAF</i> Mutant Solid Tumors	PC					<ul style="list-style-type: none"> <li>Initiate clinical trial:</li> </ul>	BeiGene

(1) Being developed by MapKure, LLC, or MapKure, a newly formed entity jointly owned by us and BeiGene.

**Nirogacestat** is currently in the potentially registrational Phase 3 DeFi clinical trial for the treatment of desmoid tumors, which are rare and often debilitating and disfiguring soft tissue tumors. Desmoid tumors can aggressively invade surrounding healthy tissues and cause significant morbidities, including severe pain, internal bleeding, incapacitating loss of range of motion and, in rare cases, death. There are currently no therapies approved by the FDA for the treatment of desmoid tumors. Nirogacestat has been generally well tolerated in over 200 subjects and clinical activity was observed in the desmoid tumor patients enrolled in two previous clinical trials, many of whom had been heavily pre-treated. Since then, the FDA has granted nirogacestat both Orphan Drug Designation and Fast Track Designation for the treatment of desmoid tumors. We are currently conducting the DeFi trial, a double-blind, randomized, placebo-controlled clinical trial in adults with progressing desmoid tumors. We believe that we have designed the DeFi trial such that, if nirogacestat demonstrates clinical activity consistent with that observed in desmoid tumor patients treated to date with nirogacestat, the primary endpoint of this clinical trial should be met. If the results are favorable, we plan to file for marketing approval for nirogacestat in the United States and select international markets.

**PD-0325901** is expected to begin a potentially registrational Phase 2b clinical trial for the treatment of NF1-PN in the third quarter of 2019. NF1-PN is a rare tumor of the peripheral nerve sheath that causes significant pain and disfigurement, and that most often manifests in children. There are currently no therapies approved by the FDA for the treatment of NF1-PN. In a previous Phase 2 clinical trial conducted in NF1-PN patients, PD-0325901 was observed to be clinically active and generally well tolerated. Since then, the FDA has granted PD-0325901 Orphan Drug Designation for the treatment of NF1 and Fast Track Designation for the treatment of NF1-PN. Our upcoming Phase 2b clinical trial will be an open-label, single-arm trial that will enroll both pediatric and adult NF1-PN patients. Given the clinical activity and tolerability observed with PD-0325901 in the previous NF1-PN clinical trial and informed by our discussions with the FDA, we designed our Phase 2b clinical trial in a manner that we believe has the potential to generate sufficient data to support approval in both pediatric and adult NF1-PN patients. If the results are favorable, we plan to file for marketing approval for PD-0325901 in the United States and select international markets.

**PD-0325901 + lifirafenib** is a combination therapy that we are evaluating with BeiGene in patients with advanced or refractory solid tumors that harbor various oncogenic driver mutations in the mitogen activated protein kinase, or MAPK, pathway, a signaling pathway whose constitutive activation has been reported in approximately 25% of human cancers owing to mutations in genes such as *RAS* and *RAF*. Lifirafenib is a *RAF* dimer inhibitor that was observed to be clinically active in advanced solid tumor patients with *RAS* and *RAF* mutations. We believe that lifirafenib's clinical activity should be enhanced with the addition of a potent and selective MEK inhibitor like PD-0325901, and potentially provide a best-in-class combination therapy for cancers whose growth is reliant on MAPK pathway signaling, such as those with mutations in *RAS* or *RAF*. In May 2019, we announced the initiation of an adaptive Phase 1b clinical trial that is currently enrolling patients in Australia with advanced or refractory solid tumors harboring relevant genetic mutations in the MAPK pathway.

**BGB-3245** is an investigational oral, selective small molecule inhibitor of specific *BRAF* driver mutations and genetic fusions. BGB-3245 is being advanced via MapKure, a newly formed entity jointly owned by us and BeiGene. BGB-3245 was exclusively licensed to MapKure by BeiGene and is intended to be initially developed as a monotherapy. Preclinical activity has been observed with BGB-3245 in a range of tumor models with *BRAF* mutations or *BRAF* fusions that are presently unaddressed with approved *BRAF*-directed therapies. MapKure expects to initiate an adaptive Phase 1 dose escalation and expansion clinical trial evaluating BGB-3245 in genetically defined solid tumors by

### **Our history and team**

We were founded in August 2017 and concurrently acquired rights to certain assets from Pfizer, including exclusive worldwide licenses to nirogacestat and PD-0325901. We have raised \$228 million from leading strategic and institutional investors. Our strategic investors include Pfizer and GlaxoSmithKline plc, and our institutional investors include OrbiMed Advisors LLC, Bain Capital, LifeArc, Perceptive Advisors, Boxer Capital of the Tavistock Group, HBM Healthcare Investments, BVF Partners, Surveyor Capital (a Citadel company), Samsara BioCapital, ArrowMark Partners and other institutional investors.

We are led by biopharmaceutical experts with extensive experience in building and operating organizations that develop and deliver innovative medicines to patients. Our team has broad experience in clinical development, regulatory affairs, manufacturing and commercialization of novel medicines, particularly in rare diseases. Our Chief Executive Officer, Saqib Islam, has more than 25 years of experience in biopharmaceuticals and finance, and has led our key business

operations and strategic corporate planning activities since our inception. Members of our management team have held leadership positions at companies that have successfully discovered, acquired, developed and commercialized therapies for a range of devastating rare diseases and cancers. These companies include Alexion Pharmaceuticals, Inc., AstraZeneca plc, Bamboo Therapeutics, Inc., Bristol-Myers Squibb Company, GlaxoSmithKline plc, Merck & Co., Inc., Moderna, Inc., Pfizer and United Therapeutics Corporation.

### **Our strategy**

Our goal is to continue building a differentiated, global biopharmaceutical company by acquiring, developing and commercializing transformative medicines for underserved patient populations. We aim to be an industry leader in rare diseases and targeted oncology. The key elements of our strategy include:

- Efficiently advance our lead product candidates, nirogacestat and PD-0325901, towards marketing approval in the rare oncology indications in which they are currently being developed.
- Maximize the potential of our portfolio through strategic partnerships in order to access promising therapies for use in combination with our product candidates.
- Commercialize our product candidates, if approved, either alone or in partnership with others, to bring new medicines to underserved patient populations using a focused and efficient approach.
- Deploy our value-driven approach to identifying, acquiring and developing new medicines to further expand our portfolio in our current focus areas of rare diseases and targeted oncology.
- Continue to cultivate a tightly integrated network of patient advocacy groups, key opinion leaders, research institutions and healthcare providers to inform our approach to developing therapies that can transform the lives of patients and their families.

### **Risks associated with our business**

Our business is subject to numerous risks that you should be aware of before making an investment decision. These risks are described more fully in the section entitled "Risk factors." These risks include, among others:

- We have incurred significant net losses since our inception and anticipate that we will continue to incur net losses in the future.
- We have a limited operating history, which may make it difficult to evaluate our prospects and likelihood of success.
- Even if this offering is successful, we will require additional capital to fund our operations and if we fail to obtain necessary capital, we will not be able to complete the development and commercialization of our product candidates.
- Our business is highly dependent on the success of our lead product candidates, nirogacestat and PD-0325901, as well as other product candidates we may develop. If we are unable to successfully complete clinical development, obtain regulatory approval for or commercialize our product candidates, or if we experience delays in doing so, our business will be materially harmed.
- Clinical 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.



- We were not involved in the early development of our lead product candidates or in the development of third-party agents used in combination with our product candidates; therefore, we are dependent on third parties having accurately generated, collected, interpreted and reported data from certain preclinical and clinical trials for our product candidates.
- As an organization, we have never successfully completed any clinical trials, and we may be unable to do so for any product candidates we may develop.
- We expect to develop nirogacestat and PD-0325901, and potentially future product candidates, in combination with other therapies, and safety or supply issues with combination use products may delay or prevent development and approval of such product candidates.
- We face significant competition from other biopharmaceutical companies, and our operating results will suffer if we fail to compete effectively.
- Even if any product candidate we develop 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.
- We rely on third parties to conduct certain aspects of our preclinical studies and clinical trials. If these third parties do not successfully carry out their contractual duties, meet expected deadlines or comply with regulatory requirements, we may not be able to obtain regulatory approval for, or commercialize, any potential product candidates.
- Our success depends in part on our ability to protect our intellectual property, and patent terms may be inadequate to protect our competitive position. It is difficult and costly to protect our proprietary rights and technology, and we may not be able to ensure their protection.
- We depend on intellectual property licensed from third parties, including from Pfizer for our lead product candidates, and termination of any of these licenses could result in the loss of significant rights, which would harm our business.
- Our principal stockholders and management own a significant percentage of our stock and will be able to exert significant control over matters subject to stockholder approval.

### **Corporate history and information**

We were originally formed in Delaware in August 2017 and until March 29, 2019, we conducted our business through SpringWorks Therapeutics, LLC, a Delaware limited liability company. Pursuant to the terms of a corporate reorganization and merger that was completed on March 29, 2019, all of the equity interests in SpringWorks Therapeutics, LLC were exchanged for the same number and class of newly issued securities of SpringWorks Therapeutics, Inc. and, as a result, SpringWorks Therapeutics, LLC became a wholly owned subsidiary of SpringWorks Therapeutics, Inc. See the section titled "Reorganization" for additional information. Our principal executive offices are located at 100 Washington Blvd, Stamford, CT 06902, and our phone number is (203) 883-9490. Our website address is <http://www.springworkstx.com>. The information contained in or accessible from our website is not incorporated into this prospectus, and you should not consider it part of this prospectus.

We own various U.S. federal trademark applications and unregistered trademarks, including our company name and our logo. All other trademarks or trade names referred to in this prospectus are the property of their respective owners. Solely for convenience, the trademarks and trade names in this prospectus are referred to without the symbols ® and ™, but such references should not be construed as any indicator that their respective owners will not assert, to the fullest extent under applicable law, their rights thereto.

**Implications of being an emerging growth company**

We qualify as an “emerging growth company,” or EGC, as defined in the Jumpstart Our Business Startups Act of 2012, as amended, or the JOBS Act. As an EGC, we may take advantage of specified reduced disclosure and other requirements that are otherwise applicable generally to public companies. These provisions include, but are not limited to:

- being permitted to present only two years of audited financial statements in this prospectus and only two years of related “Management’s discussion and analysis of financial condition and results of operations” in our periodic reports and registration statements, including this prospectus;
- not being required to comply with the auditor attestation requirements of Section 404 of the Sarbanes-Oxley Act of 2002, as amended;
- reduced disclosure obligations regarding executive compensation in our periodic reports, proxy statements and registration statements, including in this prospectus; and
- exemptions from the requirements of holding a nonbinding advisory vote on executive compensation and stockholder approval of any golden parachute payments not previously approved.

We may take advantage of these exemptions until we are no longer an EGC. We will cease to be an EGC on the date that is the earliest of (i) the last day of the fiscal year in which we have total annual gross revenues of \$1.07 billion or more; (ii) the last day of 2026; (iii) the date on which we have issued more than \$1.0 billion in nonconvertible debt during the previous three years; or (iv) the last day of the fiscal year in which we are deemed to be a large accelerated filer under the rules of the Securities and Exchange Commission, or SEC, which means the market value of our common stock that is held by non-affiliates exceeds \$700 million as of the prior June 30th.

We may choose to take advantage of some but not all of these exemptions. We have taken advantage of reduced reporting requirements in this prospectus. Accordingly, the information contained herein may be different from the information you receive from other public companies in which you hold stock. In addition, the JOBS Act provides that an EGC can take advantage of an extended transition period for complying with new or revised accounting standards. This provision allows an EGC to delay the adoption of some accounting standards until those standards would otherwise apply to private companies. We have elected to use this extended transition period for complying with new or revised accounting standards that have different effective dates for public and private companies until the earlier of the date we (i) are no longer an EGC or (ii) affirmatively and irrevocably opt out of the extended transition period provided in the JOBS Act. As a result, our financial statements may not be comparable to companies that comply with new or revised accounting pronouncements as of public company effective dates.



- shares of our common stock that will become available for future issuance under our 2019 Employee Stock Purchase Plan, or our ESPP, which will become effective upon the effectiveness of the registration statement of which this prospectus forms a part.

Unless otherwise indicated, all information in this prospectus reflects or assumes the following:

- the automatic conversion of all outstanding shares of convertible preferred stock into an aggregate of shares of common stock immediately prior to the completion of this offering;
- no exercise of outstanding options after , 2019;
- a one-for- reverse split of our common stock effected on , 2019; and
- no exercise by the underwriters of their option to purchase up to additional shares of common stock in this offering.

### Summary consolidated financial data

The following tables present summary consolidated financial data for our business. We have derived the summary statement of operations data for the period from August 18, 2017 (inception) to December 31, 2017 and the year ended December 31, 2018 and the summary balance sheet data as of December 31, 2018 from our audited consolidated financial statements included elsewhere in this prospectus. Our historical results are not necessarily indicative of the results that may be expected in the future. Except as otherwise disclosed in this prospectus, the consolidated financial statements and selected historical consolidated financial data and other financial information included in this prospectus are those of SpringWorks Therapeutics, LLC prior to the Reorganization. You should read this data together with our consolidated financial statements and related notes appearing elsewhere in this prospectus and the information in the sections entitled "Selected consolidated financial data" and "Management's discussion and analysis of financial condition and results of operations."

(in thousands, except share, unit, per share and per unit data)	Period from August 18, 2017 (inception) to December 31, 2017	Year ended December 31, 2018
<b>Consolidated statement of operations data:</b>		
Operating expenses:		
Research and development	\$ 2,799	\$ 9,898
General and administrative	1,861	8,593
<b>Total operating expenses</b>	<b>4,660</b>	<b>18,491</b>
Loss from operations	(4,660)	(18,491)
Other income:		
Interest income	21	678
<b>Total other income</b>	<b>21</b>	<b>678</b>
Net loss	\$(4,639)	\$ (17,813)
Net loss per common unit, basic and diluted <sup>(1)</sup>	\$ —	\$ (7.94)
Weighted average common units outstanding, basic and diluted <sup>(1)</sup>	—	2,244,215
Pro forma net loss per share, basic and diluted (unaudited) <sup>(2)</sup>		\$ (0.30)
Pro forma weighted average common shares outstanding, basic and diluted (unaudited) <sup>(2)</sup>		58,749,660

(1) As of December 31, 2017, there were no vested common units outstanding. Therefore, net loss per common unit, basic and diluted, is not presented for the period from August 18, 2017 (inception) through December 31, 2017.

(2) See Note 12 to the notes to our consolidated financial statements included elsewhere in this prospectus for an explanation of the method used to calculate the pro forma net loss per share and pro forma weighted average number of common shares outstanding.

(in thousands)	As of December 31, 2018		
	Actual	Pro forma <sup>(1)</sup>	Pro forma as adjusted <sup>(2)(3)</sup>
<b>Balance sheet data:</b>			
Cash and cash equivalents	\$ 45,648	\$ 45,648	\$
Working capital <sup>(4)</sup>	43,353	43,353	
Total assets	48,390	48,390	
Convertible preferred units	62,930	—	
Accumulated deficit	(22,452)	(22,452)	
Members' (deficit) equity	(19,369)	43,561	

(1) The pro forma column gives effect to the automatic conversion of all units outstanding as of December 31, 2018 into an aggregate of \_\_\_\_\_ shares of our common stock immediately prior to the completion of this offering as if such conversion had occurred on December 31, 2018.

(2) The pro forma as adjusted column gives further effect to the issuance and sale of \_\_\_\_\_ shares of common stock in this offering at an assumed initial public offering price of \$ \_\_\_\_\_ per share, the midpoint of the price range set forth on the cover page of this prospectus, after deducting estimated underwriting discounts and commissions and estimated offering expenses payable by us.

(3) The pro forma as adjusted information is illustrative only, and we will depend on the actual initial public offering price and other terms of this offering determined at pricing. Each \$1.00 increase or decrease in the assumed initial public offering price of \$ \_\_\_\_\_ per share, the midpoint of the price range set forth on the cover page of this prospectus, would increase or decrease, as applicable, the pro forma as adjusted amount of each of cash and cash equivalents, working capital, total assets and members' equity by \$ \_\_\_\_\_ million, assuming the number of shares offered by us, as set forth on the cover page of this prospectus, remains the same and after deducting estimated underwriting discounts and commissions and estimated offering expenses payable by us. We may also increase or decrease the number of shares we are offering. Each increase or decrease of 1,000,000 in the number of shares we are offering would increase or decrease, as applicable, the pro forma as adjusted amount of each of cash and cash equivalents, working capital, total assets and members' equity by \$ \_\_\_\_\_ million, assuming no change in the assumed initial public offering price per share, the midpoint of the price range set forth on the cover page of this prospectus.

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

## Reorganization

Prior to March 29, 2019, we conducted our business through SpringWorks Therapeutics, LLC, a Delaware limited liability company. On March 29, 2019, we completed a series of transactions pursuant to which SpringWorks MergerSub, LLC, a wholly owned subsidiary of SpringWorks Therapeutics, Inc., was merged with and into SpringWorks Therapeutics, LLC, or the Reorganization. Following such merger, SpringWorks Therapeutics, LLC survived as a wholly owned subsidiary of SpringWorks Therapeutics, Inc. In connection with the Reorganization:

- Holders of SpringWorks Therapeutics, LLC Junior Series A convertible preferred units received one share of SpringWorks Therapeutics, Inc. Junior Series A convertible preferred stock for each outstanding Junior Series A convertible preferred unit held immediately prior to the Reorganization, with an aggregate of 6,437,500 shares of SpringWorks Therapeutics, Inc. Junior Series A convertible preferred stock issued in the Reorganization;
- Holders of SpringWorks Therapeutics, LLC Series A convertible preferred units received one share of SpringWorks Therapeutics, Inc. Series A convertible preferred stock for each outstanding Series A convertible preferred unit held immediately prior to the Reorganization, with an aggregate of 103,000,000 shares of SpringWorks Therapeutics, Inc. Series A convertible preferred stock issued in the Reorganization;
- Holders of SpringWorks Therapeutics, LLC common units received one share of SpringWorks Therapeutics, Inc. common stock for each outstanding common unit held immediately prior to the Reorganization, with an aggregate of 1,287,500 shares of common stock issued in the Reorganization; and
- Holders of SpringWorks Therapeutics, LLC vested and unvested incentive units exchanged such incentive units for an equal number of shares of common stock or restricted common stock, respectively, given that the strike price for all incentive units that had been issued by SpringWorks Therapeutics, LLC was \$0.00 per unit. The restricted common stock was issued with the same vesting terms as the unvested incentive units held immediately prior to the Reorganization. An aggregate of 19,038,927 shares of common stock and restricted common stock were issued to the prior holders of incentive units in the Reorganization.

Immediately following the Reorganization, we issued 86,639,279 shares of Series B convertible preferred stock on March 29, 2019.

All outstanding shares of our convertible preferred stock are convertible into shares of common stock at the then-effective conversion ratios.

In connection with the Reorganization, by operation of law, we acquired all assets of SpringWorks Therapeutics, LLC and assumed all of its liabilities and obligations, and we now operate our business through SpringWorks Therapeutics, Inc., which is the issuer in this offering. The purpose of the Reorganization was to reorganize our corporate structure so that SpringWorks Therapeutics, Inc. would continue as a corporation and so that our existing investors would own our capital stock rather than equity interests in a limited liability company. For the convenience of the reader, except as context otherwise requires, all information included in this prospectus is presented giving effect to the Reorganization; except that the consolidated financial statements and summary and selected historical consolidated financial data and other financial information included in this prospectus are those of SpringWorks Therapeutics, LLC prior to the Reorganization except as otherwise disclosed in this prospectus.

## Risk factors

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

### Risks related to our financial position and need for additional capital

***We have incurred significant net losses since our inception and anticipate that we will continue to incur net losses in the future.***

We have incurred significant net losses in each reporting period since our inception. To date, we have not generated any revenue and we have financed our operations principally through equity financings. If our product candidates are not successfully developed and approved, we may never generate any revenue. We continue to incur significant research and development and other expenses related to our ongoing operations. As a result, we are not profitable and have incurred losses in each period since our inception. Our net losses were \$4.6 million and \$17.8 million for the period from August 18, 2017 (inception) to December 31, 2017 and the year ended December 31, 2018, respectively. As of December 31, 2018, we had an accumulated deficit of \$22.5 million. We expect to continue to incur significant losses for the foreseeable future, and we expect these losses to increase as we continue our research and development of, and seek regulatory approvals for, our product candidates, including our lead product candidates, nirogacestat and PD-0325901, and any future product candidates.

We anticipate that our expenses will increase substantially if, and as, we:

- advance the development of our lead product candidates, nirogacestat and PD-0325901, through potentially registrational clinical trials and potentially for other indications;
- advance our development programs for our other product candidates through clinical development and into later-stage clinical development;
- seek marketing approvals for any product candidates that successfully complete clinical trials;
- invest in or in-license other technologies or product candidates for further preclinical and clinical development;
- hire additional personnel, including clinical, quality control, scientific, medical, business development and finance personnel, and continue to build our infrastructure;
- expand our operational, financial and management systems and increase personnel, including personnel to support our clinical development, manufacturing and commercialization efforts and our operations as a public company;
- maintain, expand and protect our intellectual property portfolio; and
- establish a sales, marketing, medical affairs and distribution infrastructure to commercialize any products for which we may obtain marketing approval and intend to commercialize on our own or jointly with third parties.



To become and remain profitable, we or any potential future collaborators must develop and eventually commercialize products with significant market potential. This will require us to be successful in a range of challenging activities, including completing preclinical studies and clinical trials, obtaining marketing approval for product candidates, manufacturing, obtaining reimbursement approval, marketing and selling products for which we may obtain marketing approval and satisfying any post-marketing requirements. We may never succeed in any or all of these activities and, even if we do, we may never generate revenue that is significant or large enough to achieve profitability. If we do achieve profitability, we may not be able to sustain or increase profitability on a quarterly or annual basis. Our failure to become and remain profitable would decrease the value of our company and could impair our ability to raise capital, maintain our research and development efforts, expand our business or continue our operations. A decline in the value of our company also could cause you to lose all or part of your investment.

Even if we succeed in commercializing one or more of our product candidates, we will continue to incur substantial research and development and other expenditures to develop, register and market additional product candidates. We may encounter unforeseen expenses, difficulties, complications, delays and other unknown factors that may adversely affect our business. The size of our future net losses will depend, in part, on the rate of future growth of our expenses and our ability to generate revenue. Our prior losses and expected future losses have had and will continue to have an adverse effect on our stockholders' equity and working capital.

***We have a limited operating history, which may make it difficult to evaluate our prospects and likelihood of success.***

We are a clinical-stage biopharmaceutical company with a limited operating history. We were formed in August 2017 and our operations to date have been focused on preparing and executing our clinical trials for our product candidates, building our infrastructure, raising capital and executing partnerships. Consequently, we have limited operations upon which to evaluate our business, and predictions about our future success or viability may not be as accurate as they could be if we had a longer operating history or a history of successfully developing and commercializing drug products. Investment in biopharmaceutical product development is highly speculative because it entails substantial upfront capital expenditures and significant risk that any potential product candidate will fail to demonstrate adequate activity or an acceptable safety profile, gain regulatory approval, secure market access and reimbursement and become commercially viable.

Although we announced the initiation of the DeFi trial, a potentially registrational Phase 3 clinical trial of nirogacestat, in May 2019, and expect to commence a potentially registrational Phase 2b clinical trial of PD-0325901, we have not yet demonstrated the ability to successfully enroll or complete clinical trials for any product candidate, we have no products approved for commercial sale and we have not generated any revenue from product sales to date. In addition, as a business with a limited operating history, we may encounter unforeseen expenses, difficulties, complications, delays and other known and unknown factors and risks frequently experienced by early-stage biopharmaceutical companies in rapidly evolving fields.

In addition, we will need to transition at some point from a company with a development focus to a company capable of supporting commercial activities, and may not be successful in such a transition.

***Even if this offering is successful, we will require additional capital to fund our operations and if we fail to obtain necessary capital, we will not be able to complete the development and commercialization of our product candidates.***

Our operations have consumed substantial amounts of cash since inception. We expect to continue to spend substantial amounts of cash to conduct further research and development and

clinical trials of our product candidates to seek regulatory approvals for our product candidates and to launch and commercialize any products for which we receive regulatory approval. As of December 31, 2018, we had \$45.6 million in cash and cash equivalents. Subsequent to December 31, 2018, we have raised \$164.4 million in gross proceeds from equity financings. Based on our current operating plan, we believe that the net proceeds from this offering, together with existing cash and cash equivalents, will be sufficient to fund our operating expenses and capital expenditure requirements through . However, our future capital requirements and the period for which our existing resources will support our operations may vary significantly from what we expect, and we will in any event require additional capital in order to complete clinical development and obtain regulatory approval of our product candidates. Our monthly spending levels will vary based on new and ongoing development and corporate activities. Because the length of time and activities associated with 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. Our future funding requirements will depend on many factors, including, but not limited to:

- the initiation, progress, timing, costs and results of clinical trials for our product candidates;
- the clinical and preclinical development and manufacturing plans we establish for these product candidates;
- the number and characteristics of product candidates that we develop or in-license;
- the cost of identifying and evaluating potential product candidates for acquisition or license, including the cost of preclinical activities or clinical activities;
- the terms of any collaboration or licensing agreements we may choose to enter into;
- the outcome, timing and cost of meeting regulatory requirements established by the U.S. Food and Drug Administration, or FDA, the European Medicines Agency, or EMA, and other comparable foreign regulatory authorities;
- the cost of filing, prosecuting, defending and enforcing our patent claims and other intellectual property rights;
- the cost of defending intellectual property disputes, including patent infringement actions brought by third parties against us or our product candidates;
- the effect of competing technological and market developments;
- the cost and timing of completion of commercial-scale manufacturing activities; and
- the cost of establishing medical affairs and sales, marketing and distribution capabilities for any approved product candidates.

If we are unable to raise additional capital in sufficient amounts or on terms acceptable to us, we may have to significantly delay, scale back or discontinue the development or commercialization of one or more of our product candidates or one or more of our other research and development initiatives. Any of the above events could significantly harm our business, prospects, financial condition and results of operations and cause the price of our common stock to decline.

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

We do not have any committed external source of funds or other support for our development efforts and we cannot be certain that additional funding will be available on acceptable terms, or at all. Until we can generate sufficient product or royalty revenue to finance our cash requirements, which we may never do, we expect to finance our future cash needs through a

combination of public or private equity offerings, debt financings, collaborations, strategic alliances, licensing arrangements and other marketing or distribution arrangements. If we raise additional funds through public or private equity offerings, the terms of these securities may include liquidation or other preferences that adversely affect our stockholders' rights. Further, to the extent that we raise additional capital through the sale of common stock or securities convertible or exchangeable into common stock, your ownership interest will be diluted. In addition, any debt financing may subject us to fixed payment obligations and covenants limiting or restricting our ability to take specific actions, such as incurring additional debt, making capital expenditures or declaring dividends. If we raise additional capital through marketing and distribution arrangements or other collaborations, strategic alliances or licensing arrangements with third parties, we may have to relinquish certain valuable rights to our product candidates, technologies, future revenue streams or research programs or grant licenses on terms that may not be favorable to us. We also could be required to seek commercial or development partners for our lead products or any future product candidate at an earlier stage than otherwise would be desirable or relinquish our rights to product candidates or technologies that we otherwise would seek to develop or commercialize ourselves.

***The amount of our future losses is uncertain and our quarterly operating results may fluctuate significantly or may fall below the expectations of investors or securities analysts, each of which may cause our stock price to fluctuate or decline.***

Our quarterly and annual operating results may fluctuate significantly in the future due to a variety of factors, many of which are outside of our control and may be difficult to predict, including the following:

- the timing and success or failure of clinical trials for our product candidates or competing product candidates, or any other change in the competitive landscape of our industry, including consolidation among our competitors or partners;
- our ability to successfully recruit and retain subjects for clinical trials, and any delays caused by difficulties in such efforts;
- our ability to obtain marketing approval for our product candidates, and the timing and scope of any such approvals we may receive;
- the timing and cost of, and level of investment in, research and development activities relating to our product candidates, which may change from time to time;
- the cost of manufacturing our product candidates, which may vary depending on the quantity of production and the terms of our agreements with manufacturers;
- our ability to attract, hire and retain qualified personnel;
- expenditures that we will or may incur to develop additional product candidates;
- the level of demand for our product candidates should they receive approval, which may vary significantly;
- the risk/benefit profile, cost and reimbursement policies with respect to our product candidates, if approved, and existing and potential future therapeutics that compete with our product candidates;
- the changing and volatile U.S. and global economic environments; and
- future accounting pronouncements or changes in our accounting policies.

The cumulative effects of these factors could result in large fluctuations and unpredictability in our quarterly and annual operating results. As a result, comparing our operating results on a period-to-period basis may not be meaningful. This variability and unpredictability could also result in our failing to meet the expectations of industry or financial analysts or investors for any period. If our revenue or operating results fall below the expectations of analysts or investors or below any forecasts we may provide to the market, or if the forecasts we provide to the market are below the expectations of analysts or investors, the price of our common stock could decline substantially. Such a stock price decline could occur even when we have met any previously publicly stated guidance we may provide.

### **Risks related to research and development and the biopharmaceutical industry**

***Our business is highly dependent on the success of our lead product candidates, nirogacestat and PD-0325901, as well as other product candidates we may develop. If we are unable to successfully complete clinical development, obtain regulatory approval for or commercialize our product candidates, or if we experience delays in doing so, our business will be materially harmed.***

To date, we have not yet completed any clinical trials or development of any product candidates. Our future success and ability to generate revenue from our product candidates, which we do not expect will occur for several years, if ever, is dependent on our ability to successfully develop, obtain regulatory approval for and commercialize one or more product candidates. We are currently enrolling patients in a potentially registrational Phase 3 clinical trial of nirogacestat and we expect to commence a potentially registrational Phase 2b clinical trial of PD-0325901 in the third quarter of 2019. If either of our lead product candidates encounter safety or efficacy problems, development delays or regulatory issues or other problems, our development plans and business would be significantly harmed.

All of our other product candidates are in earlier stages of development and will require substantial additional investment for preclinical development, clinical development, regulatory review and approval in one or more jurisdictions.

We may not have the financial resources to continue development of, or to modify existing or enter into new collaborations for, a product candidate if we experience any issues that delay or prevent regulatory approval of, or our ability to commercialize, our product candidates, including:

- our inability to demonstrate to the satisfaction of the FDA or comparable foreign regulatory authorities that our product candidates are safe and effective;
- insufficiency of our financial and other resources to complete the necessary preclinical studies and clinical trials;
- negative or inconclusive results from our preclinical studies, clinical trials or the clinical trials of others for product candidates similar to ours, leading to a decision or requirement to conduct additional preclinical studies or clinical trials or abandon a program;
- product-related adverse events experienced by subjects in our clinical trials or by individuals using drugs or therapeutic biologics similar to our product candidates;
- delays in submitting an Investigational New Drug application, or IND, or comparable foreign applications or delays or failure in obtaining the necessary approvals from regulators to commence a clinical trial or a suspension or termination of a clinical trial once commenced;
- conditions imposed by the FDA, EMA or comparable foreign regulatory authorities regarding the scope or design of our clinical trials;

- poor effectiveness of our product candidates during clinical trials;
- better than expected performance of control arms, such as placebo groups, which could lead to negative or inconclusive results from our clinical trials;
- delays in enrolling subjects in clinical trials;
- high drop-out rates of subjects from clinical trials;
- inadequate supply or quality of product candidates or other materials necessary for the conduct of our clinical trials;
- greater than anticipated clinical trial or manufacturing costs;
- unfavorable FDA, EMA or comparable regulatory authority inspection and review of a clinical trial site;
- failure of our third-party contractors or investigators to comply with regulatory requirements or otherwise meet their contractual obligations in a timely manner, or at all;
- delays and changes in regulatory requirements, policy and guidelines, including the imposition of additional regulatory oversight around clinical testing generally or with respect to our therapies in particular; or
- varying interpretations of data by the FDA, EMA and comparable foreign regulatory authorities.

***Clinical 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.***

To obtain the requisite regulatory approvals to commercialize any product candidates, we must demonstrate through extensive preclinical studies and clinical trials that our product candidates are safe and effective in humans. Clinical testing is expensive and can take many years to complete, and its outcome is inherently uncertain. We may be unable to establish clinical endpoints that applicable regulatory authorities would consider clinically meaningful, and a clinical trial can fail at any stage of testing.

Differences in trial design between early-stage clinical trials and later-stage clinical trials make it difficult to extrapolate the results of earlier clinical trials to later clinical trials. Moreover, clinical data are often susceptible to varying interpretations and analyses, and many companies that have believed their product candidates performed satisfactorily in clinical trials have nonetheless failed to obtain marketing approval of their products. Additionally, we plan to conduct some open-label trials, where both the patient and investigator know whether the patient is receiving the investigational product candidate or either an existing approved drug or placebo. Open-label clinical trials are subject to various limitations that may exaggerate any therapeutic effect as patients in those trials are aware when they are receiving treatment. In addition, open-label clinical trials may be subject to an “investigator bias” where those assessing and reviewing the outcomes of the clinical trials are aware of which patients have received treatment and may interpret the information of the treated group more favorably given this knowledge. Where a randomized, placebo-controlled clinical trial is designed to allow enrolled subjects to cross-over from the placebo arm to the treatment arm, there may be a risk of inadvertent unblinding of subjects prior to cross-over, which may limit the clinical meaningfulness of those data and may require the conduct of additional clinical trials.

Successful completion of clinical trials is a prerequisite to submitting a New Drug Application, or NDA, to the FDA, a Marketing Authorization Application, or MAA, to the EMA and similar marketing applications to comparable foreign regulatory authorities for each product candidate and, consequently, the ultimate approval and commercial marketing of any product candidates. Although we have initiated a potentially registrational clinical trial for nirogacestat and expect to initiate a potentially registrational clinical trial for PD-0325901 in the third quarter of 2019, we do not know whether these trials or any of our clinical trials, including trials for our combination therapies using nirogacestat and PD-0325901, will be completed on schedule, if at all, or in some cases whether such clinical trials will begin.

We may experience delays in initiating or completing clinical trials and preparing for regulatory submissions. We also may experience numerous unforeseen events during, or as a result of, any future clinical trials that we could conduct that could delay or prevent our ability to receive marketing approval or commercialize our current product candidates or any future product candidates, including:

- regulators or institutional review boards, or IRBs, or ethics committees may not authorize us or our investigators to commence a clinical trial or conduct a clinical trial at a prospective trial site;
- we may experience delays in reaching, or fail to reach, agreement on acceptable terms with prospective clinical 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 clinical trial sites;
- clinical trials of any product candidates may fail to show acceptable safety or efficacy, or produce negative or inconclusive results and we may decide, or regulators may require us, to conduct additional preclinical studies or clinical trials or we may decide to abandon product development programs;
- the number of subjects required for clinical trials of any product candidates may be larger than we anticipate, enrollment in these clinical trials may be slower than we anticipate or subjects may drop out of these clinical trials or fail to return for post-treatment follow-up 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, or may deviate from the clinical trial protocol or drop out of the trial, which may require that we add new clinical trial sites or investigators;
- we may elect to, or regulators, IRBs or ethics committees may require, that we or our investigators suspend or terminate clinical research or trials for various reasons, including noncompliance with regulatory requirements or a finding that the participants are being exposed to unacceptable health risks;
- the cost of clinical trials of any product candidates may be greater than we anticipate;
- the supply or quality of our product candidates or other materials necessary to conduct clinical trials of our product candidates may be inadequate to initiate or complete a given clinical trial;
- our product candidates may have undesirable side effects or other unexpected characteristics, causing us or our investigators, regulators, IRBs or ethics committees to suspend or terminate the clinical trials;
- reports from clinical testing of other therapies may raise safety or efficacy concerns about our product candidates; and

- the FDA, EMA or comparable regulatory authorities may require us to submit additional data, such as long-term toxicology studies, or impose other requirements before permitting us to initiate a clinical trial.

We could also encounter delays if a clinical trial is suspended or terminated by us, the IRBs of the institutions in which such clinical trials are being conducted, or the FDA, EMA or comparable regulatory authorities, or recommended for suspension or termination by the Data Safety Monitoring Board, or DSMB, for such clinical trial. A suspension or termination may be imposed due to a number of factors, including failure to conduct the clinical trial in accordance with regulatory requirements or our clinical protocols, inspection of the clinical trial operations or clinical trial site by the FDA, EMA or comparable foreign regulatory authorities resulting in the imposition of a clinical hold, unforeseen safety issues or adverse side effects, failure to demonstrate a benefit from using a product or treatment, failure to establish or achieve clinically meaningful trial endpoints, changes in governmental regulations or administrative actions or lack of adequate funding to continue the clinical trial. 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 regulatory approval of our product candidates. Further, the FDA, EMA or comparable foreign regulatory authorities may disagree with our clinical trial design and our interpretation of data from clinical trials, or may change the requirements for approval even after they have reviewed and commented on the design for our clinical trials.

Our costs will increase if we experience delays in clinical testing or marketing approvals. We do not know whether any of our clinical trials will begin as planned, will need to be reassigned or will be completed on schedule, or at all. Significant clinical trial delays also could shorten any periods during which we may have the exclusive right to commercialize our product candidates and may allow our competitors to bring products to market before we do, potentially impairing our ability to successfully commercialize our product candidates and harming our business and results of operations. Any delays in our clinical development programs may harm our business, financial condition and results of operations significantly. The clinical trials sponsored by our partners with our product candidates in combination with our partners' therapies pose the same development risks.

***We were not involved in the early development of our lead product candidates or in the development of third-party agents used in combination with our product candidates; therefore, we are dependent on third parties having accurately generated, collected, interpreted and reported data from certain preclinical and clinical trials for our product candidates.***

We had no involvement with or control over the preclinical and clinical development of any of our lead product candidates or third-party agents used in combination with our product candidates. We are dependent on third parties having conducted their research and development in accordance with the applicable protocols and legal, regulatory and scientific standards; having accurately reported the results of all preclinical studies and clinical trials conducted with respect to such product candidates; and having correctly collected and interpreted the data from these trials. If these activities were not compliant, accurate or correct, the clinical development, regulatory approval or commercialization of our product candidates will be adversely affected.

***If our clinical trials fail to replicate positive results from earlier preclinical studies or clinical trials conducted by us or third parties, we may be unable to successfully develop, obtain regulatory approval for or commercialize our product candidates.***

Our preclinical studies or early clinical trials of our product candidates, whether conducted by us or third parties, may not necessarily be predictive of the results of later clinical trials that we

conduct. Similarly, even if we are able to complete our planned clinical trials of our product candidates, positive results from such clinical trials may not be replicated in our subsequent preclinical studies or clinical trials.

Many companies in the pharmaceutical and biotechnology industries have suffered significant setbacks in late-stage clinical trials after achieving positive results in early-stage development, and we cannot be certain that we will not face similar setbacks. These setbacks have been caused by, among other things, preclinical findings made while clinical trials were underway or safety or efficacy observations made in preclinical studies and clinical trials, including previously unreported adverse events. Moreover, preclinical and clinical data are often susceptible to varying interpretations and analyses and many companies that believed their product candidates performed satisfactorily in preclinical studies and clinical trials nonetheless failed to obtain FDA, EMA or comparable foreign regulatory authority approval. Furthermore, the approval policies or regulations of the FDA, EMA or comparable foreign regulatory authorities may significantly change in a manner rendering our clinical data insufficient for approval, which may lead to the FDA, EMA or comparable foreign regulatory authorities delaying, limiting or denying approval of our product candidates.

***As an organization, we have never successfully completed any clinical trials, and we may be unable to do so for any product candidates we may develop.***

We will need to successfully complete clinical trials in order to obtain the approval of the FDA, EMA or comparable foreign regulatory authorities to market any product candidates. Carrying out clinical trials, including later-stage registrational clinical trials, is a complicated process. As an organization, we have not previously completed any clinical trials. In order to do so, we will need to build and expand our clinical development and regulatory capabilities, and we may be unable to recruit and train qualified personnel. We also expect to continue to rely on third parties to conduct our clinical trials. See “—Risks related to our reliance on third parties—We rely on third parties to conduct certain aspects of our preclinical studies and clinical trials. If these third parties do not successfully carry out their contractual duties, meet expected deadlines or comply with regulatory requirements, we may not be able to obtain regulatory approval of or commercialize any potential product candidates.” Consequently, we may be unable to successfully and efficiently execute and complete necessary clinical trials in a way that leads to NDA submission and approval of our product candidates. We may require more time and incur greater costs than our competitors and may not succeed in obtaining regulatory approval of any product candidates that we develop. Failure to commence or complete, or delays in, our planned clinical trials, could prevent us from or delay us in commercializing our product candidates.

***The successful development of biopharmaceuticals is highly uncertain.***

Successful development of biopharmaceuticals is highly uncertain and is dependent on numerous factors, many of which are beyond our control. Product candidates that appear promising in the early phases of development may fail to reach the market for several reasons including:

- clinical trial results may show the product candidates to be less effective than expected (for example, a clinical trial could fail to meet its primary or key secondary endpoint(s)) or to have unacceptable side effects or toxicities;
- failure to receive the necessary regulatory approvals or a delay in receiving such approvals. Among other things, such delays may be caused by patients who fail the trial screening process, slow enrollment in clinical trials, patients dropping out of trials, patients lost to follow-up, length of time to achieve trial endpoints, additional time requirements for data analysis or NDA preparation, discussions with the FDA, an FDA request for additional preclinical or clinical data (such as long-term toxicology studies) or unexpected safety or manufacturing issues;



- preclinical study results may show the product candidate to be less effective than desired or to have harmful side effects;
- supply issues, manufacturing costs and formulation issues, including our inability to successfully combine our product candidates with other therapies;
- post-marketing approval requirements; and
- the proprietary rights of others and their competing products and technologies that may prevent our product candidates from being commercialized.

The length of time necessary to complete clinical trials and to submit an application for marketing approval for a final decision by a regulatory authority varies significantly from one product candidate to the next and from one country to the next, and may be difficult to predict.

Even if we are successful in obtaining marketing approval, commercial success of any approved products will also depend in large part on the availability of coverage and adequate reimbursement from third-party payors, including government payors such as the Medicare and Medicaid programs and managed care organizations in the United States or country specific governmental organizations in foreign countries, which may be affected by existing and future healthcare reform measures designed to reduce the cost of healthcare. Third-party payors could require us to conduct additional studies, including post-marketing studies related to the cost effectiveness of a product, to qualify for reimbursement, which could be costly and divert our resources. If government and other healthcare payors were not to provide coverage and adequate reimbursement for our products once approved, market acceptance and commercial success would be reduced.

In addition, if any of our product candidates receive marketing approval, we will be subject to significant regulatory obligations regarding the submission of safety and other post-marketing information and reports and registration, and will need to continue to comply (or ensure that our third-party providers comply) with current good manufacturing practices, or cGMPs, and good clinical practices, or GCPs, for any clinical trials that we conduct post-approval. In addition, there is always the risk that we, a regulatory authority or a third party might identify previously unknown problems with a product post-approval, such as adverse events of unanticipated severity or frequency. Compliance with these requirements is costly, and any failure to comply or other issues with our product candidates post-approval could adversely affect our business, financial condition and results of operations.

***We expect to develop nirogacestat and PD-0325901, and potentially future product candidates, in combination with other therapies, and safety or supply issues with combination use products may delay or prevent development and approval of such product candidates.***

We intend to develop nirogacestat and PD-0325901, and likely other future product candidates, in combination with one or more other approved or unapproved rational therapies to treat cancer or other diseases. For example, we are currently evaluating PD-0325901 in combination with lifirafenib, BeiGene's RAF dimer inhibitor.

Even if any product candidate we develop were to receive marketing approval or be commercialized for use in combination with other existing therapies, we would continue to be subject to the risks that the FDA, EMA or comparable foreign regulatory authorities outside of the United States could revoke approval of the therapy used in combination with our product or that safety, efficacy, manufacturing or supply issues could arise with any of those existing therapies. If the therapies we use in combination with our product candidates are replaced as the standard of care for the indications we choose for any of our product candidates, the FDA, EMA

or comparable foreign regulatory authorities may require us to conduct additional clinical trials. The occurrence of any of these risks could result in our own products, if approved, being removed from the market or being less successful commercially.

We also may choose to evaluate nirogacestat or PD-0325901 or any other future product candidates in combination with one or more cancer therapies that have not yet been approved for marketing by the FDA, EMA or comparable foreign regulatory authorities. We will not be able to market and sell nirogacestat, PD-0325901 or any product candidate we develop in combination with an unapproved cancer therapy for a combination indication if that unapproved cancer therapy does not ultimately obtain marketing approval either alone or in combination with our product. In addition, unapproved cancer therapies face the same risks described with respect to our product candidates currently in development and clinical trials, including the potential for serious adverse effects, delay in their clinical trials and lack of FDA approval.

If the FDA, EMA or comparable foreign regulatory authorities do not approve these other drugs or revoke their approval of, or if safety, efficacy, quality, manufacturing or supply issues arise with, the drugs we choose to evaluate in combination with our product candidate we develop, we may be unable to obtain approval of or market such combination therapy.

***Due to our limited resources and access to capital, we must prioritize development of certain programs and product candidates; these decisions may prove to be wrong and may adversely affect our business.***

We may fail to identify and acquire, through purchase or license, viable new product candidates for clinical development for a number of reasons. If we fail to identify and acquire additional product candidates, our business could be materially harmed.

Efforts to identify and pursue new product candidates and disease targets require substantial technical, financial and human resources, regardless of whether they are ultimately successful. We currently rely on third parties, including current and future collaborators, to perform all of our research and preclinical activities. Programs may initially show promise in preclinical studies, yet fail to yield positive results during clinical development for a number of reasons, including:

- the methodology used may not be successful in identifying potential indications and/or product candidates; or
- product candidates may, after further study, be shown to have harmful adverse effects or other characteristics that indicate they are unlikely to be effective products.

Because we have limited financial and human resources, we intend to initially focus on programs and product candidates for a limited set of indications. As a result, we may forego or delay pursuit of opportunities with other product candidates or for other indications with our existing product candidates that may later prove to have greater commercial potential or a greater likelihood of success. We may focus our efforts and resources on potential product candidates or other potential programs that ultimately prove to be unsuccessful.

***Our future clinical trials or those of our future collaborators may reveal significant adverse events not seen in prior preclinical studies or clinical trials and may result in a safety profile that could inhibit regulatory approval or market acceptance of any of our product candidates.***

If significant adverse events or other side effects are observed in any of our clinical trials, we may have difficulty recruiting patients to our clinical trials, patients may drop out of our trials or we may be required to abandon the trials or our development efforts of one or more product candidates altogether. For example, a prior Phase 2 clinical trial (A4581002) of PD-0325901 was terminated and enrollment in the Phase 2 portion of a Phase 1/2 clinical trial (A4581001) was

halted as a result of adverse events observed at doses of PD-0325901 of 15 mg twice daily, or BID, or above using both intermittent and continuous dosing schedules. These adverse events included ocular disorders (visual disturbances, blurred vision and retinal vein occlusion), nervous system disorders (confusion, slowed ideation, slurred speech and hallucinations), musculoskeletal and connective tissue disorders (general weakness and neck muscle weakness associated with mild and moderate elevations in creatine phosphokinase) and cardiac disorders (decreased left ventricular ejection fraction and congestive heart failure). Although these doses were significantly higher than the maximum allowable dose of 4 mg BID in our planned Phase 2b clinical trial of PD-0325901 in NF1-PN, we plan to treat patients in this upcoming trial for a period of up to 24 months, which would be longer than any subjects have been treated with PD-0325901 in prior trials. In our planned Phase 2b clinical trial, we may observe adverse events similar to those that were seen at higher doses of PD-0325901 in prior clinical trials owing to the potentially increased duration of treatment, or potentially other factors. In addition, the trial will enroll pediatric NF1-PN patients. Patients under 16 years of age have never before been exposed to PD-0325901 treatment, and it is possible that there may be unanticipated adverse events observed in this patient population.

If we elect or are required to delay, suspend or terminate any clinical trial of any product candidates that we develop, the commercial prospects of such product candidates will be harmed and our ability to generate product revenues from any of these product candidates will be delayed or eliminated. Serious adverse events or other adverse events, as well as tolerability issues, observed in clinical trials could hinder or prevent market acceptance of the product candidate at issue.

We, the FDA, EMA or comparable foreign regulatory authorities or an IRB may suspend clinical trials of a product candidate at any time for various reasons, including a belief that subjects in such trials are being exposed to unacceptable health risks or adverse side effects. Some potential therapeutics developed in the biotechnology industry that initially showed therapeutic promise in early-stage trials have later been found to cause side effects that prevented their further development. Even if the side effects do not preclude the product candidate from obtaining or maintaining marketing approval, restrictions could be imposed on the approval or an approved product could be subject to a "black box" warning, and undesirable side effects may inhibit market acceptance of the approved product due to its tolerability versus other therapies.

***If we encounter difficulties enrolling patients in any of our clinical trials, our clinical development activities could be delayed or otherwise adversely affected.***

The timely completion of clinical trials in accordance with their protocols depends, among other things, on our ability to enroll a sufficient number of patients who remain in the trial until its conclusion. We may experience difficulties in patient enrollment in our clinical trials for a variety of reasons, including:

- the patient eligibility and exclusion criteria defined in the protocol;
- the size of the patient population required for analysis of the clinical trial's primary endpoints;
- the proximity of patients to clinical trial sites;
- the design of the clinical trial;
- our ability to recruit clinical trial investigators with the appropriate competencies and experience, and the ability of these investigators to identify and enroll suitable patients;
- perception of the safety profile of our product candidates;
- our ability to obtain and maintain patient consents; and

- the risk that patients enrolled in clinical trials will drop out of the trials before completion.

For example, we are developing nirogacestat for the treatment of desmoid tumors and PD-0325901 for the treatment of NF1-PN, both of which are rare diseases with small patient populations. As a result, we may encounter difficulties enrolling subjects in our clinical trials for these product candidates due, in part, to the small size of these patient populations. In addition, our clinical trials will compete with other clinical trials for product candidates that are in the same therapeutic areas as our product candidates, and this competition will reduce the number and types of patients available to us, because some patients who might have opted to enroll in our trials may instead opt to enroll in a clinical trial being conducted by one of our competitors. Since the number of qualified clinical investigators is limited, we expect to conduct some of our clinical trials at the same clinical trial sites that some of our competitors use, which will reduce the number of patients who are available for our clinical trials in such clinical trial site. In addition, in the case of PD-0325901, we may face difficulty with enrollment due to physician or patient perception of an adverse tolerability profile.

Delays in patient enrollment may result in increased costs or may affect the timing or outcome of our clinical trials, which could prevent completion of these trials and adversely affect our ability to advance the development of our product candidates.

***The target patient populations of nirogacestat for the treatment of desmoid tumors and PD-0325901 for the treatment of NF1-PN are small and have not been definitively determined. We must be able to successfully commercialize our product candidates and achieve sufficient market share in order to achieve profitability and growth.***

Desmoid tumors and NF1-PN are rare diseases with small patient populations that have not been definitively determined. Even if our product candidates obtain regulatory approval in the United States, the European Union or other major markets, our estimates of the number of treatable patients could be lower than expected, which would adversely affect our results of operations and our business.

***We face significant competition from other biopharmaceutical companies, and our operating results will suffer if we fail to compete effectively.***

The biopharmaceutical industry is characterized by intense competition and rapid innovation. Our competitors may be able to develop other compounds or drugs that are able to achieve similar or better results. Our potential competitors include major multinational pharmaceutical companies, established biotechnology companies, specialty pharmaceutical companies and universities and other research institutions. Many of our competitors have substantially greater financial, technical and other resources, such as larger research and development staff and experienced marketing and manufacturing organizations and well-established sales forces. Smaller or early-stage companies may also prove to be significant competitors, particularly as they develop novel approaches to treating disease indications that our product candidates are also focused on treating. Established pharmaceutical companies may also invest heavily to accelerate discovery and development of novel therapeutics or to in-license novel therapeutics that could make the product candidates that we develop obsolete. Mergers and acquisitions in the biotechnology and pharmaceutical industries may result in even more resources being concentrated in our competitors. Competition may increase further as a result of advances in the commercial applicability of technologies and greater availability of capital for investment in these industries. Our competitors, either alone or with collaboration partners, may succeed in developing, acquiring or licensing on an exclusive basis drug or biologic products that are more effective, safer, more easily commercialized or less costly than our product candidates or may develop proprietary technologies or secure patent protection that we may need for the

development of our technologies and products. We believe the key competitive factors that will affect the development and commercial success of our product candidates are efficacy, safety, tolerability, reliability, convenience of use, price and reimbursement.

Even if we obtain regulatory approval of our product candidates, the availability and price of our competitors' products could limit the demand and the price we are able to charge for our product candidates. We may not be able to implement our business plan if the acceptance of our product candidates is inhibited by price competition or the reluctance of physicians to switch from existing methods of treatment to our product candidates, or if physicians switch to other new drug or biologic products or choose to reserve our product candidates for use in limited circumstances. For additional information regarding our competition, see "Business—Competition."

***Even if any product candidate we develop 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 future product candidate we develop receives marketing approval, whether as a single agent or in combination with other therapies, it may nonetheless fail to gain sufficient market acceptance by physicians, patients, third-party payors and others in the medical community. If the product candidates we develop 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 any product candidate, if approved for commercial sale, will depend on a number of factors, including:

- efficacy and potential advantages compared to other treatments;
- the ability to offer our products, if approved, for sale at competitive prices;
- convenience and ease of administration compared to other treatments;
- the willingness of the target patient population to try new therapies and of physicians to prescribe these therapies;
- the strength of marketing and distribution support;
- the ability to obtain sufficient third-party coverage, market access and adequate reimbursement; and
- the prevalence and severity of any side effects.

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

As product candidates proceed through preclinical studies to late-stage clinical trials towards potential approval and commercialization, it is common that various aspects of the development program, such as manufacturing methods and formulation, are altered along the way in an effort to optimize processes and results. Such changes carry the risk that they will not achieve these intended objectives. Any of these changes could cause our product candidates to perform differently and affect the results of planned clinical trials or other future clinical trials conducted with the materials manufactured using altered processes. Such changes may also require additional testing, including bridging or comparability testing to demonstrate the validity of clinical data obtained in clinical trials following manufacturing changes, FDA notification or FDA approval.

Because all prior clinical trials of nirogasecat and PD-0325901 were conducted by third parties, we will need to perform analytical and other tests to demonstrate that any new drug product material is comparable in all respects, including potency, to the product used in such earlier clinical trials. There is no assurance that any such product will pass the required comparability testing, that any other future third-party manufacturer that we engage will be successful in producing our product candidates or that any materials produced by any third-party manufacturer that we engage will have the same effect in patients that we have observed to date with respect to materials used in prior clinical trials.

All of the above could delay completion of clinical trials, require the conduct of bridging clinical trials or the repetition of one or more clinical trials, increase clinical trial costs, delay approval of our product candidates and jeopardize our ability to commence sales and generate revenue.

Moreover, we have not yet manufactured or processed on a commercial scale and may not be able to do so for any of our product candidates if approved. We may make changes as we work to optimize our manufacturing processes, but we cannot be sure that even minor changes in our processes will result in therapies that are safe and effective and approved for commercial sale.

***If product liability lawsuits are brought against us, we may incur substantial liabilities and may be required to limit commercialization of our product candidates.***

We face an inherent risk of product liability as a result of testing our product candidates in clinical trials and will face an even greater risk if we commercialize any products. For example, we may be sued if our product candidates cause or are perceived to cause injury or are found to be otherwise unsuitable during clinical trials, manufacturing, marketing or sale. Any such product liability claims may include allegations of defects in manufacturing, defects in design, a failure to warn of dangers inherent in the product, negligence, strict liability or a breach of warranties. Claims could also be asserted under state consumer protection acts. If we cannot successfully defend ourselves against product liability claims, we may incur substantial liabilities or be required to limit commercialization of our product candidates. Even successful defense would require significant financial and management resources. Regardless of the merits or eventual outcome, liability claims may result in:

- inability to bring a product candidate to the market;
- decreased demand for our products;
- harm to our reputation;
- withdrawal of clinical trial participants and inability to continue clinical trials;
- initiation of investigations by regulators;
- costs to defend the related litigation;
- diversion of management's time and our resources;
- substantial monetary awards to clinical trial participants or patients who receive an approved product;
- product recalls, withdrawals or labeling, marketing or promotional restrictions;
- loss of revenue;
- exhaustion of any available insurance and of our capital resources;
- the inability to commercialize any product candidate, if approved; and
- a decline in our stock price.

Our inability to obtain sufficient product liability insurance at an acceptable cost to protect against potential product liability claims could prevent or inhibit the commercialization of products we develop, alone or with collaborators. Even if our agreements with any current or future corporate collaborators entitle us to indemnification against losses, that indemnification may not be available or adequate should any claim arise. Although we currently carry \$5.0 million in clinical trial insurance, that amount of insurance coverage may not be adequate, and, in the future, we may be unable to maintain this insurance coverage, or we may not be able to obtain additional or replacement insurance at a reasonable cost, if at all. Our insurance policies also have various exclusions, and we may be subject to a product liability claim for which we have no coverage. We may have to pay any amounts awarded by a court or negotiated in a settlement that exceed our coverage limitations or that are not covered by our insurance, and we may not have, or be able to obtain, sufficient capital to pay those amounts.

### **Risks related to government regulation**

***The regulatory approval process for our product candidates in the United States, the European Union and other jurisdictions is currently uncertain and will be lengthy, time-consuming and inherently unpredictable and we may experience significant delays in the clinical development and regulatory approval, if any, of our product candidates.***

The research, testing, manufacturing, labeling, approval, selling, import, export, marketing and distribution of drug products are subject to extensive regulation by the FDA in the United States, the EMA in the European Union and comparable foreign regulatory authorities. We are not permitted to market any product in any jurisdiction until we receive marketing approval from the appropriate regulatory authority. We have not previously submitted an NDA to the FDA, an MAA to the EMA or similar marketing application to comparable foreign regulatory authorities. In the United States, an NDA must include extensive preclinical and clinical data and supporting information to establish that the product candidate is safe, pure and potent for each desired indication. An NDA must also include significant information regarding the chemistry, manufacturing and controls for the product, and the manufacturing facilities must complete a successful pre-approval inspection.

The FDA may also require a panel of experts, referred to as an Advisory Committee, to deliberate on the adequacy of the safety and efficacy data to support approval. The opinion of the Advisory Committee, although not binding, may have a significant impact on our ability to obtain approval of any product candidates that we develop based on the completed clinical trials.

In addition, clinical trials can be delayed or terminated for a variety of reasons, including delays or failures related to:

- obtaining regulatory authorization to begin a clinical trial, if applicable;
- the availability of financial resources to begin and complete the planned trials;
- reaching agreement on acceptable terms with prospective CROs and clinical trial sites, the terms of which can be subject to extensive negotiation and may vary significantly among different CROs and clinical trial sites;
- obtaining approval at each clinical trial site by an independent IRB or ethics committee;
- recruiting suitable patients to participate in a clinical trial in a timely manner;
- having patients complete a clinical trial or return for post-treatment follow-up;
- clinical trial sites deviating from clinical trial protocol, not complying with GCP requirements or dropping out of a trial;

- addressing any patient safety concerns that arise during the course of a clinical trial;
- addressing any conflicts with new or existing laws or regulations;
- adding new clinical trial sites; or
- manufacturing qualified materials under cGMP regulations for use in clinical trials.

Patient enrollment is a significant factor in the timing of clinical trials and is affected by many factors. Further, a clinical trial may be suspended or terminated by us, the IRBs for the institutions in which such clinical trials are being conducted, or the FDA, EMA or comparable foreign regulatory authorities, or recommended for suspension or termination by the DSMB for such clinical trial, due to a number of factors, including failure to conduct the clinical trial in accordance with regulatory requirements or our clinical protocols, inspection of the clinical trial operations or clinical trial sites by the FDA, EMA or comparable foreign regulatory authorities resulting in the imposition of a clinical hold, unforeseen safety issues or adverse side effects, failure to demonstrate a benefit from using a product candidate, changes in governmental regulations or administrative actions or lack of adequate funding to continue the clinical trial. If we experience termination of, or delays in the completion of, any clinical trial of our product candidates, the commercial prospects for our product candidates will be harmed, and our ability to generate product revenue will be delayed. In addition, any delays in completing any clinical trials will increase our costs, slow down our product development and approval process and jeopardize our ability to commence product sales and generate revenue.

***The FDA, EMA or comparable foreign regulatory authorities may disagree with our regulatory plan for our product candidates.***

The general approach for FDA approval of a new drug is dispositive data from one or more well-controlled Phase 3 clinical trials of the product candidate in the relevant patient population. Phase 3 clinical trials typically involve a large number of patients, have significant costs and take years to complete.

Our clinical trial results may not support approval of our product candidates. In addition, our product candidates could fail to receive regulatory approval, or regulatory approval could be delayed, for many reasons, including the following:

- the FDA, EMA or comparable foreign regulatory authorities may disagree with the dosing regimen, design or implementation of our clinical trials;
- we may be unable to demonstrate to the satisfaction of the FDA, EMA or comparable foreign regulatory authorities that our product candidates are safe and effective for any of their proposed indications;
- the results of clinical trials may not meet the level of statistical significance required by the FDA, EMA or comparable foreign regulatory authorities for approval;
- we may be unable to demonstrate that our product candidates' clinical and other benefits outweigh their safety risks;
- the FDA, EMA or comparable foreign regulatory authorities may disagree with our interpretation of data from preclinical studies or clinical trials;
- the data collected from clinical trials of our product candidates may not be sufficient to the satisfaction of the FDA, EMA or comparable foreign regulatory authorities to support the submission of an NDA or other comparable submission in foreign jurisdictions or to obtain regulatory approval in the United States or elsewhere;



- the FDA, EMA or comparable foreign regulatory authorities may fail to approve the manufacturing processes or facilities of third-party manufacturers with which we contract for clinical and commercial supplies; and
- the approval policies or regulations of the FDA, EMA or comparable foreign regulatory authorities may significantly change in a manner rendering our clinical data insufficient for approval.

We may seek regulatory approval of our product candidates, including nirogacestat, based on an interim analysis conducted of a registrational trial, particularly if the interim analysis is statistically significant for the primary endpoint and the safety data demonstrate an acceptable safety and tolerability profile. The results of any such interim analysis would be discussed with FDA at a pre-NDA meeting to assess the adequacy of the data to support the submission of a NDA; however, if the FDA does not agree that the interim analysis provides a sufficient basis for regulatory approval, we would not submit an NDA until the conclusion of such registrational trial.

***Interim “top-line” and preliminary results from our clinical trials that we announce or publish from time to time may change as more patient data become available and are subject to audit and verification procedures that could result in material changes in the final data.***

From time to time, we may publish interim top-line or preliminary results from our clinical trials. Interim results from clinical trials that we may complete are subject to the risk that one or more of the clinical outcomes may materially change as patient enrollment continues and more patient data become available. Preliminary or top-line results also remain subject to audit and verification procedures that may result in the final data being materially different from the preliminary data we previously published. As a result, interim and preliminary data should be viewed with caution until the final data are available. Differences between preliminary or interim data and final data could significantly harm our business prospects and may cause the trading price of our common stock to fluctuate significantly.

***We have been granted Orphan Drug Designation for nirogacestat and PD-0325901 and may seek Orphan Drug Designation for other product candidates, and we may be unable to maintain the benefits associated with Orphan Drug Designation, including the potential for market exclusivity.***

Regulatory authorities in some jurisdictions, including the United States and Europe, may designate drugs and therapeutic biologics for relatively small patient populations as orphan drugs. Under the Orphan Drug Act, the FDA may designate a drug or therapeutic biologic as an orphan drug if it is a drug or therapeutic biologic intended to treat a rare disease or condition, which is generally defined as a patient population of fewer than 200,000 individuals annually in the United States, or a patient population greater than 200,000 in the United States where there is no reasonable expectation that the cost of developing the drug or therapeutic biologic will be recovered from sales in the United States. In the United States, Orphan Drug Designation entitles a party to financial incentives such as opportunities for grant funding toward clinical trial costs, tax advantages and user-fee waivers. In addition, if a product that has Orphan Drug Designation subsequently receives the first FDA approval for the disease for which it has such designation, the product is entitled to orphan drug exclusivity, which means that the FDA may not approve any other applications, including a full NDA or Biologics License Application, or BLA, to market the same product for the same indication for seven years, except in limited circumstances, such as a showing of clinical superiority to the product with orphan drug exclusivity or where the manufacturer is unable to assure sufficient product quantity.

In June 2018, the FDA granted Orphan Drug Designation to nirogacestat for the treatment of desmoid tumors. In October 2018, the FDA granted Orphan Drug Designation to PD-0325901 for

the treatment of NF1. We may seek Orphan Drug Designations for nirogacestat and PD-0325901 for other indications or for our other product candidates. There can be no assurances that we will be able to obtain such designations.

Even if we obtain Orphan Drug Designation for any of our future product candidates in specific indications, we may not be the first to obtain marketing approval of nirogacestat, PD-0325901 or any other such product candidates for the orphan-designated indication due to the uncertainties associated with developing pharmaceutical products. In addition, exclusive marketing rights in the United States may be limited if we seek approval for an indication broader than the orphan-designated indication or may be lost if the FDA later determines that the request for designation was materially defective or if the manufacturer is unable to assure sufficient quantities of the product to meet the needs of patients with the rare disease or condition.

Further, even if we obtain orphan drug exclusivity in the United States for a product, that exclusivity may not effectively protect the product from competition because different drugs or therapeutic biologics with different active moieties can be approved for the same condition. Even after an orphan product is approved, the FDA can subsequently approve the same drug or therapeutic biologic with the same active moiety for the same condition if the FDA concludes that the later drug or therapeutic biologic is safer, more effective or makes a major contribution to patient care. In Europe, we could be prevented from marketing our products if a similar medicinal product is granted Orphan Drug Designation for the same indications that we are pursuing. Once authorized, with a limited number of exceptions, neither the competent authorities of the EU member states, the EMA or the European Commission are permitted to accept applications or grant marketing authorization for other similar medicinal products with the same therapeutic indication. Marketing authorization could also be granted to a similar medicinal product with the same orphan indication if the latter product is safer, more effective or otherwise clinically superior to the original orphan medicinal product. Further, the composition of matter patents for nirogacestat and PD-0325901 expire in 2025 and 2021, respectively, and if orphan drug exclusivity does not protect these products from competition, our business and financial condition could be materially adversely affected. Orphan Drug Designation neither shortens the development time or regulatory review time of a drug or therapeutic biologic nor gives the drug or therapeutic biologic any advantage in the regulatory review or approval process. In addition, while we may seek Orphan Drug Designation for our future product candidates, we may never receive such designations.

***Breakthrough Therapy Designation or Fast Track Designation from the FDA may not actually lead to a faster development or regulatory review or approval process.***

The FDA has granted Fast Track Designation for nirogacestat for the treatment of adult patients with progressive, unresectable, recurrent or refractory desmoid tumors or deep fibromatosis, and has granted Fast Track Designation for PD-0325901 for the treatment of patients at least two years of age with NF1-associated inoperable PN that are progressing or causing significant morbidity. We may seek Breakthrough Therapy Designation for our product candidates or Fast Track Designation for certain of our other product candidates.

If a product is intended for the treatment of a serious or life-threatening condition and the product demonstrates the potential to address unmet medical needs for this condition, the product sponsor may apply for Fast Track Designation. The FDA has broad discretion whether or not to grant this designation, so even if we believe one of our product candidates 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.

A breakthrough therapy is defined as a product that is intended, alone or in combination with one or more other products, to treat a serious or life-threatening disease or condition, and preliminary clinical evidence indicates that the product 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 products that have been designated as breakthrough therapies, interaction and communication between the FDA and the sponsor of the trial can help to identify the most efficient path for clinical development while minimizing the number of patients placed in ineffective control regimens.

Designation as a breakthrough therapy is within the discretion of the FDA. Accordingly, even if we believe one of our product candidates meets the criteria for designation as a breakthrough therapy, the FDA may disagree and instead determine not to make such designation. In any event, the receipt of a Breakthrough Therapy Designation may not result in a faster development process, review or approval compared to products considered for approval under conventional FDA procedures and does not assure ultimate approval by the FDA. In addition, even if a product candidate qualifies as a breakthrough therapy, the FDA may later decide that the product no longer meets the conditions for qualification and rescind the Breakthrough Therapy Designation.

***The results of clinical trials conducted at clinical trial sites outside the United States might not be accepted by the FDA, and data developed outside of a foreign jurisdiction similarly might not be accepted by such foreign regulatory authority.***

Some of the prior clinical trials for our product candidates were conducted outside the United States, and we intend to conduct additional clinical trials outside the United States. Although the FDA, EMA or comparable foreign regulatory authorities may accept data from clinical trials conducted outside the relevant jurisdiction, acceptance of these data is subject to certain conditions. For example, the FDA requires that the clinical trial must be well designed and conducted and performed by qualified investigators in accordance with ethical principles such as IRB or ethics committee approval and informed consent, the trial population must adequately represent the U.S. population, and the data must be applicable to the U.S. population and U.S. medical practice in ways that the FDA deems clinically meaningful. In addition, while these clinical trials are subject to the applicable local laws, acceptance of the data by the FDA will be dependent upon its determination that the trials were conducted consistent with all applicable U.S. laws and regulations. There can be no assurance that the FDA will accept data from trials conducted outside of the United States as adequate support of a marketing application. Similarly, we must also ensure that any data submitted to foreign regulatory authorities adheres to their standards and requirements for clinical trials and there can be no assurance a comparable foreign regulatory authority would accept data from trials conducted outside of its jurisdiction.

***Our relationships with healthcare providers and physicians 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.***

Healthcare providers, physicians and third-party payors in the United States and elsewhere play a primary role in the recommendation and prescription of pharmaceutical products. Arrangements with third-party payors and customers can expose pharmaceutical manufacturers to broadly applicable fraud and abuse and other healthcare laws and regulations, including, without limitation, the federal Anti-Kickback Statute and the federal False Claims Act, or FCA, which may

constrain the business or financial arrangements and relationships through which such companies sell, market and distribute pharmaceutical products. In particular, the research of our product candidates, as well as the promotion, sales and marketing of healthcare items and services, as well as certain business arrangements in the healthcare industry, are subject to extensive laws designed to prevent fraud, kickbacks, self-dealing and other abusive practices. These laws and regulations may restrict or prohibit a wide range of pricing, discounting, marketing and promotion, structuring and commission(s), certain customer incentive programs and other business arrangements generally. Activities subject to these laws also involve the improper use of information obtained in the course of patient recruitment for clinical trials. The applicable federal, state and foreign healthcare laws and regulations that may affect our ability to operate include, but are not limited to:

- the federal Anti-Kickback Statute, which prohibits, among other things, knowingly and willfully soliciting, receiving, offering or paying any remuneration (including any kickback, bribe or rebate), directly or indirectly, overtly or covertly, in cash or in kind, to induce, or in return for, either the referral of an individual, or the purchase, lease, order or recommendation of any good, facility, item or service for which payment may be made, in whole or in part, under a federal healthcare program, such as the Medicare and Medicaid programs. A person or entity can be found guilty of violating the statute without actual knowledge of the statute or specific intent to violate it. In addition, a claim including items or services resulting from a violation of the federal Anti-Kickback Statute constitutes a false or fraudulent claim for purposes of the FCA. The Anti-Kickback Statute has been interpreted to apply to arrangements between pharmaceutical manufacturers on the one hand and prescribers, purchasers, and formulary managers on the other. There are a number of statutory exceptions and regulatory safe harbors protecting some common activities from prosecution;
- the federal civil and criminal false claims laws and civil monetary penalty laws, including the FCA, which prohibit, among other things, individuals or entities from knowingly presenting, or causing to be presented, false or fraudulent claims for payment to, or approval by Medicare, Medicaid or other federal healthcare programs, knowingly making, using or causing to be made or used a false record or statement material to a false or fraudulent claim or an obligation to pay or transmit money to the federal government, or knowingly concealing or knowingly and improperly avoiding or decreasing or concealing an obligation to pay money to the federal government. Manufacturers can be held liable under the FCA even when they do not submit claims directly to government payors if they are deemed to “cause” the submission of false or fraudulent claims. The FCA also permits a private individual acting as a “whistleblower” to bring actions on behalf of the federal government alleging violations of the FCA and to share in any monetary recovery;
- the federal Health Insurance Portability and Accountability Act of 1996, or HIPAA, which created additional federal criminal statutes that prohibit knowingly and willfully executing, or attempting to execute, a scheme to defraud any healthcare benefit program or obtain, by means of false or fraudulent pretenses, representations or promises, any of the money or property owned by, or under the custody or control of, any healthcare benefit program, regardless of the payor (e.g., public or private) and knowingly and willfully falsifying, concealing or covering up by any trick or device a material fact or making any materially false statements in connection with the delivery of, or payment for, healthcare benefits, items or services relating to healthcare matters. Similar to the federal Anti-Kickback Statute, a person or entity can be found guilty of violating HIPAA without actual knowledge of the statute or specific intent to violate it;
- HIPAA, as amended by the Health Information Technology for Economic and Clinical Health Act of 2009, or HITECH, and their respective implementing regulations, which impose, among other

things, requirements on certain healthcare providers, health plans and healthcare clearinghouses, known as covered entities, as well as their respective business associates, independent contractors that perform services for covered entities that involve the use, or disclosure of, individually identifiable health information, relating to the privacy, security and transmission of individually identifiable health information. HITECH also created new tiers of civil monetary penalties, amended HIPAA to make civil and criminal penalties directly applicable to business associates, and gave state attorneys general new authority to file civil actions for damages or injunctions in federal courts to enforce the federal HIPAA laws and seek attorneys' fees and costs associated with pursuing federal civil actions;

- the federal Physician Payments Sunshine Act, created under the Patient Protection and Affordable Care Act, as amended, or ACA, and its implementing regulations, which require some manufacturers of drugs, devices, biologicals and medical supplies for which payment is available under Medicare, Medicaid or the Children's Health Insurance Program (with certain exceptions) to report annually to the Centers for Medicare & Medicaid Services, or CMS, of the U.S. Department of Health and Human Services, or HHS, information related to payments or other transfers of value made to physicians (defined to include doctors, dentists, optometrists, podiatrists and chiropractors) and teaching hospitals, as well as ownership and investment interests held by physicians and their immediate family members; and
- analogous state and foreign laws and regulations, such as state anti-kickback and false claims laws, which may apply to sales or marketing arrangements and claims involving healthcare items or services reimbursed by non-governmental third-party payors, including private insurers, and may be broader in scope than their federal equivalents; state and foreign laws that require pharmaceutical companies to comply with the pharmaceutical industry's voluntary compliance guidelines and the relevant compliance guidance promulgated by the federal government or otherwise restrict payments that may be made to healthcare providers; state and foreign laws that require drug manufacturers to report information related to payments and other transfers of value to physicians and other healthcare providers, marketing expenditures or drug pricing; state and local laws that require the registration of pharmaceutical sales representatives; and state and foreign laws governing the privacy and security of health information in certain circumstances, many of which differ from each other in significant ways and often are not preempted by HIPAA, thus complicating compliance efforts.

The distribution of pharmaceutical products is subject to additional requirements and regulations, including extensive record-keeping, licensing, storage and security requirements intended to prevent the unauthorized sale of pharmaceutical products. Pharmaceutical companies may also be subject to federal consumer protection and unfair competition laws, which broadly regulate marketplace activities and activities that potentially harm consumers.

The scope and enforcement of each of these laws is uncertain and subject to rapid change in the current environment of healthcare reform, especially in light of the lack of applicable precedent and regulations. For example, on January 31, 2019, the HHS and HHS Office of Inspector General, or OIG, proposed an amendment to one of the existing federal Anti-Kickback Statute safe harbors (42 C.F.R. 1001.952(h)) which would prohibit certain biopharmaceutical manufacturers from offering rebates to pharmacy benefit managers, or PBMs, in the Medicare Part D and Medicaid managed care programs. The proposed amendment would remove protection for "discounts" from federal Anti-Kickback Statute enforcement action, and would include criminal and civil penalties for knowingly and willfully offering, paying, soliciting or receiving remuneration to induce or reward the referral of business reimbursable under federal healthcare programs. At the same time, HHS also proposed to create a new safe harbor to protect point-of-sale discounts that drug manufacturers provide directly to patients, and adds another safe harbor to protect certain administrative fees paid by manufacturers to PBMs. If this proposal

is adopted, in whole or in part, it could affect the pricing and reimbursement for any products for which we receive approval in the future. Federal and state enforcement bodies have recently increased their scrutiny of interactions between healthcare companies and healthcare providers, which has led to a number of investigations, prosecutions, convictions and settlements in the healthcare industry. Ensuring business arrangements comply with applicable healthcare laws, as well as responding to possible investigations by government authorities, can be time and resource-consuming and can divert a company's attention from the business.

It is possible that governmental and enforcement authorities will conclude that our business practices may not comply with current or future statutes, regulations or case law interpreting applicable fraud and abuse or other healthcare laws and regulations. If any such actions are instituted against us, and we are not successful in defending ourselves or asserting our rights, those actions could have a significant impact on our business, including the imposition of civil, criminal and administrative penalties, damages, fines, disgorgement, imprisonment, exclusion from participation in federal and state funded healthcare programs, contractual damages and the curtailment or restricting of our operations, as well as additional reporting obligations and oversight if we become subject to a corporate integrity agreement or other agreement to resolve allegations of non-compliance with these laws. Further, if any of the physicians or other healthcare providers or entities with whom we expect to do business is found to be not in compliance with applicable laws, they may be subject to significant criminal, civil or administrative sanctions, including exclusions from government funded healthcare programs. Any action for violation of these laws, even if successfully defended, could cause a biopharmaceutical manufacturer to incur significant legal expenses and divert management's attention from the operation of the business. Prohibitions or restrictions on sales or withdrawal of future marketed products could materially affect business in an adverse way.

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

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

We may also submit marketing applications in other countries. Regulatory authorities in jurisdictions outside of the United States have requirements for approval of product candidates with which we must comply prior to marketing in those jurisdictions. Obtaining foreign regulatory approvals and compliance with foreign regulatory requirements could result in significant delays, difficulties and costs for us and could delay or prevent the introduction of our products in certain countries. If we 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.

***Even if we receive regulatory approval of any product candidates, we will be subject to ongoing regulatory obligations and continued regulatory review, which may result in significant additional expense and we may be subject to penalties if we fail to comply with regulatory requirements or experience unanticipated problems with our product candidates.***

If any of our product candidates are approved, they will be subject to ongoing regulatory requirements for manufacturing, labeling, packaging, storage, advertising, promotion, sampling, record-keeping, conduct of post-marketing studies and submission of safety, efficacy and other post-market information, including both federal and state requirements in the United States and requirements of comparable foreign regulatory authorities. In addition, we will be subject to continued compliance with cGMP and GCP requirements for any clinical trials that we conduct post-approval.

Manufacturers and manufacturers' facilities are required to comply with extensive FDA, EMA and comparable foreign regulatory authority requirements, including ensuring that quality control and manufacturing procedures conform to cGMP regulations. As such, we and our contract manufacturers will be subject to continual review and inspections to assess compliance with cGMP and adherence to commitments made in any BLA, other marketing application and previous responses to inspection observations. Accordingly, we and others with whom we work must continue to expend time, money and effort in all areas of regulatory compliance, including manufacturing, production and quality control.

Any regulatory approvals that we receive for our product candidates may be subject to limitations on the approved indicated uses for which the product may be marketed or to the conditions of approval, or contain requirements for potentially costly post-marketing testing, including Phase 4 clinical trials and surveillance to monitor the safety and efficacy of the product candidate. Certain endpoint data we hope to include in any approved product labeling also may not make it into such labeling, including exploratory or secondary endpoint data such as patient-reported outcome measures. The FDA may also require a risk evaluation and mitigation strategies, or REMS, program as a condition of approval of our product candidates, which could entail requirements for long-term patient follow-up, a medication guide, physician communication plans or additional elements to ensure safe use, such as restricted distribution methods, patient registries and other risk minimization tools. In addition, if the FDA, EMA or a comparable foreign regulatory authority approves our product candidates, we will have to comply with requirements including submissions of safety and other post-marketing information and reports and registration.

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

- restrictions on the marketing or manufacturing of our products, withdrawal of the product from the market or voluntary or mandatory product recalls;
- fines, warning letters or holds on clinical trials;
- refusal by the FDA to approve pending applications or supplements to approved applications filed by us or suspension or revocation of license approvals;
- product seizure or detention or refusal to permit the import or export of our product candidates; and

- injunctions or the imposition of civil or criminal penalties.

The FDA strictly regulates marketing, labeling, advertising and promotion of products that are placed on the market. Products may be promoted only for the approved indications and in accordance with the provisions of the approved label. The policies of the FDA, EMA and comparable foreign regulatory authorities may change and additional government regulations may be enacted that could prevent, limit or delay regulatory approval of our product candidates. We cannot predict the likelihood, nature or extent of government regulation that may arise from future legislation or administrative action, either in the United States or abroad. If we are slow or unable to adapt to changes in existing requirements or the adoption of new requirements or policies, or if we are not able to maintain regulatory compliance, we may lose any marketing approval that we may have obtained and we may not achieve or sustain profitability.

***Coverage and reimbursement may be limited or unavailable in certain market segments for our product candidates, if approved, which could make it difficult for us to sell any product candidates profitably.***

The success of our product candidates, if approved, depends on the availability of coverage and adequate reimbursement from third-party payors. We cannot be sure that coverage and reimbursement will be available for, or accurately estimate the potential revenue from, our product candidates or assure that coverage and reimbursement will be available for any product that we may develop.

Patients who are provided medical treatment for their conditions generally rely on third-party payors to reimburse all or part of the costs associated with their treatment. Coverage and adequate reimbursement from governmental healthcare programs, such as Medicare and Medicaid, and commercial payors is critical to new product acceptance.

Government authorities and third-party payors, such as private health insurers and health maintenance organizations, decide which drugs and treatments they will cover and the amount of reimbursement. Coverage and reimbursement by a third-party payor may depend upon a number of factors, including the third-party payor's determination that use of a product is:

- a covered benefit under its health plan;
- safe, effective and medically necessary;
- appropriate for the specific patient;
- cost-effective; and
- neither experimental nor investigational.

In the United States, no uniform policy of coverage and reimbursement for products exists among third-party payors. As a result, obtaining coverage and reimbursement approval of a product from a government or other third-party payor is a time-consuming and costly process that could require us to provide to each payor supporting scientific, clinical and cost-effectiveness data for the use of our products on a payor-by-payor basis, with no assurance that coverage and adequate reimbursement will be obtained. Even if we obtain coverage for a given product, the resulting reimbursement payment rates might not be adequate for us to achieve or sustain profitability or may require co-payments that patients find unacceptably high. Additionally, third-party payors may not cover, or provide adequate reimbursement for, long-term follow-up evaluations required following the use of product candidates, once approved. Patients are unlikely to use our product candidates, once approved, unless coverage is provided and reimbursement is adequate



to cover a significant portion of their cost. There is significant uncertainty related to insurance coverage and reimbursement of newly approved products. It is difficult to predict at this time what third-party payors will decide with respect to the coverage and reimbursement for our product candidates.

Payment methodologies may be subject to changes in healthcare legislation and regulatory initiatives. For example, the Middle Class Tax Relief and Job Creation Act of 2012 required that CMS, the agency responsible for administering the Medicare program, reduce the Medicare clinical laboratory fee schedule by 2% in 2013, which served as a base for 2014 and subsequent years. In addition, effective January 1, 2014, CMS also began bundling the Medicare payments for certain laboratory tests ordered while a patient received services in a hospital outpatient setting. Additional state and federal healthcare reform measures are expected to be adopted in the future, any of which could limit the amounts that federal and state governments will pay for healthcare products and services, which could result in reduced demand for certain pharmaceutical products or additional pricing pressures.

Moreover, increasing efforts by governmental and third-party payors in the United States and abroad to cap or reduce healthcare costs may cause such organizations to limit both coverage and the level of reimbursement for newly approved products and, as a result, they may not cover or provide adequate payment for our product candidates. There has been increasing legislative and enforcement interest in the United States with respect to specialty drug pricing practices. Specifically, there have been several recent U.S. Congressional inquiries and proposed and enacted federal and state legislation designed to, among other things, bring more transparency to drug pricing, reduce the cost of prescription drugs under Medicare, review the relationship between pricing and manufacturer patient programs and reform government program reimbursement methodologies for drugs. We expect to experience pricing pressures in connection with the sale of any of our product candidates due to the trend toward managed healthcare, the increasing influence of health maintenance organizations, cost containment initiatives and additional legislative changes.

At the federal level, the Trump administration's budget for fiscal year 2019 contains further drug price control measures that could be enacted during the 2019 legislative session or in other future legislation, including, for example, measures to permit Medicare Part D plans to negotiate the price of certain drugs under Medicare Part B, to allow some states to negotiate drug prices under Medicaid and to eliminate cost sharing for generic drugs for low-income patients. While any proposed measures will require authorization through additional legislation to become effective, Congress and the Trump administration have each indicated that it will continue to seek new legislative and/or administrative measures to control drug costs.

At the state level, legislatures are increasingly passing legislation and implementing regulations designed to control pharmaceutical and biological product pricing, including price or patient reimbursement constraints, discounts, restrictions on certain product access and marketing cost disclosure and transparency measures, and, in some cases, designed to encourage importation from other countries and bulk purchasing.

On May 10, 2019, CMS announced a new pricing transparency rule, which goes into effect on July 9, 2019. This final rule requires direct-to-consumer television advertisements for prescription drugs and biological products for which reimbursement is available, directly or indirectly, through or under Medicare or Medicaid to include the list price of that product, except for a prescription drug or biological product that has a list price of less than \$35 per month for a 30-day supply or typical course of treatment. Prescription drugs and biological products that are in violation of these requirements will be included on a public list. The pricing transparency rule could have a negative effect on our business.

***Ongoing healthcare legislative and regulatory reform measures may have a material adverse effect on our business and results of operations.***

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

In the United States, there have been and continue to be a number of legislative initiatives to contain healthcare costs. For example, in March 2010, the ACA was passed, which substantially changed the way healthcare is financed by both governmental and private insurers, and significantly impacted the U.S. biopharmaceutical industry. The ACA, among other things, addressed a new methodology by which rebates owed by manufacturers under the Medicaid Drug Rebate Program are calculated for drugs that are inhaled, infused, instilled, implanted or injected, increased the minimum Medicaid rebates owed by manufacturers under the Medicaid Drug Rebate Program and extended the rebate program to individuals enrolled in Medicaid managed care organizations, established annual fees and taxes on manufacturers of certain branded prescription drugs and created a new Medicare Part D coverage gap discount program, in which manufacturers must agree to offer 70% point-of-sale discounts off negotiated prices of applicable brand drugs to eligible beneficiaries during their coverage gap period, as a condition for the manufacturer's outpatient drugs to be covered under Medicare Part D.

Some of the provisions of the ACA have yet to be fully implemented, while certain provisions have been subject to judicial and Congressional challenges, as well as efforts by the Trump administration to repeal or replace certain aspects of the ACA. For example, Congress has considered legislation that would repeal or repeal and replace all or part of the ACA. While Congress has not passed repeal legislation, the Tax Reform Act includes a provision that repealed, effective January 1, 2019, the tax-based shared responsibility payment imposed by the ACA on certain individuals who fail to maintain qualifying health coverage for all or part of a year that is commonly referred to as the "individual mandate." As a result of the individual mandate repeal, subsequent litigation challenged the validity of the ACA. On December 14, 2018, a U.S. District Court judge in the Northern District of Texas ruled that the individual mandate portion of the ACA is an essential and inseparable feature of the ACA, and therefore because the mandate was repealed as part of the Tax Cuts and Jobs Act, or TCJA, the remaining provisions of the ACA are invalid as well. The Trump administration and CMS have both stated that the ruling will have no immediate effect, and on December 30, 2018 the same judge issued an order staying the judgment pending appeal. It is unclear how this decision and any subsequent appeals and other efforts to repeal and replace the ACA will impact the ACA and our business.

Since January 2017, President Trump has signed two Executive Orders designed to delay the implementation of certain provisions of the ACA or otherwise circumvent some of the requirements for health insurance mandated by the ACA. Further, the Trump administration has concluded that cost-sharing reduction, or CSR, payments to insurance companies required under the ACA have not received necessary appropriations from Congress and announced that it will discontinue these payments immediately until those appropriations are made. The loss of the CSR payments is expected to increase premiums on certain policies issued by qualified health plans under the ACA. Bipartisan bills to appropriate funds for CSR payments were proposed in 2017 and 2018, but the proposals have not been enacted into law. Multiple state Attorneys General filed suit to stop the administration from terminating the subsidies, but their case was dismissed by a federal judge in California on July 18, 2018. Furthermore, on June 14, 2018, the U.S. Court of Appeals for the Federal Circuit ruled that the federal government was not required to pay more

than \$12 billion in ACA risk corridor payments to third-party payors who argued were owed to them. The effects of this gap in reimbursement on third-party payors, the viability of the ACA marketplace and providers, and the potential effect on our business, are not yet known.

Additionally, CMS has recently proposed regulations that would give states greater flexibility in setting benchmarks for insurers in the individual and small group marketplaces, which may have the effect of relaxing the essential health benefits required under the ACA for plans sold through such marketplaces. The Bipartisan Budget Act of 2018, or BBA, also amended the ACA, effective January 1, 2019, by increasing the point-of-sale discount that is owed by pharmaceutical manufacturers who participate in Medicare Part D and closing the coverage gap in most Medicare drug plans, commonly referred to as the "donut hole." Moreover, in July 2018, CMS published a final rule permitting further collections and payments to and from certain ACA qualified health plans and health insurance issuers under the ACA risk adjustment program in response to the outcome of federal district court litigation regarding the method CMS uses to determine this risk adjustment. On May 23, 2019, CMS finalized a rule that amends the Medicare Advantage and Medicare Part D prescription drug benefit regulations to reduce out of pocket costs for plan enrollees and allows Medicare plans to negotiate lower rates for certain drugs. Among other things, the final rule allows Medicare Advantage plans to use pre authorization, or PA, and step therapy, or ST, for six protected classes of drugs, with certain exceptions (and modifications from the proposed rule) and permits plans to implement PA and ST in Medicare Part B drugs. The proposed rule proposed to change the definition of "negotiated prices," under which plan sponsors would be required to pass through all pharmacy price concessions at the point of sale; however, CMS is still reviewing comments from stakeholders on this issue. Litigation and legislative efforts to change or repeal the ACA are likely to continue, with unpredictable and uncertain results.

Other legislative changes have been proposed and adopted in the United States since the ACA was enacted. The Budget Control Act of 2011, among other things, created measures for spending reductions by Congress. A Joint Select Committee on Deficit Reduction, tasked with recommending a targeted deficit reduction of at least \$1.2 trillion for the years 2013 through 2021, was unable to reach required goals, thereby triggering the legislation's automatic reduction to several government programs, including aggregate reductions of Medicare payments to providers of 2% per fiscal year. These reductions went into effect on April 1, 2013 and, due to subsequent legislative amendments to the statute, including the BBA, will remain in effect through 2027, unless additional congressional action is taken. On January 2, 2013, the American Taxpayer Relief Act of 2012 was signed into law, which, among other things, further reduced Medicare payments to several types of providers.

These laws, and future state and federal healthcare reform measures may be adopted in the future, any of which may result in additional reductions in Medicare and other healthcare funding and otherwise affect the prices we may obtain for any of our product candidates for which we may obtain regulatory approval or the frequency with which any such product candidate is prescribed or used.

***Off-label use or misuse of our products may harm our reputation in the marketplace or result in injuries that lead to costly product liability suits.***

We are developing nirogacestat for the treatment of desmoid tumors and PD-0325901 for the treatment of NF1-PN. If our product candidates are approved by the FDA, we may only promote or market our product candidates for their specifically approved indications. We will train our marketing and sales force against promoting our product candidates for uses outside of the approved indications for use, known as "off-label uses." We cannot, however, prevent a physician from using our products off label, when in the physician's independent professional

medical judgment he or she deems it appropriate. Furthermore, the use of our products for indications other than those approved by the FDA may not effectively treat such conditions. Any such off-label use of our product candidates could harm our reputation in the marketplace among physicians and patients. There may also be increased risk of injury to patients if physicians attempt to use our products for these uses for which they are not approved, which could lead to product liability suits that that might require significant financial and management resources and that could harm our reputation.

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

The ability of the FDA to review and approve new products can be affected by a variety of factors, including government budget and funding levels, ability to hire and retain key personnel and accept the payment of user fees, and statutory, regulatory, and policy changes. Average review times at the agency have fluctuated in recent years as a result. In addition, government funding of the SEC and other government agencies on which our operations may rely, including those that fund research and development activities, is subject to the political process, which is inherently fluid and unpredictable.

Disruptions at the FDA and other agencies may also slow the time necessary for new drugs to be reviewed and/or approved by necessary government agencies, which would adversely affect our business. For example, over the last several years, the U.S. government has shut down several times and certain regulatory agencies, such as the FDA and the SEC, have had to furlough critical employees and stop critical activities. If a prolonged government shutdown occurs, it could significantly impact the ability of the FDA to timely review and process our regulatory submissions, which could have a material adverse effect on our business. Further, upon completion of this offering and in our operations as a public company, future government shutdowns could impact our ability to access the public markets and obtain necessary capital in order to properly capitalize and continue our operations.

***EU drug marketing and reimbursement regulations may materially affect our ability to market and receive coverage for our products in the European member states.***

We intend to seek approval to market our product candidates in both the United States and in selected foreign jurisdictions. If we obtain approval in one or more foreign jurisdictions for our product candidates, we will be subject to rules and regulations in those jurisdictions. In some foreign countries, particularly those in the European Union, the pricing of drugs is subject to governmental control and other market regulations which could put pressure on the pricing and usage of our product candidates. In these countries, pricing negotiations with governmental authorities can take considerable time after obtaining marketing approval of a product candidate. In addition, market acceptance and sales of our product candidates will depend significantly on the availability of adequate coverage and reimbursement from third-party payors for our product candidates and may be affected by existing and future healthcare reform measures.

Much like the federal Anti-Kickback Statute prohibition in the United States, the provision of benefits or advantages to physicians to induce or encourage the prescription, recommendation, endorsement, purchase, supply, order or use of medicinal products is also prohibited in the European Union. The provision of benefits or advantages to physicians is governed by the national anti-bribery laws of EU Member States, such as the UK Bribery Act 2010. Infringement of these laws could result in substantial fines and imprisonment.

Payments made to physicians in certain EU Member States must be publicly disclosed. Moreover, agreements with physicians often must be the subject of prior notification and approval by the physician's employer, his or her competent professional organization and/or the regulatory authorities of the individual EU Member States. These requirements are provided in the national laws, industry codes or professional codes of conduct, applicable in the EU Member States. Failure to comply with these requirements could result in reputational risk, public reprimands, administrative penalties, fines or imprisonment.

In addition, in most foreign countries, including the European Economic Area, or EEA, the proposed pricing for a drug must be approved before it may be lawfully marketed. The requirements governing drug pricing and reimbursement vary widely from country to country. For example, the European Union provides options for its member states to restrict the range of medicinal products for which their national health insurance systems provide reimbursement and to control the prices of medicinal products for human use. Reference pricing used by various EU member states and parallel distribution, or arbitrage between low-priced and high-priced member states, can further reduce prices. A member state may approve a specific price for the medicinal product or it may instead adopt a system of direct or indirect controls on the profitability of the company placing the medicinal product on the market. In some countries, we may be required to conduct a clinical study or other studies that compare the cost-effectiveness of any of our product candidates to other available therapies in order to obtain or maintain reimbursement or pricing approval. There can be no assurance that any country that has price controls or reimbursement limitations for biopharmaceutical products will allow favorable reimbursement and pricing arrangements for any of our products. Historically, products launched in the European Union do not follow price structures of the United States and generally prices tend to be significantly lower. Publication of discounts by third-party payors or authorities may lead to further pressure on the prices or reimbursement levels within the country of publication and other countries. If pricing is set at unsatisfactory levels or if reimbursement of our products is unavailable or limited in scope or amount, our revenues from sales and the potential profitability of any of our product candidates in those countries would be negatively affected.

***We may incur substantial costs in our efforts to comply with evolving global data protection laws and regulations, and any failure or perceived failure by us to comply with such laws and regulations may harm our business and operations.***

The global data protection landscape is rapidly evolving, and we may be or become subject to or affected by numerous federal, state and foreign laws and regulations, as well as regulatory guidance, governing the collection, use, disclosure, transfer, security and processing of personal data, such as information that we collect about participants and healthcare providers in connection with clinical trials. Implementation standards and enforcement practices are likely to remain uncertain for the foreseeable future, which may create uncertainty in our business, affect our or our service providers' ability to operate in certain jurisdictions or to collect, store, transfer use and share personal data, result in liability or impose additional compliance or other costs on us. Any failure or perceived failure by us to comply with federal, state, or foreign laws or self-regulatory standards could result in negative publicity, diversion of management time and effort and proceedings against us by governmental entities or others. For example, California recently passed the California Data Privacy Protection Act, which goes into effect in January 2020 and provides broad rights to California consumers with respect to the collection and use of their information by businesses. The new California law further expands the privacy and process enhancements and commitment of resources in support of compliance with California's regulatory requirements and may lead to similar laws in other U.S. states or at a national level.

In addition to our operations in the United States, which may be subject to healthcare and other laws relating to the privacy and security of health information and other personal information,

may seek to conduct clinical trials in EEA and may become subject to additional European data privacy laws, regulations and guidelines. The General Data Protection Regulation, (EU) 2016/679, or GDPR, became effective on May 25, 2018, and deals with the processing of personal data and on the free movement of such data. The GDPR imposes a broad range of strict requirements on companies subject to the GDPR, including requirements relating to having legal bases for processing personal information relating to identifiable individuals and transferring such information outside the EEA, including to the United States, providing details to those individuals regarding the processing of their personal information, keeping personal information secure, having data processing agreements with third parties who process personal information, responding to individuals' requests to exercise their rights in respect of their personal information, reporting security breaches involving personal data to the competent national data protection authority and affected individuals, appointing data protection officers, conducting data protection impact assessments and record-keeping. The GDPR increases substantially the penalties to which we could be subject in the event of any non-compliance, including fines of up to 10,000,000 Euros or up to 2% of our total worldwide annual turnover for certain comparatively minor offenses, or up to 20,000,000 Euros or up to 4% of our total worldwide annual turnover for more serious offenses. Given the limited enforcement of the GDPR to date, we face uncertainty as to the exact interpretation of the new requirements on our trials and we may be unsuccessful in implementing all measures required by data protection authorities or courts in interpretation of the new law.

In particular, national laws of member states of the European Union are in the process of being adapted to the requirements under the GDPR, thereby implementing national laws which may partially deviate from the GDPR and impose different obligations from country to country, so that we do not expect to operate in a uniform legal landscape in the EEA. Also, as it relates to processing and transfer of genetic data, the GDPR specifically allows national laws to impose additional and more specific requirements or restrictions, and European laws have historically differed quite substantially in this field, leading to additional uncertainty. Further, the impact of the impending "Brexit", whereby the United Kingdom is planning to leave the EEA in October of 2019, either with or without a "deal" is uncertain and cannot be predicted at this time.

In the event we commence clinical trials in the EEA, we must also ensure that we maintain adequate safeguards to enable the transfer of personal data outside of the EEA, in particular to the United States, in compliance with European data protection laws. We expect that we will continue to face uncertainty as to whether our efforts to comply with any obligations under European privacy laws will be sufficient. If we are investigated by a European data protection authority, we may face fines and other penalties. Any such investigation or charges by European data protection authorities could have a negative effect on our existing business and on our ability to attract and retain new clients or biopharmaceutical partners. We may also experience hesitancy, reluctance or refusal by European or multi-national clients or biopharmaceutical partners to continue to use our products and solutions due to the potential risk exposure as a result of the current (and, in particular, future) data protection obligations imposed on them by certain data protection authorities in interpretation of current law, including the GDPR. Such clients or biopharmaceutical partners may also view any alternative approaches to compliance as being too costly, too burdensome, too legally uncertain or otherwise objectionable and therefore decide not to do business with us. Any of the forgoing could materially harm our business, prospects, financial condition and results of operations.

***Additional laws and regulations governing international operations could negatively impact or restrict our operations.***

If we further expand our operations outside of the United States, we must dedicate additional resources to comply with numerous laws and regulations in each jurisdiction in which we plan to

operate. The U.S. Foreign Corrupt Practices Act, or FCPA, prohibits any U.S. individual or business from paying, offering, authorizing payment or offering anything of value, directly or indirectly, to any foreign official, political party or candidate for the purpose of influencing any act or decision of the foreign entity in order to assist the individual or business in obtaining or retaining business. The FCPA also obligates companies whose securities are listed in the United States to comply with certain accounting provisions requiring the company to maintain books and records that accurately and fairly reflect all transactions of the corporation, including international subsidiaries, and to devise and maintain an adequate system of internal accounting controls for international operations.

Compliance with the FCPA is expensive and difficult, particularly in countries in which corruption is a recognized problem. In addition, the FCPA presents particular challenges in the pharmaceutical industry, because, in many countries, hospitals are operated by the government, and doctors and other hospital employees are considered foreign officials. Certain payments to hospitals in connection with clinical trials and other work have been deemed to be improper payments to government officials and have led to FCPA enforcement actions.

Various laws, regulations and executive orders also restrict the use and dissemination outside of the United States, or the sharing with certain non-U.S. nationals, of information classified for national security purposes, as well as certain products and technical data relating to those products. If we expand our presence outside of the United States, it will require us to dedicate additional resources to comply with these laws, and these laws may preclude us from developing, manufacturing or selling certain products and product candidates outside of the United States, which could limit our growth potential and increase our development costs.

The failure to comply with laws governing international business practices may result in substantial civil and criminal penalties and suspension or debarment from government contracting. The SEC also may suspend or bar issuers from trading securities on U.S. exchanges for violations of the FCPA's accounting provisions.

***We are subject to certain U.S. and foreign anti-corruption, anti-money laundering, export control, sanctions and other trade laws and regulations. We can face serious consequences for violations.***

Among other matters, U.S. and foreign anti-corruption, anti-money laundering, export control, sanctions and other trade laws and regulations, which are collectively referred to as Trade Laws, prohibit companies and their employees, agents, clinical research organizations, legal counsel, accountants, consultants, contractors and other partners from authorizing, promising, offering, providing, soliciting or receiving, directly or indirectly, corrupt or improper payments or anything else of value to or from recipients in the public or private sector. Violations of Trade Laws can result in substantial criminal fines and civil penalties, imprisonment, the loss of trade privileges, debarment, tax reassessments, breach of contract and fraud litigation, reputational harm and other consequences. We have direct or indirect interactions with officials and employees of government agencies or government-affiliated hospitals, universities and other organizations. We also expect our non-U.S. activities to increase in time. We plan to engage third parties for clinical trials and/or to obtain necessary permits, licenses, patent registrations and other regulatory approvals and we can be held liable for the corrupt or other illegal activities of our personnel, agents or partners, even if we do not explicitly authorize or have prior knowledge of such activities.

***A portion of our manufacturing of our lead product candidates takes place in China through third-party manufacturers. A significant disruption in the operation of those manufacturers, a trade war or political unrest in China could materially adversely affect our business, financial condition and results of operations.***

We currently contract manufacturing operations to third parties, and clinical quantities of our lead product candidates are manufactured by these third parties outside the United States, including in China, and we expect to continue to use such third-party manufacturers for such product candidates. Any disruption in production or inability of our manufacturers in China to produce adequate quantities to meet our needs, whether as a result of a natural disaster or other causes, could impair our ability to operate our business on a day-to-day basis and to continue our development of our product candidates. Furthermore, since these manufacturers are located in China, we are exposed to the possibility of product supply disruption and increased costs in the event of changes in the policies of the United States or Chinese governments, political unrest or unstable economic conditions in China. For example, a trade war could lead to tariffs on the chemical intermediates we use that are manufactured in China. Any of these matters could materially and adversely affect our business and results of operations. Any recall of the manufacturing lots or similar action regarding our product candidates used in clinical trials could delay the trials or detract from the integrity of the trial data and its potential use in future regulatory filings. In addition, manufacturing interruptions or failure to comply with regulatory requirements by any of these manufacturers could significantly delay clinical development of potential products and reduce third-party or clinical researcher interest and support of proposed trials. These interruptions or failures could also impede commercialization of our product candidates and impair our competitive position. Further, we may be exposed to fluctuations in the value of the local currency in China. Future appreciation of the local currency could increase our costs. In addition, our labor costs could continue to rise as wage rates increase due to increased demand for skilled laborers and the availability of skilled labor declines in China.

### **Risks related to our intellectual property**

***Our success depends in part on our ability to protect our intellectual property, and patent terms may be inadequate to protect our competitive position. It is difficult and costly to protect our proprietary rights and technology, and we may not be able to ensure their protection.***

Our commercial success will depend in large part on obtaining and maintaining patent, trademark and trade secret protection of our proprietary technologies and our product candidates, their respective components, formulations, combination therapies, methods used to manufacture them and methods of treatment, as well as successfully defending these patents against third-party challenges. Our ability to stop unauthorized third parties from making, using, selling, offering to sell or importing our product candidates is affected by the extent to which we have rights under valid and enforceable patents that cover these activities. If our patents expire, or we are unable to secure and maintain patent protection for any product or technology we develop, or if the scope of the patent protection secured is not sufficiently broad, our competitors could develop and commercialize products and technology similar or identical to ours, and our ability to commercialize any product candidates we may develop may be adversely affected.

Patents have a limited lifespan. In the United States, if all maintenance fees are timely paid, the natural expiration of a patent is generally 20 years from its earliest U.S. non-provisional filing date. Various extensions such as patent term adjustments and/or extensions, may be available, but the life of a patent, and the protection it affords, is limited. Our current composition of matter patents covering nirogacestat and PD-0325901, which we licensed from Pfizer Inc., or Pfizer, in connection with the formation of our company, are expected to expire in 2025 and



2021, respectively, not including any patent term extensions. Our earliest patents may expire before, or soon after, either product candidate achieves marketing approval in the United States or foreign jurisdictions. Upon the expiration of the current patents, we currently intend to rely on orphan drug exclusivity to market our lead products. Once the patent life has expired, we may be open to competition from competitive products, including generics. As a result, our patent portfolio may not provide us with sufficient rights to exclude others from commercializing products similar or identical to ours. The expiration of the patents covering our lead product candidates, and our inability to secure additional patent protection, could also have a material adverse effect on our business, results of operations, financial condition and prospects.

The patenting process is expensive and time-consuming, and we may not be able to file and prosecute all necessary or desirable patent applications at a reasonable cost or in a timely manner. In addition, we may not pursue or obtain patent protection in all relevant markets. It is also possible that we will fail to identify patentable aspects of our research and development output before it is too late to obtain patent protection. Moreover, in some circumstances, we may not have the right to control the preparation, filing and prosecution of patent applications, or to maintain the patents, covering technology that we license from or license to third parties and are reliant on our licensors or licensees.

The strength of patents in the biopharmaceutical field involves complex legal and scientific questions and can be uncertain. The patent applications that we own or in-license now or in the future may fail to result in issued patents with claims that cover our product candidates or uses thereof in the United States or in other foreign countries. Even if the patents do successfully issue, third parties may challenge the validity, enforceability or scope thereof, which may result in such patents being narrowed, invalidated or held unenforceable. Furthermore, even if they are unchallenged, the patents and patent applications covering our product candidates may not adequately protect our intellectual property or prevent others from designing around our claims. If the breadth or strength of protection provided by the patents we hold with respect to our product candidates is threatened, it could dissuade companies from collaborating with us to develop, and threaten our ability to commercialize, our product candidates. Further, if we encounter delays in our clinical trials, the period of time during which we could market our product candidates under patent protection would be reduced.

Since patent applications in the United States and most other countries are confidential for a period of time after filing, there is no certainty that any patent application related to a product candidate was the first to be filed. Furthermore, for United States applications in which at least one claim is entitled to a priority date before March 16, 2013, an interference proceeding can be provoked by a third party or instituted by the U.S. Patent and Trademark Office, or USPTO, to determine who was the first to invent any of the subject matter covered by the patent claims of an application.

We cannot be certain that we are the first to invent any inventions covered by a pending patent application and, if we are not, we could be subject to priority disputes. We may be required to disclaim part or all of the term of certain patents or all of the term of certain patent applications. There may be prior art of which we are not aware that may affect the validity or enforceability of a patent claim. There also may be prior art of which we are aware, but which we do not believe affects the validity or enforceability of a claim, which may, nonetheless, ultimately be found to affect the validity or enforceability of a claim. No assurance can be given that if challenged, our patents would be declared by a court to be valid or enforceable or that even if found valid and enforceable, a competitor's technology or product would be found by a court to infringe our patents. We may analyze patents or patent applications of our competitors that we believe are relevant to our activities, and consider that we are free to operate in relation to our product

candidates, but our competitors may achieve issued claims, including in patents we consider to be unrelated, which block our efforts or may potentially result in our product candidates or our activities infringing such claims. The possibility exists that others will develop products which have the same effect as our products on an independent basis which do not infringe our patents or other intellectual property rights, or will design around the claims of patents that we have had issued that cover our products.

Recent or future 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. Under the enacted Leahy-Smith America Invents Act, or America Invents Act, enacted in 2013, the United States moved from a "first-to-invent" to a "first-to-file" system. Under a "first-to-file" system, assuming the other requirements for patentability are met, the first inventor to file a patent application generally will be entitled to a patent on the invention regardless of whether another inventor had made the invention earlier. The America Invents Act includes a number of other significant changes to U.S. patent law, including provisions that affect the way patent applications are prosecuted, redefine prior art and establish a new post-grant review system. The effects of these changes are currently unclear as the USPTO only recently developed new regulations and procedures in connection with the America Invents Act and many of the substantive changes to patent law, including the "first-to-file" provisions, only became effective in March 2013. In addition, the courts have yet to address many of these provisions and the applicability of the act and new regulations on specific patents discussed herein have not been determined and would need to be reviewed. However, the America Invents Act and its implementation could increase the uncertainties and costs surrounding the prosecution of any 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 degree of future protection for our proprietary rights is uncertain because legal means afford only limited protection and may not adequately protect our rights or permit us to gain or keep our competitive advantage. For example:

- others may be able to make or use compounds that are similar to the compositions of our product candidates but that are not covered by the claims of our patents;
- the active ingredients in our current product candidates will eventually become commercially available in generic drug products, and no patent protection may be available with regard to formulation or method of use;
- a company or its licensor, as the case may be, may fail to meet its obligations to the U.S. government in regard to any in-licensed patents and patent applications funded by U.S. government grants, leading to the loss of patent rights;
- such company or its licensors, as the case may be, might not have been the first to file patent applications for these inventions;
- others may independently develop similar or alternative technologies or duplicate any of our technologies;
- it is possible that a pending patent applications will not result in issued patents;
- it is possible that there are prior public disclosures that could invalidate our or our licensors' patents, as the case may be, or parts of our or their patents;
- it is possible that others may circumvent our owned or in-licensed patents;
- it is possible that there are unpublished applications or patent applications maintained in secrecy that may later issue with claims covering our products or technology similar to ours;

- the laws of foreign countries may not protect our or our licensors', as the case may be, proprietary rights to the same extent as the laws of the United States;
- the claims of our owned or in-licensed issued patents or patent applications, if and when issued, may not cover our product candidates;
- our owned or in-licensed issued patents may not provide us with any competitive advantages, may be narrowed in scope, or be held invalid or unenforceable as a result of legal challenges by third parties;
- the inventors of owned or in-licensed patents or patent applications may become involved with competitors, develop products or processes which design around our patents, or become hostile to us or the patents or patent applications on which they are named as inventors;
- it is possible that owned or in-licensed patents or patent applications omit individual(s) that should be listed as inventor(s) or include individual(s) that should not be listed as inventor(s), which may cause these patents or patents issuing from these patent applications to be held invalid or unenforceable;
- we have engaged in scientific collaborations in the past, and will continue to do so in the future. Such collaborators may develop adjacent or competing products to ours that are outside the scope of our patents;
- we may not develop additional proprietary technologies for which we can obtain patent protection;
- it is possible that product candidates we develop may be covered by third parties' patents or other exclusive rights; or
- the patents of others may have an adverse effect on our business.

***We depend on intellectual property licensed from third parties, including from Pfizer for our lead product candidates, and termination of any of these licenses could result in the loss of significant rights, which would harm our business.***

We are dependent on patents, know-how and proprietary technology, both our own and licensed from others. All patents covering nirogacestat and PD-0325901 and any combination therapies using our product candidates are licensed from third parties. Any termination of a product license could result in the loss of significant rights and would cause material adverse harm to our ability to commercialize our product candidates. See "Business—License and collaboration agreements" for additional information regarding our license agreements.

Disputes may also arise between us and our licensors regarding intellectual property subject to a license agreement, including:

- the scope of rights granted under the license agreement and other interpretation-related issues;
- whether and the extent to which our technology and processes infringe on intellectual property of the licensor that is not subject to the licensing agreement;
- our right to sublicense patent and other rights to third parties under collaborative development relationships;
- our diligence obligations with respect to the use of licensed technology in relation to our development and commercialization of our product candidates and what activities satisfy those diligence obligations; and

- the ownership of inventions and know-how resulting from the joint creation or use of intellectual property by our licensors and us and our partners.

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

We are generally also subject to all of the same risks with respect to protection of intellectual property that we own, as we are for intellectual property that we license, which are described below. If we or our licensors fail to adequately protect this intellectual property, our ability to commercialize products could materially suffer.

***If we fail to comply with our obligations under our patent licenses with third parties, we could lose license rights that are important to our business.***

We are a party to license agreements pursuant to which we in-license key patents for our product candidates. At the time we began our operations in August 2017, we entered into four license agreements with Pfizer, including a license agreement for each of our lead product candidates, nirogacestat and PD-0325901. Each of our existing licenses imposes various diligence, milestone payment, royalty, insurance and other obligations on us. If we fail to comply with these obligations, our licensors may have the right to terminate the license, in which event we would not be able to develop or market the products covered by such licensed intellectual property.

We may have limited control over the maintenance and prosecution of these in-licensed rights, activities or any other intellectual property that may be related to our in-licensed intellectual property. For example, we cannot be certain that such activities by these licensors have been or will be conducted in compliance with applicable laws and regulations or will result in valid and enforceable patents and other intellectual property rights. We have limited control over the manner in which our licensors initiate an infringement proceeding against a third-party infringer of the intellectual property rights, or defend certain of the intellectual property that is licensed to us. It is possible that the licensors' infringement proceeding or defense activities may be less vigorous than had we conducted them ourselves.

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

In addition to patent protection, we rely heavily upon know-how and trade secret protection, as well as non-disclosure agreements and invention assignment agreements with our employees, consultants and third parties, to protect our confidential and proprietary information, especially where we do not believe patent protection is appropriate or obtainable. In addition to contractual measures, we try to protect the confidential nature of our proprietary information using physical and technological security measures. Such measures may not, for example, in the case of misappropriation of a trade secret by an employee or third party with authorized access, provide adequate protection for our proprietary information. Our security measures may not prevent an employee or consultant from misappropriating our trade secrets and providing them to a competitor, and recourse we take against such misconduct may not provide an adequate remedy to protect our interests fully. Enforcing a claim that a party illegally disclosed or misappropriated a trade secret can be difficult, expensive and time-consuming, and the outcome is unpredictable. In addition, trade secrets may be independently developed by others in a manner that could prevent legal recourse by us. If any of our confidential or proprietary information, such as our trade secrets, were to be disclosed or misappropriated, or if any such information was independently developed by a competitor, our competitive position could be harmed.

In addition, courts outside the United States are sometimes less willing to protect trade secrets. If we choose to go to court to stop a third party from using any of our trade secrets, we may incur substantial costs. These lawsuits may consume our time and other resources even if we are successful. Although we take steps to protect our proprietary information and trade secrets, including through contractual means with our employees and consultants, third parties may independently develop substantially equivalent proprietary information and techniques or otherwise gain access to our trade secrets or disclose our technology.

Thus, we may not be able to meaningfully protect our trade secrets. It is our policy to require our employees, consultants, outside scientific collaborators, sponsored researchers and other advisors to execute confidentiality agreements upon the commencement of employment or consulting relationships with us. These agreements provide that all confidential information concerning our business or financial affairs developed or made known to the individual or entity during the course of the party's relationship with us is to be kept confidential and not disclosed to third parties except in specific circumstances. In the case of employees, the agreements provide that all inventions conceived by the individual, and which are related to our current or planned business or research and development or made during normal working hours, on our premises or using our equipment or proprietary information, are our exclusive property. In addition, we take other appropriate precautions, such as physical and technological security measures, to guard against misappropriation of our proprietary technology by third parties.

***Third-party claims of intellectual property infringement may prevent or delay our product discovery and development efforts.***

Our commercial success depends in part on our ability to develop, manufacture, market and sell our product candidates and use our proprietary technologies without infringing the proprietary rights of third parties. There is a substantial amount of litigation involving patents and other intellectual property rights in the biotechnology and pharmaceutical industries, as well as administrative proceedings for challenging patents, including interference, derivation, *inter partes* review, post grant review, and reexamination proceedings before the USPTO or oppositions and other comparable proceedings in foreign jurisdictions. We may be exposed to, or threatened with, future litigation by third parties having patent or other intellectual property rights alleging that our product candidates and/or proprietary technologies infringe their intellectual property rights. Numerous U.S. and foreign issued patents and pending patent applications, which are owned by third parties, exist in the fields in which we are developing our product candidates. As the biotechnology and pharmaceutical industries expand and more patents are issued, the risk increases that our product candidates may give rise to claims of infringement of the patent rights of others. Moreover, it is not always clear to industry participants, including us, which patents cover various types of drugs, products or their methods of use or manufacture. Thus, because of the large number of patents issued and patent applications filed in our fields, there may be a risk that third parties may allege they have patent rights encompassing our product candidates, technologies or methods.

If a third party claims that we infringe its intellectual property rights, we may face a number of issues, including, but not limited to:

- infringement and other intellectual property claims which, regardless of merit, may be expensive and time-consuming to litigate and may divert our management's attention from our core business;
- substantial damages for infringement, which we may have to pay if a court decides that the product candidate or technology at issue infringes on or violates the third party's rights, and, if the court finds that the infringement was willful, we could be ordered to pay treble damages and the patent owner's attorneys' fees;

- a court prohibiting us from developing, manufacturing, marketing or selling our product candidates, or from using our proprietary technologies, unless the third party licenses its product rights to us, which it is not required to do;
- if a license is available from a third party, we may have to pay substantial royalties, upfront fees and other amounts, and/or grant cross-licenses to intellectual property rights for our products; and
- redesigning our product candidates or processes so they do not infringe, which may not be possible or may require substantial monetary expenditures and time.

Some of our competitors may be able to sustain the costs of complex patent litigation more effectively than we can because they have substantially greater resources. In addition, any uncertainties resulting from the initiation and continuation of any litigation could have a material adverse effect on our ability to raise the funds necessary to continue our operations or could otherwise have a material adverse effect on our business, results of operations, financial condition and prospects.

Third parties may assert that we are employing their proprietary technology without authorization. Generally, conducting clinical trials and other development activities in the United States is protected under the Safe Harbor exemption as set forth in 35 U.S.C. §271. If and when any of our product candidates are approved by the FDA, that certain third-party may then seek to enforce its patent by filing a patent infringement lawsuit against us. While we do not believe that any claims of such patent that could otherwise materially adversely affect commercialization of our product candidates, if approved, are valid and enforceable, we may be incorrect in this belief, or we may not be able to prove it in a litigation. In this regard, patents issued in the U.S. by law enjoy a presumption of validity that can be rebutted only with evidence that is "clear and convincing," a heightened standard of proof. There may be third-party patents of which we are currently unaware with claims to materials, formulations, methods of manufacture or methods for treatment related to the use or manufacture of our product candidates. Because patent applications can take many years to issue, there may be currently pending patent applications which may later result in issued patents that our product candidates may infringe. In addition, third parties may obtain patents in the future and claim that use of our technologies infringes upon these patents. If any third-party patents were held by a court of competent jurisdiction to cover the manufacturing process of our product candidates, constructs or molecules used in or formed during the manufacturing process, or any final product itself, the holders of any such patents may be able to block our ability to commercialize the product candidate unless we obtained a license under the applicable patents, or until such patents expire or they are finally determined to be held invalid or unenforceable. Similarly, if any third-party patent were held by a court of competent jurisdiction to cover aspects of our formulations, processes for manufacture or methods of use, the holders of any such patent may be able to block our ability to develop and commercialize the product candidate unless we obtained a license or until such patent expires or is finally determined to be held invalid or unenforceable. In either case, such a license may not be available on commercially reasonable terms or at all. If we are unable to obtain a necessary license to a third-party patent on commercially reasonable terms, or at all, our ability to commercialize our product candidates may be impaired or delayed, which could in turn significantly harm our business. Even if we obtain a license, it may be non-exclusive, thereby giving our competitors access to the same technologies licensed to us. In addition, if the breadth or strength of protection provided by our patents and any patent applications is threatened, it could dissuade companies from collaborating with us to license, develop or commercialize current or future product candidates.

Parties making claims against us may seek and obtain injunctive or other equitable relief, which could effectively block our ability to further develop and commercialize our product candidates.

Defense of these claims, regardless of their merit, would involve substantial litigation expense and would be a substantial diversion of employee resources from our business. In the event of a successful claim of infringement against us, we or our licensors may have to pay substantial damages, including treble damages and attorneys' fees for willful infringement, obtain one or more licenses from third parties, pay royalties or redesign our infringing products, which may be impossible or require substantial time and monetary expenditure. We cannot predict whether any such license would be available at all or whether it would be available on commercially reasonable terms. Furthermore, even in the absence of litigation, we may need to obtain licenses from third parties to advance our research or allow commercialization of our product candidates. We may fail to obtain any of these licenses at a reasonable cost or on reasonable terms, if at all. In that event, we would be unable to further develop and commercialize our product candidates, which could harm our business significantly.

***Third parties may assert that our employees, consultants, collaborators or partners have wrongfully used or disclosed confidential information or misappropriated trade secrets.***

As is common in the biotechnology and pharmaceutical industries, we employ individuals who were previously employed at universities or other biopharmaceutical or pharmaceutical companies, including our competitors or potential competitors. Although no claims against us are currently pending, and although we try to ensure that our employees and consultants do not use the proprietary information or know-how of others in their work for us, we may be subject to claims that we or our employees, consultants or independent contractors have inadvertently or otherwise used or disclosed intellectual property, including trade secrets or other proprietary information, of a former employer or other third parties. Litigation may be necessary to defend against these claims. If we fail in 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 defending against such claims, litigation or other legal proceedings relating to intellectual property claims may cause us to incur significant expenses, and could distract our technical and management personnel from their normal responsibilities. 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. This type of litigation or proceeding could substantially increase our operating losses and reduce our resources available for development 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 substantially greater financial resources. Uncertainties resulting from the initiation and continuation of patent litigation or other intellectual property related proceedings could adversely affect our ability to compete in the marketplace.

***We may not be successful in obtaining or maintaining necessary rights to develop any future product candidates on acceptable terms.***

Because our programs may involve additional product candidates that may require the use of proprietary rights held by third parties, the growth of our business may depend in part on our ability to acquire, in-license or use these proprietary rights.

Our product candidates may also require specific formulations to work effectively and efficiently and these rights may be held by others. We may develop products containing our compounds and pre-existing pharmaceutical compounds. We may be unable to acquire or in-license any compositions, methods of use, processes or other third-party intellectual property rights from third parties that we identify as necessary or important to our business operations. We may fail to obtain any of these licenses at a reasonable cost or on reasonable terms, if at all, which would

harm our business. We may need to cease use of the compositions or methods covered by such third-party intellectual property rights, and may need to seek to develop alternative approaches that do not infringe on such intellectual property rights which may entail additional costs and development delays, even if we were able to develop such alternatives, which may not be feasible. Even if we are able to obtain a license, it may be non-exclusive, thereby giving our competitors access to the same technologies licensed to us. In that event, we may be required to expend significant time and resources to develop or license replacement technology.

Additionally, we sometimes collaborate with academic institutions to accelerate our preclinical research or development under written agreements with these institutions. In certain cases, these institutions may provide us with an option to negotiate a license to any of the institution's rights in technology resulting from the collaboration. Regardless of such option, we may be unable to negotiate a license within the specified timeframe or under terms that are acceptable to us. If we are unable to do so, the institution may offer the intellectual property rights to others, potentially blocking our ability to pursue our program. If we are unable to successfully obtain rights to required third-party intellectual property or to maintain the existing intellectual property rights we have, we may have to abandon development of such program and our business and financial condition could suffer.

The licensing and acquisition of third-party intellectual property rights is a competitive area, and companies, which may be more established, or have greater resources than we do, may also be pursuing strategies to license or acquire third-party intellectual property rights that we may consider necessary or attractive in order to commercialize our product candidates. More established companies may have a competitive advantage over us due to their size, cash resources and greater clinical development and commercialization capabilities. There can be no assurance that we will be able to successfully complete such negotiations and ultimately acquire the rights to the intellectual property surrounding the additional product candidates that we may seek to acquire.

***We may be involved in lawsuits to protect or enforce our patents or the patents of our licensors, which could be expensive, time-consuming and unsuccessful.***

Competitors may infringe our patents or the patents of our licensors. To counter infringement or unauthorized use, we may be required to file infringement claims, which can be expensive and time-consuming. In addition, in an infringement proceeding, a court may decide that one or more of our patents is not valid or is unenforceable, or may 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 or defense proceedings could put one or more of our patents at risk of being invalidated, held unenforceable or interpreted narrowly and could put any patent applications at risk of not issuing. Defense of these claims, regardless of their merit, would involve substantial litigation expense and would be a substantial diversion of employee resources from our business.

We may choose to challenge the patentability of claims in a third party's U.S. patent by requesting that the USPTO review the patent claims in an *ex-parte re-exam*, *inter partes* review or post-grant review proceedings. These proceedings are expensive and may consume our time or other resources. We may choose to challenge a third party's patent in patent opposition proceedings in the European Patent Office, or EPO, or other foreign patent offices. The costs of these opposition proceedings could be substantial and may consume our time or other resources. If we fail to obtain a favorable result at the USPTO, EPO or other patent offices then we may be exposed to litigation by a third party alleging that the patent may be infringed by our product candidates or proprietary technologies.



In addition, because some patent applications in the United States may be maintained in secrecy until the patents are issued, patent applications in the United States and many foreign jurisdictions are typically not published until 18 months after filing, and publications in the scientific literature often lag behind actual discoveries, we cannot be certain that others have not filed patent applications for technology covered by issued patents or any pending applications, or that we or, if applicable, a licensor were the first to invent the technology. Our competitors also may have filed, and may in the future file, patent applications covering our products or technology similar to ours. Any such patent application may have priority over our patents or any patent applications, which could require us to obtain rights to issued patents covering such technologies. If another party has filed a U.S. patent application on inventions similar to those owned by or in-licensed to us, we or, in the case of in-licensed technology, the licensor may have to participate in an interference proceeding declared by the USPTO to determine priority of invention in the United States. If we or one of our licensors is a party to an interference proceeding involving a U.S. patent application on inventions owned by or in-licensed to us, we may incur substantial costs, divert management's time and expend other resources, even if we are successful.

Interference proceedings provoked by third parties or brought by the USPTO may be necessary to determine the priority of inventions with respect to our patents or any patent applications or those of our licensors. An unfavorable outcome could result in a loss of our current patent rights and could require us to cease using the related technology or to attempt to license rights to it from the prevailing party. Our business could be harmed if the prevailing party does not offer us a license on commercially reasonable terms. Litigation or interference proceedings may result in a decision adverse to our interests and, even if we are successful, may result in substantial costs and distract our management and other employees. We may not be able to prevent, alone or with our licensors, misappropriation of our trade secrets or confidential information, particularly in countries where the laws may not protect those rights as fully as in the United States.

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 such litigation. In addition, there could be public announcements of the results of hearings, motions or other interim proceedings or developments. If securities analysts or investors perceive these results to be negative, it could have a substantial adverse effect on the price of our common stock.

***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 on any issued patent are due to be paid to the USPTO and foreign patent agencies in several stages over the lifetime of the patent. The USPTO and various foreign governmental patent agencies require compliance with a number of procedural, documentary, fee payment and other provisions during the patent application process and following the issuance of a patent. While an inadvertent lapse can in many cases be cured by payment of a late fee or by other means in accordance with the applicable rules, there are situations in which noncompliance can result in abandonment or lapse of the patent or patent application, resulting in partial or complete loss of patent rights in the relevant jurisdiction. Noncompliance events that could result in abandonment or lapse of a patent or patent application include, but are not limited to, failure to respond to official actions within prescribed time limits, non-payment of fees and failure to properly legalize and submit formal documents. In such an event, our competitors might be able to enter the market, which would have a material adverse effect on our business.

***Issued patents covering our product candidates could be found invalid or unenforceable if challenged in court or the USPTO.***

If we or one of our licensing partners initiate legal proceedings against a third party to enforce a patent covering one of our product candidates, the defendant could counterclaim that the patent covering our product candidate, as applicable, is invalid and/or unenforceable. In patent litigation in the United States, defendant counterclaims alleging invalidity and/or unenforceability are commonplace, and there are numerous grounds upon which a third party can assert invalidity or unenforceability of a patent. Third parties may also raise similar claims before administrative bodies in the United States or abroad, even outside the context of litigation. Such mechanisms include re-examination, post grant review, and equivalent proceedings in foreign jurisdictions (e.g., opposition proceedings). Such proceedings could result in revocation or amendment to our patents in such a way that they no longer cover our product candidates. The outcome following legal assertions of invalidity and unenforceability is unpredictable. With respect to validity, for example, we cannot be certain that there is no invalidating prior art, of which we, our patent counsel and the patent examiner were unaware during prosecution. If a defendant were to prevail on a legal assertion of invalidity and/or unenforceability, or if we are otherwise unable to adequately protect our rights, we would lose at least part, and perhaps all, of the patent protection on our product candidates. Such a loss of patent protection could have a material adverse impact on our business and our ability to commercialize or license our technology and product candidates.

***Changes in patent law in the United States and in ex-U.S. jurisdictions could diminish the value of patents in general, thereby impairing our ability to protect our products.***

As is the case with other biopharmaceutical companies, our success is heavily dependent on intellectual property, particularly patents. Obtaining and enforcing patents in the biopharmaceutical industry involve both technological and legal complexity, and is therefore costly, time-consuming and inherently uncertain. In addition, the United States has recently enacted and is currently implementing wide-ranging patent reform legislation. Recent U.S. Supreme Court rulings have narrowed the scope of patent protection available in certain circumstances and weakened the rights of patent owners in certain situations. In addition to increasing uncertainty with regard to our ability to obtain patents in the future, this combination of events has created uncertainty with respect to the value of patents, once obtained. Depending on decisions by the U.S. Congress, the federal courts and the USPTO, 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. We cannot predict how these decisions or any future decisions by the courts, the U.S. Congress or the USPTO may impact the value of our patents. Similarly, any adverse changes in the patent laws of other jurisdictions could have a material adverse effect on our business and financial condition.

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

Filing, prosecuting and defending patents on product candidates in all countries throughout the world is expensive. While our licensed patents, including the patents covering our lead product candidates, have been issued in major markets and other countries, our intellectual property rights in some countries outside the United States can be less extensive than those in the United States. In addition, the laws of some foreign countries do not protect intellectual property rights to the same extent as federal and state laws in the United States. Consequently, we may not be able to prevent third parties from practicing our inventions in all countries outside the United States, or from selling or importing products made using our inventions in and into the United States or other jurisdictions. Competitors may use our technologies in jurisdictions where

we have not obtained patent protection to develop their own products and, further, may export otherwise infringing products to territories where we have patent protection but where enforcement is not as strong as that in the United States. These products may compete with our products in jurisdictions where we do not have any issued patents and our patent claims or other intellectual property rights may not be effective or sufficient to prevent them from competing.

Many companies have encountered significant problems in protecting and defending intellectual property rights in foreign jurisdictions. The legal systems of certain countries, particularly certain developing countries, do not favor the enforcement of patents, trade secrets and other intellectual property protection, particularly those relating to biopharmaceutical products, which could make it difficult for us or our licensors to stop the infringement of our patents or marketing of competing products against third parties in violation of our proprietary rights generally. The initiation of proceedings by third parties to challenge the scope or validity of our patent rights in foreign jurisdictions could result in substantial cost and divert our efforts and attention from other aspects of our business, could put our patents at risk of being invalidated or interpreted narrowly and any patent applications at risk of not issuing and could provoke third parties to assert claims against us or our licensors. We may not prevail in any lawsuits that we initiate and the damages or other remedies awarded, if any, may not be commercially meaningful. Accordingly, our efforts to enforce our intellectual property rights around the world may be inadequate to obtain a significant commercial advantage from the intellectual property that we develop or license.

***If we do not obtain patent term extension and data exclusivity for any product candidates we may develop, our business may be materially harmed.***

Depending upon the timing, duration and specifics of any FDA marketing approval of any product candidates we may develop, one or more of our U.S. patents may be eligible for limited patent term extension under the Drug Price Competition and Patent Term Restoration Action of 1984, or Hatch-Waxman Amendments. The Hatch-Waxman Amendments permit a patent extension term of up to five years as compensation for patent term lost during the FDA regulatory review process. A patent term extension cannot extend the remaining term of a patent beyond a total of 14 years from the date of product approval, only one patent may be extended and only those claims covering the approved drug, a method for using it or a method for manufacturing it may be extended. However, we may not be granted an extension because of, for example, failing to exercise due diligence during the testing phase or regulatory review process, failing to apply within applicable deadlines, failing to apply prior to expiration of relevant patents or otherwise failing to satisfy applicable requirements. Moreover, the applicable time period or the scope of patent protection afforded could be less than we request. If we are unable to obtain patent term extension or term of any such extension is less than we request, our competitors may obtain approval of competing products following our patent expiration, and our business, financial condition, results of operations and prospects could be materially harmed.

***If our trademarks and trade names are not adequately protected, then we may not be able to build name recognition in our markets of interest and our business may be adversely affected.***

Our trademarks or trade names may be challenged, infringed, circumvented or declared generic or determined to be infringing on other marks. We may not be able to protect our rights to these

trademarks and trade names or may be forced to stop using these names, which we need for name recognition by potential partners or customers in our markets of interest. If we are unable to establish name recognition based on our trademarks and trade names, we may not be able to compete effectively and our business may be adversely affected.

### **Risks related to our reliance on third parties**

***We rely on third parties to conduct certain aspects of our preclinical studies and clinical trials. If these third parties do not successfully carry out their contractual duties, meet expected deadlines or comply with regulatory requirements, we may not be able to obtain regulatory approval for, or commercialize, any potential product candidates.***

We depend upon third parties to conduct certain aspects of our preclinical studies and depend on third parties, including independent investigators, to conduct our clinical trials, under agreements with universities, medical institutions, CROs, strategic partners and others. We expect to negotiate budgets and contracts with such third parties, which may result in delays to our development timelines and increased costs.

We commenced operations in August 2017 and we continue to build our infrastructure and hire personnel necessary to execute our operational plans. We will rely especially heavily on third parties over the course of our clinical trials, and, as a result, may have limited control over the clinical investigators and limited visibility into their day-to-day activities, including with respect to their compliance with the approved clinical protocol. Nevertheless, we are responsible for ensuring that each of our clinical trials is conducted in accordance with the applicable protocol, legal and regulatory requirements and scientific standards, and our reliance on third parties does not relieve us of our regulatory responsibilities. We and these third parties are required to comply with GCP requirements, which are regulations and guidelines enforced by the FDA and comparable foreign regulatory authorities for product candidates in clinical development. Regulatory authorities enforce these GCP requirements through periodic inspections of clinical trial sponsors, clinical investigators and clinical trial sites. If we or any of these third parties fail to comply with applicable GCP requirements, the clinical data generated in our clinical trials may be deemed unreliable and the FDA or comparable foreign regulatory authorities may require us to suspend or terminate these trials or perform additional preclinical studies or clinical trials before approving our marketing applications. We cannot be certain that, upon inspection, such regulatory authorities will determine that any of our clinical trials comply with GCP requirements. In addition, our clinical trials must be conducted with product produced under cGMP, requirements and may require a large number of patients.

Our failure or any failure by these third parties to comply with these regulations may require us to repeat clinical trials, which would delay the regulatory approval process. Moreover, our business may be adversely affected if any of these third parties violates federal or state fraud and abuse or false claims laws and regulations or healthcare privacy and security laws.

Any third parties conducting aspects of our preclinical studies or our clinical trials will not be our employees and, except for remedies that may be available to us under our agreements with such third parties, we cannot control whether or not they devote sufficient time and resources to our preclinical studies and clinical programs. These third parties may also have relationships with other commercial entities, including our competitors, for whom they may also be conducting clinical trials or other product development activities, which could affect their performance on our behalf. If these third parties 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 preclinical or clinical data they obtain is compromised due to the failure to adhere to our protocols or regulatory requirements or for other reasons, our development timelines, including

clinical development timelines, may be extended, delayed or terminated and we may not be able to complete development of, obtain regulatory approval of or successfully commercialize our product candidates. As a result, our financial results and the commercial prospects for our product candidates would be harmed, our costs could increase and our ability to generate revenue could be delayed or precluded entirely.

If any of our relationships with these third-party CROs or others terminate, we may not be able to enter into arrangements with alternative CROs or other third parties or to do so on commercially reasonable terms.

Switching or adding additional CROs involves additional cost and requires management time and focus. In addition, there is a natural transition period when a new CRO begins work. As a result, delays may occur, which can materially impact our ability to meet our desired development timelines. Though we endeavor to carefully manage our relationships with our CROs and other third parties, there can be no assurance that we will not encounter similar challenges or delays in the future or that these delays or challenges will not have a material adverse impact on our business, financial condition and prospects.

***Because we rely on third-party manufacturing and supply partners, our supply of preclinical and clinical development materials may become limited or interrupted or may not be of satisfactory quantity or quality.***

We rely on third-party contract manufacturers to manufacture all of our preclinical and clinical trial product supplies. We do not own manufacturing facilities for producing any product supplies. There can be no assurance that our preclinical and clinical development product supplies will not be limited, interrupted, of satisfactory quality or continue to be available at acceptable prices. In particular, any replacement of our manufacturers could require significant effort and expertise because there may be a limited number of qualified replacements.

The manufacturing process for a product candidate is subject to FDA, EMA and comparable foreign regulatory authority review. Suppliers and manufacturers must meet applicable manufacturing requirements and undergo rigorous facility and process validation tests required by regulatory authorities in order to comply with regulatory standards, such as cGMPs. In the event that any of our manufacturers fails to comply with such requirements or to perform its obligations to us in relation to quality, timing or otherwise, or if our supply of components or other materials becomes limited or interrupted for other reasons, we may be forced to manufacture the materials ourselves, for which we currently do not have the capabilities or resources, or enter into an agreement with another third party, which we may not be able to do on reasonable terms, if at all. In some cases, the technical skills or technology required to manufacture our product candidates may be unique or proprietary to the original manufacturer and we may have difficulty transferring such skills or technology to another third party and a feasible alternative may not exist. These factors would increase our reliance on such manufacturer or require us to obtain a license from such manufacturer in order to have another third party manufacture our product candidates. If we are required to change manufacturers for any reason, we will be required to verify that the new manufacturer maintains facilities and procedures that comply with quality standards and with all applicable regulations and guidelines. The delays associated with the verification of a new manufacturer could negatively affect our ability to develop product candidates in a timely manner or within budget.

Our or a third party's failure to execute on our manufacturing requirements and comply with cGMP could adversely affect our business in a number of ways, including:

- an inability to initiate or continue clinical trials of product candidates under development;

- delay in submitting regulatory applications, or receiving regulatory approvals, for product candidates;
- loss of the cooperation of an existing or future collaborator;
- subjecting third-party manufacturing facilities to additional inspections by regulatory authorities;
- requirements to cease distribution or to recall batches of our product candidates; and
- in the event of approval to market and commercialize a product candidate, an inability to meet commercial demands for our products.

In addition, we contract with packaging providers with the appropriate expertise, facilities and scale to meet our needs. Failure to maintain cGMP can result in a contractor receiving FDA sanctions, which can impact our ability to operate or lead to delays in any clinical development programs. We believe that our current packaging contractors operate in accordance with cGMP, but we can give no assurance that FDA, EMA or comparable foreign regulatory authorities will not conclude that a lack of compliance exists. In addition, any delay in contracting for packaging services, or failure of the contract manufacturer to perform the services as needed, may delay any clinical trials, registration and launches, which could negatively affect our business.

Our product candidates and any drugs that we may develop may compete with other product candidates and drugs for access to manufacturing facilities. There are no assurances we would be able to enter into similar commercial arrangements with other 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.

***We have not yet manufactured on a commercial scale and expect to rely on third parties to produce and process commercial quantities of our product candidates, if approved.***

We expect to continue to rely on third-party manufacturers if we receive regulatory approval for our product candidates. We have not yet entered into any arrangement with a third party for the manufacture and supply of commercial quantities of our product candidates. To the extent that we enter into future manufacturing arrangements with third parties for commercial supply of our product candidates, if approved, we will depend on these third parties to perform their obligations in a timely manner consistent with contractual and regulatory requirements, including those related to quality control and assurance.

The facilities used by our contract manufacturers to manufacture our product candidates must be approved by the FDA, EMA or comparable foreign regulatory authorities following inspections that will be conducted after we submit an application to the FDA, EMA or comparable foreign regulatory authorities. We do not directly control the manufacturing process of, and will be completely dependent on, our contract manufacturing partners for compliance with cGMP requirements for the manufacture of our product candidates. If our contract manufacturers cannot successfully manufacture material that conforms to our specifications and the strict regulatory requirements of the FDA, EMA or comparable foreign regulatory authorities, they will not be able to secure and/or maintain regulatory approval for their manufacturing facilities. In addition, we have no direct control over the ability of our contract manufacturers to maintain adequate quality control, quality assurance and qualified personnel. If the FDA, EMA or a comparable foreign regulatory authority does not approve these facilities for the manufacture of our product candidates or if it withdraws any approval in the future, we may need to find alternative manufacturing facilities, which would significantly impact our ability to develop, obtain regulatory approval for or market our product candidates, if approved.

***We are dependent on a small number of suppliers for some of the materials used to manufacture our product candidates, and on one company for the manufacture of the active pharmaceutical ingredient for each of our product candidates.***

We currently depend on a small number of suppliers for some of the materials used in, and processes required to develop, our product candidates. We cannot ensure that these suppliers or service providers will remain in business or have sufficient capacity or supply to meet our needs, or that they will not be purchased by one of our competitors or another company that is not interested in continuing to work with us. Our use of a small number of suppliers exposes us to several risks, including disruptions in supply, price increases or late deliveries. There are, in general, relatively few alternative sources of supply for substitute materials. Our current vendors may be unable or unwilling to meet our future demands for our clinical trials or commercial sale. Finding suitable replacement suppliers, materials and processes could take a substantial amount of time and it may be difficult to establish replacement suppliers who meet regulatory requirements. Any disruption or delay in supply could compromise our ability to pursue development and eventual commercialization of our product candidates.

***Our existing and future collaborations will be important to our business. If we are unable to maintain our existing collaborations or enter into new collaborations, or if these collaborations are not successful, our business could be adversely affected.***

An important part of our strategy is to evaluate and, as deemed appropriate, extend our current or enter into additional partnerships in the future, including potentially with major biopharmaceutical companies. We have limited capabilities for product development and do not yet have any capability for commercialization. Accordingly, we have entered into collaborations with other companies to provide us with important technologies in order to more fully develop our product candidates, including PD-0325901, and we may enter into collaborations with other companies to provide us with important technologies or funding for our programs.

Any current or future collaborations we may extend or enter into may pose a number of risks, including the following:

- collaborators have significant discretion in determining the efforts and resources that they will apply;
- collaborators may not perform their obligations as expected;
- collaborators may not pursue development and commercialization of any product candidates that achieve regulatory approval or may elect not to continue or renew development or commercialization programs or license arrangements based on clinical trial results, changes in the collaborators' strategic focus or available funding, or external factors, such as a strategic transaction that may divert resources or create competing priorities;
- collaborators may delay clinical trials, provide insufficient funding for a clinical trial program, stop a clinical trial or abandon a product candidate, repeat or conduct new clinical trials or require a new formulation of a product candidate for clinical testing;
- collaborators could independently develop, or develop with third parties, products that compete directly or indirectly with our products and product candidates if the collaborators believe that the competitive products are more likely to be successfully developed or can be commercialized under terms that are more economically attractive than ours;
- for collaborations involving combination therapies that have not yet been tested together, treatment emergent adverse events may be unforeseen and may negatively impact the monotherapy development of our product candidates;

- product candidates discovered in collaboration with us may be viewed by our collaborators as competitive with their own product candidates or products, which may cause collaborators to cease to devote resources to the commercialization of our product candidates;
- collaborators may fail to comply with applicable regulatory requirements regarding the development, manufacture, distribution or marketing of a product candidate or product;
- collaborators with marketing and distribution rights to one or more of our product candidates that achieve regulatory approval may not commit sufficient resources to the marketing and distribution of such product or products;
- disagreements with collaborators, including disagreements over proprietary rights, contract interpretation or the preferred course of development, might cause delays or terminations of the research, development or commercialization of product candidates, might lead to additional responsibilities for us with respect to product candidates, or might result in litigation or arbitration, any of which would be time-consuming and expensive;
- collaborators may not properly maintain or defend our intellectual property rights or may use our proprietary information in such a way as to invite litigation that could jeopardize or invalidate our intellectual property or proprietary information or expose us to potential litigation;
- collaborators may infringe the intellectual property rights of third parties, which may expose us to litigation and potential liability; and
- collaborations may be terminated by the collaborator, and, if terminated, we could lose license rights to the applicable product candidates or could be required to raise additional capital to pursue further development or commercialization of the applicable product candidates.

Under our collaboration agreement with BeiGene, we are evaluating PD-0325901 with lifirafenib in a Phase 1b clinical trial. Under this existing arrangement with BeiGene, upon completion of this clinical trial, we and BeiGene need to agree that certain pre-defined criteria have been satisfied before we enter into negotiation to provide for the expansion of the clinical collaboration and the establishment of a commercial relationship. Therefore, our partner has no obligation to continue development of the combination product, regardless of the clinical trial results. Similarly, we jointly formed MapKure, LLC, or MapKure, with BeiGene for the development of BGB-3245, and although we will contribute to clinical development and other operational activities, we will not control the development process. MapKure may pursue a development plan that differs from our expectations, which may or may not be successful.

If our collaborations do not result in the successful discovery, development and commercialization of product candidates or if one of our collaborators elects not to enter into collaboration agreements to pursue future development, we may not receive any future funding or milestone or royalty payments under such collaborations. Risks relating to product development, regulatory approval and commercialization described in this prospectus may also apply to the activities of our collaborators.

Additionally, if one of our collaborators terminates its agreement with us, we may find it more difficult to attract new collaborators and our perception in the business and financial communities could be adversely affected.

Furthermore, we face significant competition in seeking appropriate partners for our product candidates and the negotiation process is time-consuming and complex. In order for us to successfully partner our product candidates, potential partners must view our product candidates as economically valuable in markets they determine to be attractive in light of the terms that we are seeking and other available products for licensing by other companies. In addition, there have



been a significant number of recent business combinations among large biopharmaceutical companies that have resulted in a reduced number of potential future collaborators. Our ability to 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. If we are unable to reach agreements with suitable collaborators on a timely basis, on acceptable terms, or at all, we may have to curtail the development of a product candidate, reduce or delay its development program or one or more of our other development programs, delay its potential commercialization or reduce the scope of any sales or marketing activities or planning, 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 expertise or capital, which may not be available to us on acceptable terms, or at all. If we fail to enter into collaborations or do not have sufficient funds or expertise to undertake the necessary development and commercialization activities, we may not be able to further develop our product candidates, bring them to market and generate revenue from sales of drugs or continue to develop our technology, and our business may be materially and adversely affected. Even if we are successful in our efforts to establish new strategic partnerships, the terms that we agree upon may not be favorable to us, and we may not be able to maintain such strategic partnerships if, for example, development or approval of a product candidate is delayed or sales of an approved product are disappointing. Any delay in entering into new strategic partnership agreements related to our product candidates could delay the development and commercialization of our product candidates and reduce their competitiveness even if they reach the market.

## **Risks related to managing our business and operations**

### ***We will need to grow the size of our organization, and we may experience difficulties in managing this growth.***

As of June 1, 2019, we had 48 full-time employees. As our clinical development and commercialization plans and strategies develop, and as we transition into operating as a public company, we expect we will need additional managerial, clinical, manufacturing, medical, regulatory, sales, marketing, financial, legal and other personnel. Future growth would impose significant added responsibilities on members of management, including:

- recruiting, integrating, retaining and motivating additional employees;
- managing our development efforts effectively, including the clinical, manufacturing and quality review process for our product candidates, while complying with our contractual obligations to contractors, collaboration partners and other third parties; and
- improving our operational, financial and management controls, reporting systems and procedures.

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

We currently rely, and for the foreseeable future will continue to rely, in substantial part on third parties, including independent organizations, advisors and consultants, to provide certain services to support and perform our operations. There can be no assurance that the services of these third parties will continue to be available to us on a timely basis when needed, or that we can find

qualified replacements. In addition, if we are unable to effectively manage our outsourced activities or if the quality, accuracy or quantity of the services provided is compromised for any reason, our clinical trials may be delayed or terminated, and we may not be able to obtain, or may be substantially delayed in obtaining, regulatory approval of our product candidates or otherwise advance our business. There can be no assurance that we will be able to manage our existing consultants or find other suitable outside contractors and consultants on economically reasonable terms, or at all.

If we are not able to effectively expand our organization by hiring new employees and expanding our groups of consultants and contractors, we may not be able to successfully execute the tasks necessary to further develop and commercialize our product candidates and, accordingly, may not achieve our development and commercialization goals.

***We have no history of commercializing marketed products. Building our commercialization capabilities will require a significant investment of time and money. There can be no assurance that we will successfully set up our commercialization capabilities.***

We are currently in the early stages of building our commercial capabilities to allow us to market our product candidates, if approved, either alone or in combination with others. Establishing commercialization capabilities will require substantial investment of time and money and may divert significant management focus and resources. In addition, we will be competing with larger biopharmaceutical and biotechnology companies with established commercialization and marketing capabilities as we seek to recruit suitable personnel. Accordingly, there can be no assurance that our efforts to set up commercialization capabilities will be successful.

***If we lose key management personnel, or if we fail to recruit additional highly skilled personnel, our ability to pursue our business strategy will be impaired, could result in loss of markets or market share and could make us less competitive.***

Our ability to compete in the highly competitive biopharmaceutical industries depends upon our ability to attract and retain highly qualified managerial, scientific and medical personnel. We are highly dependent on our management, scientific and medical personnel, including Saqib Islam, our Chief Executive Officer, Badreddin Edris, our Chief Business Officer, Jens Renstrup, our Chief Medical Officer and L. Mary Smith, our Senior Vice President, Clinical Research and Development. The loss of the services of any of our executive officers, other key employees, and other scientific and medical advisors, and our inability to find suitable replacements for these individuals could harm our business.

Competition for skilled personnel in our industry is intense and may limit our ability to hire and retain highly qualified personnel on acceptable terms, in a timely manner or at all. To induce valuable employees to remain at our company, in addition to salary and cash incentives, we have provided equity incentive awards that vest over time. The value to employees of restricted stock awards and stock options that vest over time may be significantly affected by movements in our stock price that are beyond our control, and may at any time be insufficient to counteract more lucrative offers from other companies. Despite our efforts to retain valuable employees, members of our management, scientific and development teams are at-will employees and may terminate their employment with us on short notice. We do not maintain "key man" insurance policies on the lives of these individuals or the lives of any of our other employees. Given the stage of our programs and our plans to expand operations, our success also depends on our ability to continue to attract, retain and motivate highly skilled junior, mid-level and senior personnel across our organization.

***We do not have the internal research capabilities required to independently discover new product candidates, and we plan to execute our growth strategy by identifying and in-licensing or acquiring additional product candidates that have been discovered and initially developed by others. We may not be successful in executing our growth strategy or such growth strategy may not deliver the anticipated results.***

We do not have an internal discovery and preclinical research and development department to independently discover and initially develop new product candidates. We plan to source new product candidates, including those that may be complementary to our existing product candidates, by in-licensing or acquiring them from other companies, academic institutions or other asset originators. If we are unable to identify, in-license or acquire and integrate product candidates, our ability to pursue our growth strategy would be limited.

Research programs and business development efforts to identify new product candidates require substantial technical, financial and human resources, and we have no immediate plans to develop an internal discovery and preclinical research and development group. In-licensing and acquiring product candidates or development programs often requires significant payments and expenses and may consume valuable resources. We will need to devote a substantial amount of time and personnel to develop and commercialize any in-licensed or acquired technology or product candidate, in addition to doing so for our existing product candidates. Our business development efforts or acquisition or licensing attempts may fail to yield additional complementary or successful product candidates for clinical development and commercialization for a number of reasons, including the following:

- our identification or business development methodology or search criteria and process may be unsuccessful in identifying potential product candidates with a high probability of success for development progression;
- we may not be able or willing to assemble sufficient resources or expertise to identify and in-license or acquire additional product candidates;
- for product candidates we seek to in-license or acquire, we may not be able to agree to acceptable terms with the licensor or owner of those product candidates;
- any product candidates that we do in-license or acquire may not succeed in preclinical studies or clinical trials;
- we may not succeed in formulation or process development of such in-licensed or acquired product candidates;
- such in-licensed or acquired product candidates may be shown to have harmful side effects or may have other characteristics that may make the products unlikely to receive regulatory approval or be unmarketable if approved;
- competitors may develop alternatives that render such in-licensed product candidates obsolete or less attractive;
- in-licensed or acquired product candidates may be covered by third parties' patents or other exclusive rights that we may not be able to access;
- in-licensed or acquired product candidates that we develop may not allow us to best make use of our expertise and our development and commercial infrastructure as currently expected;
- the market for a product candidate that we in-license or acquire may change during the course of our development of the product candidate so that such product candidate may become unreasonable to continue to develop;

- a product candidate that we in-license or acquire may not be capable of being produced in commercial quantities at an acceptable cost, or at all; and
- a product candidate that we in-license or acquire may not be accepted as safe and effective by patients, the medical community or third-party payors.

If any of these events occur, we may not be successful in executing our growth strategy or our growth strategy may not deliver the anticipated results.

***Our internal computer systems, or those used by our vendors, or other contractors or consultants, may fail or suffer security breaches.***

Despite the implementation of security measures, our internal computer systems and those of our CROs and other third parties, including our contractors and consultants, are vulnerable to damage from computer viruses and unauthorized access. Like other companies of our size and in our industry, we have been the target of phishing attacks and attacks on our data and systems. While we have not experienced any material system failure 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 development programs and our business operations. For example, the loss of preclinical or clinical data could result in delays in our regulatory approval efforts and significantly increase our costs to recover or reproduce the data. To the extent that any disruption or security breach were to result in a loss of, or damage to, our data or applications, or inappropriate disclosure of financial or confidential information, we could incur liability and the further development and commercialization of our product candidates could be delayed.

We could also be subject to risks caused by misappropriation, misuse, leakage, falsification or intentional or accidental release or loss of information maintained in the information systems and networks of our company and our contractors or consultants. In addition, outside parties may attempt to penetrate our systems or those of our contractors or consultants or fraudulently induce our personnel or the personnel of our contractors or consultants to disclose sensitive information in order to gain access to our data and/or systems. We may experience threats to our data and systems, including malicious codes and viruses, phishing and other cyber-attacks. The number and complexity of these threats continue to increase over time. If a material breach of our information technology systems or those of our contractors or consultants occurs, the market perception of the effectiveness of our security measures could be harmed and our reputation and credibility could be damaged. We could be required to expend significant amounts of money and other resources to repair or replace information systems or networks. In addition, we could be subject to regulatory actions and/or claims made by individuals and groups in private litigation involving privacy issues related to data collection and use practices and other data privacy laws and regulations, including claims for misuse or inappropriate disclosure of data, as well as unfair or deceptive practices. Although we develop and maintain systems and controls designed to prevent these events from occurring, and we have a process to identify and mitigate threats, the development and maintenance of these systems, controls and processes is costly and requires ongoing monitoring and updating as technologies change and efforts to overcome security measures become increasingly sophisticated. Moreover, despite our efforts, the possibility of these events occurring cannot be eliminated entirely. In addition, there can be no assurance that our internal information technology systems or those of our third-party contractors, or our consultants' efforts to implement adequate security and control measures, will be sufficient to protect us against breakdowns, service disruption, data deterioration or loss in the event of a system malfunction, or prevent data from being stolen or corrupted in the event of a cyberattack, security breach, industrial espionage attacks or insider threat attacks which could result in financial, legal, business or reputational harm.

***Our employees, independent contractors, consultants, academic collaborators, partners and vendors may engage in misconduct or other improper activities, including noncompliance with regulatory standards and requirements.***

We are exposed to the risk of employee fraud or other illegal activity by our employees, independent contractors, consultants, academic collaborators, partners and vendors. Misconduct by these parties could include intentional, reckless and/or negligent conduct that fails to comply with the laws of the FDA, EMA and comparable foreign regulatory authorities, provide true, complete and accurate information to the FDA, EMA and comparable foreign regulatory authorities, comply with manufacturing standards we have established, comply with healthcare fraud and abuse laws in the United States and similar foreign fraudulent misconduct laws, or report financial information or data accurately or to disclose unauthorized activities to us. If we obtain FDA approval of any of our product candidates and begin commercializing those products in the United States, our potential exposure under such laws will increase significantly, and our costs associated with compliance with such laws are also likely to increase. These laws may impact, among other things, our current activities with principal investigators and research patients, as well as proposed and future sales, marketing and education programs. In connection with this offering, we will adopt a code of business conduct and ethics, but it is not always possible to identify and deter misconduct by our employees, independent contractors, consultants, academic collaborators, partners and vendors, and the precautions we take to detect and prevent such activities may not be effective in controlling unknown or unmanaged risks or losses or in protecting us from governmental investigations or other actions or lawsuits stemming from a failure to comply with these laws or regulations. If any actions are instituted against us and we are not successful in defending ourselves or asserting our rights, those actions could result in the imposition of civil, criminal and administrative penalties, damages, monetary fines, imprisonment, disgorgement, possible exclusion from participation in government healthcare programs, additional reporting obligations and oversight if we become subject to a corporate integrity agreement or other agreement to resolve allegations of non-compliance with these laws, contractual damages, reputational harm, diminished profits and future earnings and the curtailment of our operations.

***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 the handling, use, storage, treatment and disposal of hazardous materials and wastes. Our development activities involve the use of biological and hazardous materials and can produce hazardous waste products. We cannot eliminate the risk of contamination or injury from these materials, which could cause an interruption of our commercialization efforts, research and development efforts and business operations, environmental damage resulting in costly clean-up and liabilities under applicable laws and regulations governing the use, storage, handling and disposal of these materials and specified waste products. Although we believe that the safety procedures utilized by our third-party manufacturers for handling and disposing of these materials generally comply with the standards prescribed by these laws and regulations, we cannot guarantee that this is the case or eliminate the risk of accidental contamination or injury from these materials. In such an event, we may be held liable for any resulting damages and such liability could exceed our resources and state or federal or other applicable authorities may curtail our use of certain materials and/or interrupt our business operations. Furthermore, environmental laws and regulations are complex, change frequently and have tended to become more stringent. We cannot predict the impact of such changes and cannot be certain of our future compliance. In addition, we may incur substantial costs in order to comply with current or

future environmental, health and safety laws and regulations. These current or future laws and regulations may impair our research, development or production efforts. Failure to comply with these laws and regulations also may result in substantial fines, penalties or other sanctions.

Although we maintain workers' compensation insurance to cover us for costs and expenses we may incur due to injuries resulting from the use of hazardous materials or other work-related injuries, this insurance may not provide adequate coverage against potential liabilities. We do not carry specific biological waste or hazardous waste insurance coverage, workers compensation or property and casualty and general liability insurance policies that include coverage for damages and fines arising from biological or hazardous waste exposure or contamination.

***Our current operations are concentrated in two locations, and we or the third parties upon whom 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.***

Our current headquarters are located in Stamford, Connecticut. Our development operations are currently located in Durham, North Carolina. We currently outsource our manufacturing operations to third parties, and clinical quantities of our product candidates are manufactured by these third parties outside the United States, including in China and France. Any unplanned event, such as flood, fire, explosion, earthquake, extreme weather condition, medical epidemics, power shortage, telecommunication failure or other natural or manmade accidents or incidents that result in us being unable to fully utilize our facilities, or the manufacturing facilities of our third-party contract manufacturers, may have a material and adverse effect on our ability to operate our business, particularly on a daily basis, and have significant negative consequences on our financial and operating conditions. Loss of access to these facilities may result in increased costs, delays in the development of our product candidates or interruption of our business operations. Earthquakes or other natural disasters could further disrupt our operations and have a material and adverse effect on our business, financial condition, results of operations 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 or our development operations, 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. Disaster recovery and business continuity plans 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. As part of our risk management approach, we maintain insurance coverage at levels that we believe are appropriate for our business. However, in the event of an accident or incident at these facilities, we cannot assure you that the amounts of insurance will be sufficient to satisfy any damages and losses. If our facilities, or the manufacturing facilities of our third-party contract manufacturers, are unable to operate because of an accident or incident or for any other reason, even for a short period of time, any or all of our research and development programs may be harmed. Any business interruption may have a material and adverse effect on our business, financial condition, results of operations and prospects.

***Comprehensive tax reform legislation could adversely affect our business and financial condition.***

On December 22, 2017, President Trump signed into law the TCJA that significantly reforms the Internal Revenue Code of 1986, as amended, or the Code. The TCJA, among other things, contains significant changes to corporate taxation, including reduction of the corporate tax rate from 34.0% to a flat rate of 21.0%, limitation of the tax deduction for interest expense to 30.0%

of adjusted taxable income (except for certain small businesses), limitation of the deduction for net operating losses arising in taxable years beginning after December 31, 2017 to 80.0% of annual taxable income and elimination of net operating loss carrybacks applying to net operating losses arising in taxable years ending after December 31, 2017, and modifying or repealing many business deductions and credits (including reducing the business tax credit for certain clinical testing expenses incurred in the testing of certain drugs for rare diseases or conditions generally referred to as "orphan drugs"). The effect of the TCJA on our business, whether adverse or favorable, is uncertain and may not become evident for some period of time. We urge investors to consult with their legal and tax advisers regarding the implications of the TCJA on an investment in our common stock.

***Our ability to use our net operating loss carryforwards and certain tax credit carryforwards may be subject to limitation.***

As of December 31, 2018, we had net operating loss carryforwards for federal, state and city income tax purposes of \$14.2 million, \$0.6 million and \$3.8 million, respectively. Federal net operating loss carryforwards of \$4.3 million were recorded in 2017 and the state and city net operating loss carryforwards expire at various dates through 2038. Federal net operating loss carryforwards of \$9.9 million recorded in 2018 will be available to offset 80% of taxable income for an indefinite period of time, until fully utilized. As of December 31, 2018, we also had federal tax credits of \$0.4 million, which may be used to offset future tax liabilities. These tax credit carryforwards will expire in 2038. Under Section 382 of the Code, changes in our ownership may limit the amount of our net operating loss carryforwards and tax credit carryforwards that could be utilized annually to offset our future taxable income, if any. This limitation would generally apply in the event of a cumulative change in ownership of our company of more than 50% within a three-year period. Any such limitation may significantly reduce our ability to utilize our net operating loss carryforwards and tax credit carryforwards before they expire. Private placements and other transactions that have occurred since our inception, as well as this offering, may trigger such an ownership change pursuant to Section 382. Any such limitation, whether as the result of this offering, prior private placements, sales of our common stock by our existing stockholders or additional sales of our common stock by us, could have a material adverse effect on our results of operations in future years. The reduction of the corporate tax rate under TCJA may cause a reduction in the economic benefit of our net operating loss carryforwards and other deferred tax assets available to us. Under the TCJA, net operating losses generated in taxable years ending after December 31, 2017 will not be subject to expiration; however, under the TCJA, net operating losses generated in taxable years beginning after December 31, 2017 will be subject to limitation on deduction.

***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. Portions of our future clinical trials may be conducted outside of the United States and unfavorable economic conditions resulting in the weakening of the U.S. dollar would make those clinical trials more costly to operate. Furthermore, the most recent global financial crisis caused extreme volatility and disruptions in the capital and credit markets. A severe or prolonged economic downturn could result in a variety of risks to our business, including a reduced ability to raise additional capital when needed on acceptable terms, if at all. A weak or declining economy or international trade disputes could also strain our suppliers, some of which are located outside of the United States, 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.

## Risks related to our common stock and this offering

***There has been no prior public market for our common stock, and we do not know whether an active, liquid and orderly trading market will develop for our common stock, or what the market price of our common stock will be, and as a result it may be difficult for you to sell your shares of our common stock.***

Prior to this offering there has been no public market for shares of our common stock. Although we intend to apply to list our common stock on \_\_\_\_\_, an active trading market for our shares may never develop or be sustained following this offering. You may not be able to sell your shares quickly or at the market price if trading in shares of our common stock is not active. The initial public offering price for our common stock will be determined through negotiations with the underwriters, and the negotiated price may not be indicative of the market price of the common stock after the offering. As a result of these and other factors, you may be unable to resell your shares of our common stock at or above the initial public offering price.

Further, an inactive market may also impair our ability to raise capital by selling shares of our common stock and may impair our ability to enter into strategic partnerships or acquire companies or products by using our shares of common stock as consideration.

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

The trading price of our common stock following this offering is likely to be highly volatile and could be subject to wide fluctuations in response to various factors, some of which are beyond our control, including limited trading volume. In addition to the factors discussed in this "Risk factors" section and elsewhere in this prospectus, these factors include:

- the commencement, enrollment or results of our ongoing and planned potentially registrational clinical trials for nirogacestat and PD-0325901;
- any delay in our regulatory filings for our product candidates and any adverse development or perceived adverse development with respect to the applicable regulatory authority's review of such filings, including without limitation the FDA's issuance of a "refusal to file" letter or a request for additional information;
- adverse results from or delays in future clinical trials;
- our decision to initiate a clinical trial, not to initiate a clinical trial or to terminate an existing clinical trial;
- adverse regulatory decisions, including failure to receive regulatory approval of our product candidates or any future product candidate;
- changes in laws or regulations applicable to our product candidates or any future product candidate, including but not limited to clinical trial requirements for approvals;
- changes in the structure of healthcare payment systems;
- adverse developments concerning our manufacturers;
- our inability to obtain adequate product supply for any approved product or inability to do so at acceptable prices;
- our inability to establish collaborations or partnerships, if needed;
- our failure to commercialize our product candidates, if approved;
- additions or departures of key medical, scientific or management personnel;
- unanticipated serious safety concerns related to the use of our product candidates;



- introduction of new products or services offered by us or our competitors;
- clinical trial results for other product candidates that could compete with our product candidates;
- announcements of significant acquisitions, strategic partnerships, joint ventures or capital commitments by us or our competitors;
- our ability to effectively manage our growth;
- actual or anticipated variations in quarterly operating results;
- our cash position;
- our failure to meet the estimates and projections of the investment community or that we may otherwise provide to the public;
- publication of research reports about us or our industry, or product candidates in particular, or positive or negative recommendations or withdrawal of research coverage by securities analysts;
- changes in the market valuations of similar companies;
- overall performance of the equity markets;
- sales of our common stock by us or our stockholders in the future;
- trading volume of our common stock;
- changes in accounting practices;
- ineffectiveness of our internal controls;
- disputes or other developments relating to proprietary rights, including patents, litigation matters and our ability to obtain patent protection for our technologies;
- significant lawsuits, including patent or stockholder litigation;
- general political and economic conditions; and
- other events or factors, many of which are beyond our control.

In addition, the stock market in general, and the market for biopharmaceutical companies in particular, have experienced extreme price and volume fluctuations that have often been unrelated or disproportionate to the operating performance of these companies. Broad market and industry factors may negatively affect the market price of our common stock, regardless of our actual operating performance. If the market price of our common stock after this offering does not exceed the initial public offering price, you may not realize any return on your investment in us and may lose some or all of your investment. In the past, securities class action litigation has often been instituted against companies following periods of volatility in the market price of a company's securities. This type of litigation, if instituted, could result in substantial costs and a diversion of management's attention and resources, which would harm our business, operating results or financial condition.

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

We currently anticipate that we will retain future earnings for the development, operation and expansion of our business and do not anticipate declaring or paying any cash dividends for the foreseeable future. Furthermore, future debt or other financing arrangements may contain terms prohibiting or limiting the amount of dividends that may be declared or paid on our common stock. Any return to stockholders will therefore be limited to the appreciation of their stock.

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

Immediately following the completion of this offering, our executive officers, directors and their affiliates and certain significant stockholders will beneficially hold, in the aggregate, approximately % of our outstanding voting stock. Therefore, even after this offering, these stockholders will have the ability to influence us through this ownership position. These stockholders may be able to determine all matters requiring stockholder approval. For example, these stockholders may be able to control elections of directors, amendments of our organizational documents, or approval of any merger, sale of assets, or other major corporate transaction. This may prevent or discourage unsolicited acquisition proposals or offers for our common stock that you may feel are in your best interest as one of our stockholders.

***If you purchase our common stock in this offering, you will incur immediate and substantial dilution in the book value of your shares.***

The initial public offering price will be substantially higher than the pro forma as adjusted net tangible book value per share of our common stock after this offering. Investors purchasing common stock in this offering will pay a price per share that substantially exceeds the pro forma as adjusted net tangible book value per share after this offering. As a result, investors purchasing common stock in this offering will incur immediate dilution of \$ per share, 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, representing the difference between our pro forma as adjusted net tangible book value per share after giving effect to this offering and the assumed initial public offering price. Further, investors purchasing common stock in this offering will contribute approximately % of the total amount invested by stockholders since our inception, but will own only approximately % of the shares of common stock outstanding after this offering.

This dilution is due to our investors who purchased shares prior to this offering having paid substantially less when they purchased their shares than the price offered to the public in this offering. To the extent outstanding options are exercised, there will be further dilution to new investors. As a result of the dilution to investors purchasing shares in this offering, investors may receive significantly less than the purchase price paid in this offering, if anything, in the event of our liquidation. For a further description of the dilution that you will experience immediately after this offering, see "Dilution."

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

We are an emerging growth company, or EGC, as defined in the Jumpstart Our Business Startups Act, or the JOBS Act, enacted in April 2012. For as long as we continue to be an EGC, we may take advantage of exemptions from various reporting requirements that are applicable to other public companies that are not EGCs, including not being required to comply with the auditor attestation requirements of Section 404 of the Sarbanes-Oxley Act of 2002, as amended, or the Sarbanes-Oxley Act, reduced disclosure obligations regarding executive compensation in this prospectus and our periodic reports and proxy statements and exemptions from the requirements of holding nonbinding advisory votes on executive compensation and stockholder approval of any golden parachute payments not previously approved. We could be an EGC for up to five years following the year in which we complete this offering, although circumstances could cause us to lose that status earlier. We will remain an EGC until the earlier of (i) the last day of the fiscal year (a) following the fifth anniversary of the completion of this offering, (b) in which we have total annual gross revenue of at least \$1.07 billion or (c) in which we are deemed to be a large

accelerated filer, which requires the market value of our common stock that is held by non-affiliates to exceed \$700.0 million as of the prior June 30th and (ii) the date on which we have issued more than \$1.0 billion in non-convertible debt during the prior three-year period.

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 not included all of the executive compensation information that would be required if we were not an EGC. We cannot predict whether investors will find our common stock less attractive if we rely on certain or all of 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.

Under the JOBS Act, EGCs can also delay adopting new or revised accounting standards until such time as those standards apply to private companies, which may make our financial statements less comparable to companies that comply with new or revised accounting pronouncements as of public company effective dates.

***We will incur significant 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.***

As a public company, we will incur significant legal, accounting and other expenses that we did not incur as a private company. We will be subject to the reporting requirements of the Securities Exchange Act of 1934, as amended, or the Exchange Act, which will require, among other things, that we file with the SEC, annual, quarterly and current reports with respect to our business and financial condition. In addition, the Sarbanes-Oxley Act, as well as rules subsequently adopted by the SEC and to implement provisions of the Sarbanes-Oxley Act, impose significant requirements on public companies, including requiring establishment and maintenance of effective disclosure and financial controls and changes in corporate governance practices. Further, in July 2010, the Dodd-Frank Wall Street Reform and Consumer Protection Act, or the Dodd-Frank Act, was enacted. There are significant corporate governance and executive compensation related provisions in the Dodd-Frank Act that require the SEC to adopt additional rules and regulations in these areas such as "say on pay" and proxy access. Recent legislation permits EGCs to implement many of these requirements over a longer period and up to five years from the pricing of this offering. Stockholder activism, the current political environment and the current high level of government intervention and regulatory reform may lead to substantial new regulations and disclosure obligations, which may lead to additional compliance costs and impact the manner in which we operate our business in ways we cannot currently anticipate.

We expect the rules and regulations applicable to public companies to substantially increase our legal and financial compliance costs and to make some activities more time-consuming and costly. If these requirements divert the attention of our management and personnel from other business concerns, they could have an adverse effect on our business. The increased costs will decrease our net income or increase our net loss, and may require us to reduce costs in other areas of our business. For example, we expect these rules and regulations to make it more difficult and more expensive for us to obtain director and officer liability insurance and we may be required to incur substantial costs to maintain the same or similar coverage. We cannot predict or estimate the amount or timing of additional costs we may incur to respond to these requirements. The impact of these requirements could also make it more difficult for us to attract and retain qualified persons to serve on our board of directors, our board committees or as executive officers.

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

If our existing stockholders sell, or indicate an intention to sell, substantial amounts of our common stock in the public market after the lock-up and other legal restrictions on resale discussed in this prospectus lapse, the trading price of our common stock could decline. Based on shares of common stock outstanding as of \_\_\_\_\_, 2019, upon the completion of this offering we will have outstanding a total of \_\_\_\_\_ shares of common stock. Of these shares, only the shares of common stock sold in this offering by us, plus any shares sold upon exercise of the underwriters' option to purchase additional shares, will be freely tradable without restriction in the public market immediately following this offering.

The lock-up agreements pertaining to this offering will expire 180 days from the date of this prospectus, subject to earlier release of all or a portion of the shares subject to such agreements by the representatives of the underwriters in their sole discretion. After the lock-up agreements expire, based upon the number of shares of common stock, on an as-converted basis, outstanding as of \_\_\_\_\_, up to an additional \_\_\_\_\_ shares of common stock will be eligible for sale in the public market. Approximately \_\_\_\_\_% of these additional shares are held by directors, executive officers and other affiliates and will be subject to certain limitations of Rule 144 under the Securities Act of 1933, as amended, or the Securities Act.

In addition, shares of common stock that are either subject to outstanding options or reserved for future issuance under our existing equity compensation plans will become eligible for sale in the public market to the extent permitted by the provisions of various vesting schedules, the lock-up agreements and Rule 144 and Rule 701 under the Securities Act. If these additional shares of common stock are sold, or if it is perceived that they will be sold, in the public market, the trading price of our common stock could decline. Additionally, the number of shares of our common stock reserved for issuance under the 2019 Stock Option and Equity Incentive Plan will automatically increase on January 1 of each year, beginning on January 1, 2020 and continuing through and including January 1, 2030, by \_\_\_\_\_% of the total number of shares of our capital stock outstanding on December 31 of the preceding calendar year, or a lesser number of shares determined by our board of directors. Unless our board of directors elects not to increase the number of shares available for future grant each year, our stockholders may experience additional dilution.

After the completion of this offering, the holders of \_\_\_\_\_ shares of our common stock (including shares issuable upon conversion of our outstanding convertible preferred stock) will be entitled to rights with respect to the registration of their shares under the Securities Act, subject to the 180-day lock-up agreements described above. See "Description of capital stock—Registration rights." Registration of these shares under the Securities Act would result in the shares becoming freely tradable without restriction under the Securities Act, except for shares held by affiliates, as defined in Rule 144 under the Securities Act. Any sales of securities by these stockholders could have a material adverse effect on the trading price of our common stock.

***We have broad discretion in the use of our existing cash, cash equivalents and the net proceeds from this offering and may not use them effectively.***

Our management will have broad discretion in the application of our existing cash, cash equivalents and the net proceeds from this offering, including for any of the purposes described in the section titled "Use of proceeds," and you will not have the opportunity as part of your investment decision to assess whether such proceeds are being used appropriately. Because of the number and variability of factors that will determine our use of our existing cash and cash equivalents and the net proceeds from this offering, their ultimate use may vary substantially

from their currently intended use. Our management might not apply our existing cash and cash equivalents and the net proceeds from this offering in ways that ultimately increase the value of your investment. The failure by our management to apply these funds effectively could harm our business. Pending their use, we may invest the net proceeds from this offering in short-term, investment-grade, interest-bearing securities. These investments may not yield a favorable return to our stockholders. If we do not invest or apply the net proceeds from this offering in ways that enhance stockholder value, we may fail to achieve expected financial results, which could cause our stock price to decline.

***Anti-takeover provisions under our charter documents and Delaware law could delay or prevent a change of control which could limit the market price of our common stock and may prevent or frustrate attempts by our stockholders to replace or remove our current management.***

Our amended and restated certificate of incorporation and amended and restated bylaws, which are to become effective immediately prior to the completion of this offering, contain provisions that could delay or prevent a change of control of our company or changes in our board of directors that our stockholders might consider favorable. Some of these provisions include:

- a board of directors divided into three classes serving staggered three-year terms, such that not all members of the board will be elected at one time;
- a prohibition on stockholder action through written consent, which requires that all stockholder actions be taken at a meeting of our stockholders;
- a requirement that special meetings of stockholders be called only by the chairman of the board of directors, the chief executive officer or by a majority of the total number of authorized directors;
- advance notice requirements for stockholder proposals and nominations for election to our board of directors;
- a requirement that no member of our board of directors may be removed from office by our stockholders except for cause and, in addition to any other vote required by law, upon the approval of not less than two-thirds of all outstanding shares of our voting stock then entitled to vote in the election of directors;
- a requirement of approval of not less than two-thirds of all outstanding shares of our voting stock to amend any bylaws by stockholder action or to amend specific provisions of our certificate of incorporation; and
- the authority of the board of directors to issue convertible preferred stock on terms determined by the board of directors without stockholder approval and which convertible preferred stock may include rights superior to the rights of the holders of common stock.

In addition, because we are incorporated in Delaware, we are governed by the provisions of Section 203 of the Delaware General Corporation Law, which may prohibit certain business combinations with stockholders owning 15% or more of our outstanding voting stock. These anti-takeover provisions and other provisions in our amended and restated certificate of incorporation and amended and restated bylaws could make it more difficult for stockholders or potential acquirers to obtain control of our board of directors or initiate actions that are opposed by the then-current board of directors and could also delay or impede a merger, tender offer or proxy contest involving our company. These provisions could also discourage proxy contests and make it more difficult for you and other stockholders to elect directors of your choosing or cause us to take other corporate actions you desire. Any delay or prevention of a change of control transaction or changes in our board of directors could cause the market price of our common stock to decline.

***If securities or industry analysts do not publish research or publish inaccurate or unfavorable research 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. Securities and industry analysts do not currently, and may never, publish research on our company. If no securities or industry analysts commence coverage of our company, the trading price for our stock would likely be negatively impacted. In the event securities or industry analysts initiate coverage, if one or more of the analysts who covers us downgrades our stock or publishes inaccurate or unfavorable research about our business, our stock price may decline. If one or more of these analysts ceases coverage of our company or fails to publish reports on us regularly, demand for our stock could decrease, which might cause our stock price and trading volume to decline.

***If we fail to maintain an effective system of internal control over financial reporting, we may not be able to accurately report our financial results or prevent fraud. As a result, stockholders could lose confidence in our financial and other public reporting, which would harm our business and the trading price of our common stock.***

Effective internal controls over financial reporting are necessary for us to provide reliable financial reports and, together with adequate disclosure controls and procedures, are designed to prevent fraud. Any failure to implement required new or improved controls, or difficulties encountered in their implementation could cause us to fail to meet our reporting obligations. In addition, any testing by us conducted in connection with Section 404, or any subsequent testing by our independent registered public accounting firm, may reveal deficiencies in our internal controls over financial reporting that are deemed to be material weaknesses or that may require prospective or retroactive changes to our financial statements or identify other areas for further attention or improvement. Inferior internal controls could also cause investors to lose confidence in our reported financial information, which could have a negative effect on the trading price of our stock.

We will be required to disclose changes made in our internal controls and procedures on a quarterly basis and our management will be required to assess the effectiveness of these controls annually. However, for as long as we are an EGC, our independent registered public accounting firm will not be required to attest to the effectiveness of our internal controls over financial reporting pursuant to Section 404. We could be an EGC for up to five years. An independent assessment of the effectiveness of our internal controls over financial reporting could detect problems that our management's assessment might not. Undetected material weaknesses in our internal controls over financial reporting could lead to restatements of our financial statements and require us to incur the expense of remediation.

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

Upon completion of this offering, we will become subject to certain reporting requirements of the Exchange Act. Our disclosure controls and procedures are designed to reasonably assure that information required to be disclosed by us in reports we file or submit under the Exchange Act is accumulated and communicated to management, recorded, processed, summarized and reported within the time periods specified in the rules and forms of the SEC. We believe that any disclosure controls and procedures or internal controls and procedures, no matter how well conceived and operated, can provide only reasonable, not absolute, assurance that the objectives of the control system are met. These inherent limitations include the realities that judgments in decision-making can be faulty, and that breakdowns can occur because of simple error or mistake. Additionally, controls can be circumvented by the individual acts of some persons, by

collusion of two or more people or by an unauthorized override of the controls. Accordingly, because of the inherent limitations in our control system, misstatements or insufficient disclosures due to error or fraud may occur and not be detected.

***Our amended and restated bylaws will designate the Court of Chancery of the State of Delaware as the exclusive forum for certain state law litigation that may be initiated by our stockholders, which could limit our stockholders' ability to litigate disputes with us in a different judicial forum.***

Pursuant to our amended and restated bylaws, as will become effective immediately prior to the completion of this offering, 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 the following types of actions or proceedings under Delaware statutory or common law: (i) any derivative action or proceeding brought on our behalf; (ii) any action asserting a claim of breach of a fiduciary duty or other wrongdoing by any of our directors, officers, employees or agents to us or our stockholders; (iii) any action asserting a claim against us arising pursuant to any provision of the General Corporation Law of the State of Delaware, our amended and restated certificate of incorporation or our amended and restated bylaws; (iv) any action to interpret, apply, enforce or determine the validity of our certificate of incorporation or bylaws; or (v) any action asserting a claim governed by the internal affairs doctrine, in each case subject to the Court of Chancery having personal jurisdiction over the indispensable parties named as defendants therein. This exclusive forum provision will not apply to any causes of action arising under the Securities Act or the Exchange Act or any other claim for which the federal courts have exclusive jurisdiction. The forum selection clause in our amended and restated bylaws may limit our stockholders' ability to litigate disputes with us in a different judicial forum.

## Special note regarding forward-looking statements

This prospectus contains forward-looking statements that are based on management's beliefs and assumptions and on information currently available to management. Some of the statements in the section captioned "Prospectus summary," "Risk factors," "Management's discussion and analysis of financial condition and results of operations," "Business" and elsewhere in this prospectus contain forward-looking statements. In some cases, you can identify forward-looking statements by the following words: "may," "will," "could," "would," "should," "expect," "intend," "plan," "anticipate," "believe," "estimate," "predict," "project," "potential," "continue," "ongoing" or the negative of these terms or other comparable terminology, although not all forward-looking statements contain these words.

These statements involve risks, uncertainties and other factors that may cause actual results, levels of activity, performance or achievements to be materially different from the information expressed or implied by these forward-looking statements. Although we believe that we have a reasonable basis for each forward-looking statement contained in this prospectus, we caution you that these statements are based on a combination of facts and factors currently known by us and our projections of the future, about which we cannot be certain.

Forward-looking statements in this prospectus include, but are not limited to, statements about:

- the success, cost and timing of our product development activities and clinical trials, including statements regarding the timing of our ongoing Phase 3 clinical trial of nirogacestat, the initiation of our planned Phase 2b clinical trial of PD-0325901 and the initiation and completion of any other clinical trials and related preparatory work, the expected timing of the availability of results of the clinical trials and the potentially registrational nature of the single Phase 3 clinical trial and the Phase 2b clinical trial;
- the potential attributes and benefits of our product candidates;
- our plans to commercialize any of our product candidates that achieve approval either alone or in partnership with others;
- our ability to obtain funding for our operations, including funding necessary to complete further development of our product candidates, and if approved, commercialization;
- the period over which we anticipate the proceeds of this offering, together with our existing cash and cash equivalents, will be sufficient to fund our operating expenses and capital expenditure requirements;
- the potential for our business development efforts to maximize the potential value of our portfolio;
- our ability to identify, in-license or acquire additional product candidates;
- the ability and willingness of our third-party collaborators to continue research and development activities relating to our product candidates that we are developing as combination therapies;
- our ability to obtain and maintain regulatory approval for our product candidates, and any related restrictions, limitations or warnings in the label of an approved product candidate;
- the potential benefit of Orphan Drug and Fast Track Designations for nirogacestat, PD-0325901 and any other of our product candidates that may receive such designation;
- our ability to compete with companies currently marketing or engaged in the development of treatments for desmoid tumors or NF1-PN;



- our expectations regarding our ability to obtain and maintain intellectual property protection or market exclusivity for our product candidates and the direction of such protection;
- our ability and the potential to successfully manufacture our product candidates for preclinical studies, clinical trials and, if approved, for commercial use, the capacity of our current contract manufacturing organizations, or CMOs, to support clinical supply and commercial-scale production for product candidates and our potential election to pursue additional CMOs for manufacturing supplies of drug substance and finished drug product in the future;
- the size and growth potential of the markets for our product candidates, and our ability to serve those markets, either alone or in partnership with others;
- the rate and degree of market acceptance of our product candidates, if approved;
- regulatory developments in the United States and foreign countries;
- our ability to contract with third-party suppliers and manufacturers and their ability to perform adequately;
- the success of competing products that are or may become available;
- our ability to attract and retain key scientific, medical, commercial or management personnel;
- our estimates regarding expenses, future revenue, capital requirements and needs for additional financing; and
- our use of the proceeds from this offering.

In addition, you should refer to the "Risk factors" section of this prospectus for a discussion of other important factors that may cause actual results to differ materially from those expressed or implied by the forward-looking statements. As a result of these factors, we cannot assure you that the forward-looking statements in this prospectus will prove to be accurate. Furthermore, if the forward-looking statements prove to be inaccurate, the inaccuracy may be material. In light of the significant uncertainties in these forward-looking statements, you should not regard these statements as a representation or warranty by us or any other person that we will achieve our objectives and plans in any specified time frame, or at all. The forward-looking statements in this prospectus represent our views as of the date of this prospectus. We anticipate that subsequent events and developments will cause our views to change. However, while we may elect to update these forward-looking statements at some point in the future, we have no current intention of doing so except to the extent required by applicable law. You should, therefore, not rely on these forward-looking statements as representing our views as of any date subsequent to the date of this prospectus.

## Market and industry data and forecasts

We obtained the industry and market data used throughout this prospectus from our own internal estimates and research, as well as from independent market research, industry and general publications and surveys, governmental agencies and publicly available information in addition to research, surveys and studies conducted by third parties. Internal estimates are derived from publicly available information released by industry analysts and third-party sources, our internal research and our industry experience, and are based on assumptions made by us based on such data and our knowledge of our industry and market, which we believe to be reasonable. In some cases, we do not expressly refer to the sources from which this data is derived. In addition, while we believe the industry and market data included in this prospectus is reliable and based on reasonable assumptions, such data involve risks and uncertainties and are subject to change based on various factors, including those discussed in the section entitled "Risk factors." These and other factors could cause results to differ materially from those expressed in the estimates made by the independent parties or by us.



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

## **Dividend policy**

We have never declared or paid any cash dividends on our capital stock. We do not anticipate paying any dividends on our capital stock in the foreseeable future. We currently intend to retain all available funds and any future earnings to fund the development and growth of our business. 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 our capitalization as of December 31, 2018:

- on an actual basis;
- on a pro forma basis to give effect to (i) the automatic conversion of all units outstanding as of December 31, 2018 into an aggregate of \_\_\_\_\_ shares of our common stock, as if such conversion had occurred on December 31, 2018, and (ii) the filing and effectiveness of our amended and restated certificate of incorporation immediately prior to the completion of this offering; and
- on a pro forma as adjusted basis to give further effect to the issuance and sale of \_\_\_\_\_ shares of our common stock in this offering at an assumed initial public offering price of \$ \_\_\_\_\_ per share, the midpoint of the price range set forth on the cover page of this prospectus, after deducting estimated underwriting discounts and commissions and estimated offering expenses payable by us.

You should read this information together with our consolidated financial statements and related notes appearing elsewhere in this prospectus and the information set forth in the sections entitled "Selected consolidated financial data" and "Management's discussion and analysis of financial condition and results of operations."

(in thousands)	As of December 31, 2018		
	Actual	Pro forma	Pro forma as adjusted <sup>(1)</sup>
Cash and cash equivalents	\$ 45,648	\$ 45,648	\$
Convertible preferred units, no par value per unit; 103,000,000 units authorized, _____ issued and outstanding, actual; no units authorized, issued or outstanding, pro forma and pro forma as adjusted	\$ 62,930	\$ —	\$ —
Members' (deficit) equity:			
Preferred units, no par value per unit; 6,473,500 units authorized, 6,437,500 issued or outstanding, actual; no units authorized, issued or outstanding, pro forma and pro forma as adjusted	2,014	—	—
Common units, no par value per unit; 1,287,501 units authorized, 1,287,500 units issued and outstanding, actual; no units authorized, issued or outstanding, pro forma and pro forma as adjusted	—	—	—
Common stock, \$0.0001 par value, no shares authorized, _____ issued or outstanding, actual; _____ shares authorized, _____ issued and outstanding, pro forma; _____ shares authorized, _____ shares issued and outstanding, pro forma as adjusted	—	—	—
Additional paid-in capital	1,069	66,013	
Accumulated deficit	(22,452)	(22,452)	
Total members' (deficit) equity	(19,369)	43,561	
Total capitalization	\$ 43,561	\$ 43,561	\$

(1) The pro forma as adjusted information is illustrative only, and will depend on the actual initial public offering price and other terms of this offering determined at pricing. Each \$1.00 increase or decrease in the assumed initial public offering price of \$ \_\_\_\_\_ per share, the midpoint of the price range set forth on the cover page of this prospectus, would

increase or decrease, as applicable, each of pro forma as adjusted cash and cash equivalents, additional paid-in capital, total members' equity and total capitalization by \$            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. Each increase or decrease of 1,000,000 shares in the number of shares we are offering would increase or decrease, as applicable, each of pro forma as adjusted cash and cash equivalents, additional paid-in capital, total members' equity and total capitalization by \$            million, assuming the assumed initial public offering price per share remains the same.

The table above does not include:

- shares of common stock issuable upon the exercise of stock options outstanding as of           , 2019 under our existing stock option and incentive plan, with a weighted average exercise price of \$        per share;
- shares of common stock reserved for future issuance as of           , 2019 under our existing stock option and incentive plan, which will cease to be available for issuance at the time that our 2019 Equity Plan becomes effective;
- shares of our common stock that will become available for future issuance under our 2019 Equity Plan, which will become effective upon the effectiveness of the registration statement of which this prospectus forms a part; and
- shares of our common stock that will become available for future issuance under our ESPP which will become effective upon the effectiveness of the registration statement of which this prospectus forms a part.

## Dilution

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

Our historical net tangible book value (deficit) was \$( ) million, or \$( ) per share, as of , 2019. Our historical net tangible book (deficit) value is equal to our total tangible assets less our total liabilities and convertible preferred stock, and our historical net tangible book (deficit) per share is that number divided by the number of shares of common stock outstanding as of such date.

Our pro forma net tangible book value as of , 2019 was \$ million, or \$ per share. Our pro forma net tangible book value per share represents the amount of our total tangible assets reduced by the amount of our total liabilities and divided by the total number of shares of our common stock outstanding as of , 2019, assuming the automatic conversion of all outstanding shares of convertible preferred stock as of , 2019 into an aggregate of shares of common stock, which conversion will occur immediately prior to the completion of this offering.

After giving effect to our sale of shares of common stock in this offering at an assumed initial public offering price of \$ per share, the midpoint of the price range set forth on the cover page of this prospectus, and after deducting estimated underwriting discounts and commissions and estimated offering expenses payable by us, our pro forma as adjusted net tangible book value as of , 2019 would have been \$ million, or \$ per share. This represents an immediate increase in net tangible book value of \$ per share to existing stockholders and an immediate dilution in net tangible book value of \$ per share to purchasers of common stock in this offering. Dilution per share to new investors represents the difference between the amount per share paid by purchasers of shares of common stock in this offering and the pro forma as adjusted net tangible book value per share of common stock immediately after completion of this offering. The following table illustrates this dilution on a per share basis:

Assumed initial public offering price per share	\$
Historical net tangible book value (deficit) per share as of , 2019	\$
Increase in net tangible book value per share attributable to the pro forma adjustments described above	_____
Pro forma net tangible book value per share as of December 31, 2018	_____
Increase in pro forma net tangible book value per share attributable to new investors participating in this offering	_____
Pro forma as adjusted net tangible book value per share after this offering	_____
Dilution per share to new investors participating in this offering	\$ _____

The pro forma as adjusted dilution information discussed above is illustrative only and will depend on the actual initial public offering price. Each \$1.00 increase or decrease in the assumed public offering price of \$ per share, the midpoint of the price range set forth on the cover page of this prospectus, would increase or decrease, as applicable, our pro forma as adjusted net tangible book value by \$ million, or \$ per share, and dilution per share to investors in this offering by \$ per share, assuming that the number of shares offered by us, as set forth



on the cover of this prospectus, remains the same and after deducting 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 or decrease of 1,000,000 in the number of shares we are offering would increase or decrease, as applicable, our pro forma as adjusted net tangible book value by \$      million, or \$      per share, and would increase or decrease, as applicable, dilution per share to investors in this offering by \$      per share, assuming the assumed initial public offering price per share remains the same and after deducting estimated underwriting discounts and commissions and estimated offering expenses payable by us.

If the underwriters' option to purchase additional shares from us is exercised in full, the pro forma as adjusted net tangible book value per share after this offering would be \$      per share, the increase in pro forma as adjusted net tangible book value per share to existing stockholders would be \$      per share and the dilution to new investors purchasing shares in this offering would be \$      per share, based on the assumed initial public offering price of \$      per share and after deducting estimated underwriting discounts and commissions and estimated offering expenses payable by us.

The following table shows, as of      , 2019, on the pro forma as adjusted basis described above (but before deducting estimated underwriting discounts and commissions and estimated offering expenses payable by us), the differences between the existing stockholders and the purchasers of shares in this offering with respect to the number of shares purchased from us, the total consideration paid, which includes, in the case of existing stockholders, gross proceeds received from the issuance of common and redeemable convertible preferred stock, cash received from the exercise of stock options, and the value of any stock issued for services, and the average price paid per share (dollars in thousands, except per share amounts):

	Shares purchased		Total consideration		Weighted average price per share
	Number	Percent	Amount	Percent	
Existing stockholders before this offering		%	\$	%	\$
New investors participating in this offering					
<b>Total</b>		<b>100%</b>	<b>\$</b>	<b>100%</b>	

The tables and discussion above are based on the number of shares of our common stock outstanding as of      , 2019, and exclude:

- shares of common stock issuable upon the exercise of stock options outstanding as of      , 2019 under our existing stock option and incentive plan with a weighted average exercise price of \$      per share;
- shares of common stock reserved for future issuance as of      , 2019 under our existing stock option and incentive plan, which will cease to be available for issuance at the time that our 2019 Plan becomes effective;
- shares of our common stock that will become available for future issuance under our 2019 Equity Plan, which will become effective upon the effectiveness of the registration statement of which this prospectus forms a part; and
- shares of our common stock that will become available for future issuance under our ESPP, which will become effective upon the effectiveness of the registration statement of which this prospectus forms a part.

To the extent that outstanding stock options are exercised, new stock options or warrants are issued, or we issue additional shares of common stock in the future, there will be further dilution

to new investors. 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 these securities could result in further dilution to our stockholders.

## Selected consolidated financial data

You should read the following selected consolidated financial data together with our consolidated 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 selected statement of operations data for the period from August 18, 2017 (inception) to December 31, 2017 and the year ended December 31, 2018 and the summary balance sheet data as of December 31, 2017 and 2018 from our audited consolidated financial statements included elsewhere in this prospectus. Our historical results are not necessarily indicative of the results that may be expected in the future.

(in thousands, except share, unit, per share and per unit data)	Period from August 18, 2017 (inception) to December 31, 2017	Year ended December 31, 2018
<b>Consolidated statement of operations data:</b>		
Operating expenses:		
Research and development	\$ 2,799	\$ 9,898
General and administrative	1,861	8,593
Total operating expenses	4,660	18,491
Loss from operations	(4,660)	(18,491)
Other income:		
Interest income	21	678
Total other income	21	678
Net loss	\$(4,639)	\$ (17,813)
Net loss per common unit, basic and diluted <sup>(1)</sup>	\$ —	\$ (7.94)
Weighted average common units outstanding, basic and diluted <sup>(1)</sup>	—	2,244,215
Pro forma net loss per share, basic and diluted (unaudited) <sup>(2)</sup>		\$ (0.30)
Pro forma weighted average common shares outstanding, basic and diluted (unaudited) <sup>(2)</sup>		58,749,660

(1) As of December 31, 2017, there were no vested common units outstanding. Therefore, net loss per common unit, basic and diluted, is not presented for the period from August 18, 2017 (inception) through December 31, 2017.

(2) See Note 12 to the notes to our consolidated financial statements included in this prospectus for an explanation of the method used to calculate the pro forma net loss per share and pro forma weighted average number of common shares outstanding.

(in thousands)	As of December 31,	
	2017	2018
<b>Balance sheet data:</b>		
Cash and cash equivalents	\$10,271	\$ 45,648
Working capital <sup>(1)</sup>	9,888	43,353
Total assets	10,582	48,390
Convertible preferred units	12,554	62,930
Accumulated deficit	(4,639)	(22,452)
Members' (deficit) equity	(2,625)	(19,369)

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

## Management's discussion and analysis of financial conditions and results of operations

*You should read the following discussion and analysis of our financial condition and results of operations together with the section titled "Selected consolidated financial data" and the consolidated financial statements and related notes included elsewhere in this prospectus. This discussion contains forward-looking statements based upon current expectations that involve risks and uncertainties. Our actual results may differ materially from those anticipated in these forward-looking statements as a result of various factors, including those identified below and those discussed in the section titled "Risk factors" and in other parts of this prospectus.*

### Overview

We are a clinical-stage biopharmaceutical company applying a precision medicine approach to acquiring, developing and commercializing life-changing medicines for underserved patient populations suffering from devastating rare diseases and cancer. We have a differentiated portfolio of small molecule targeted oncology product candidates and are advancing two potentially registrational clinical trials in rare tumor types, as well as several other programs addressing highly prevalent, genetically defined cancers. Our strategic approach and operational excellence in clinical development have enabled us to rapidly advance our two lead product candidates into late-stage clinical trials while simultaneously entering into multiple shared-value partnerships with industry leaders to expand our portfolio. From this foundation, we are continuing to build a differentiated, global biopharmaceutical company intensely focused on understanding patients and their diseases in order to develop transformative targeted medicines.

Our most advanced product candidate, nirogacestat, is an oral, small molecule gamma secretase inhibitor, or GSI, initially in development for the treatment of desmoid tumors, a rare and often debilitating and disfiguring soft tissue tumor for which there are currently no therapies approved by the U.S. Food and Drug Administration, or FDA. We believe nirogacestat may address the significant limitations associated with existing treatment options and has the potential to become the first therapy approved by the FDA for both newly diagnosed and previously treated desmoid tumors. Since we licensed nirogacestat from Pfizer Inc., or Pfizer, in August 2017, the FDA has granted us both Orphan Drug Designation and Fast Track Designation for this indication. In May 2019, we announced the initiation of the DeFi trial, a potentially registrational Phase 3 clinical trial of nirogacestat for patients with desmoid tumors. We expect to provide an update on the DeFi trial in 2020.

Our second product candidate is PD-0325901, an oral, small molecule MEK inhibitor initially in development for the treatment of NF1-PN, a rare tumor of the peripheral nerve sheath that causes significant pain and disfigurement, and that most often manifests in children. We believe that PD-0325901 has the potential to offer a best-in-class combination of tolerability and efficacy to enable the long-term treatment required for this patient population, as compared to other MEK inhibitors. As with nirogacestat, we licensed PD-0325901 from Pfizer in August 2017; since then, the FDA has granted us both Orphan Drug Designation and Fast Track Designation for NF1-PN. We expect to commence a potentially registrational Phase 2b clinical trial of PD-0325901 for patients with NF1-PN in the third quarter of 2019.

In addition to our late-stage programs in rare oncology indications, we have expanded our portfolio to develop targeted therapies for the treatment of highly prevalent, genetically defined cancers. To advance this strategy, we are taking a precision medicine approach in collaboration with industry leaders, including BeiGene, Ltd., or BeiGene, to develop combination therapies with nirogacestat and PD-0325901, as well as new standalone medicines. The first of these efforts is

our ongoing collaboration with BeiGene, under which patients with advanced or refractory solid tumors harboring RAS mutations, RAF mutations or other MAPK pathway aberrations are being enrolled in a Phase 1b clinical trial evaluating the combination of PD-0325901 and BeiGene's RAF dimer inhibitor lifirafenib.

Furthermore, we intend to continue to expand our portfolio by licensing additional programs with strong biological rationales and validated mechanisms of action. We also plan to continue using shared-value partnerships to maximize the potential of our therapies to serve patients. We believe that our clinical development capabilities and innovative partnership approach will continue to allow us to expand our shared-value relationships with innovators and maximize the potential of our existing and future portfolio.

We were originally formed as SpringWorks Therapeutics, LLC, a Delaware limited liability company in August 2017. Concurrent with our formation, we acquired exclusive worldwide licenses to nirogacestat and PD-0325901 from Pfizer. In September 2018, we announced that we entered into a global clinical collaboration with BeiGene to evaluate the combination of PD-0325901 with BeiGene's RAF dimer inhibitor, lifirafenib. From our inception to March 29, 2019, we conducted our business through SpringWorks Therapeutics, LLC and were treated as a partnership for income tax purposes. Pursuant to the terms of a corporate reorganization that was completed on March 29, 2019, all of the equity interests in SpringWorks Therapeutics, LLC were exchanged for the same number and class of newly issued securities of SpringWorks Therapeutics, Inc., or the Reorganization, and, as a result, SpringWorks Therapeutics, LLC became a wholly owned subsidiary of SpringWorks Therapeutics, Inc. Following the Reorganization, we now conduct our business as SpringWorks Therapeutics, Inc. See the section entitled "Reorganization" for more information.

In June 2019, we announced the formation of MapKure, LLC, or MapKure, which is jointly owned by us and BeiGene. BeiGene licensed exclusive rights to MapKure to BGB-3245, and we will contribute to MapKure's clinical development and other operational activities for BGB-3245.

Since our inception, our operations have been limited to organizing and staffing our company, business planning, raising capital and performing research and development of our product candidates, including nirogacestat for the treatment of desmoid tumors and PD-0325901 for the treatment of NF1-PN.

We do not have any products approved for commercial sale and have not generated any revenues. As of December 31, 2018, we had cash and cash equivalents of \$45.6 million. Since inception and through December 31, 2018, we have funded our operations primarily by net proceeds of \$62.9 million from the sale of our Series A convertible preferred units prior to the Reorganization. In March 2019, we completed the final closing of \$39.4 million in gross proceeds from the sale of Series A convertible preferred units prior to our Reorganization, and raised \$125 million in gross proceeds from the sale of our Series B convertible preferred stock. We believe that the net proceeds from this offering, together with our existing cash and cash equivalents, will enable us to fund our operating expenses and capital expenditure requirements into

Since inception, we have incurred significant operating losses. Our net losses were \$4.6 million and \$17.8 million for the period from August 18, 2017 (inception) to December 31, 2017 and the year ended December 31, 2018, respectively. As of December 31, 2018, we had an accumulated deficit of \$22.5 million. We expect to continue to incur significant expenses and operating losses for the foreseeable future. In addition, we anticipate that our expenses will increase significantly in connection with our ongoing activities, as we:

- advance our product candidates through clinical development, including our ongoing potentially registrational Phase 3 clinical trial for nirogacestat and planned potentially registrational Phase 2b clinical trial for PD-0325901;
- advance our other preclinical and clinical development programs, including our combination therapies, into and through clinical development;
- seek regulatory approvals for any product candidates that successfully complete clinical trials;
- increase the amount of research and development activities to identify, acquire and develop product candidates;
- hire additional clinical, quality control, medical, scientific and other technical personnel;
- expand our operational, financial and management systems and increase personnel, including personnel to support our clinical development, manufacturing, business development and commercialization efforts and our operations as a public company;
- maintain, expand and protect our intellectual property portfolio;
- complete commercial-scale outsourced manufacturing activities;
- establish sales, marketing and distribution capabilities for any product candidates for which we may receive regulatory approval in regions where we choose to commercialize our products on our own or jointly with third parties; and
- invest in or in-license other technologies or product candidates.

We will not generate revenue from product sales unless and until we successfully complete clinical development and obtain regulatory approval for our product candidates. In addition, if we obtain regulatory approval for nirogacestat or PD-0325901, we expect to incur significant expenses related to developing our commercialization capabilities to support product sales, marketing and distribution activities, either alone or in collaboration with others.

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

## **Our license and collaboration agreements**

### ***Pfizer license agreements***

In August 2017, we entered into a license agreement, or the Nirogacestat License Agreement, with Pfizer pursuant to which we acquired exclusive worldwide rights to nirogacestat. Pursuant

to the Nirogacestat License Agreement, we are required to pay Pfizer payments of up to an aggregate of \$232.5 million upon achievement of certain commercial milestone events. We will pay Pfizer tiered royalties on sales of nirogacestat ranging from mid-single digit to low second decile percentages, which may be subject to deductions for expiration of valid claims, amounts due under third-party licenses and generic competition.

In August 2017, we entered into a license agreement, or the PD-0325901 License Agreement, with Pfizer pursuant to which we acquired exclusive worldwide rights to PD-0325901. Pursuant to the PD-0325901 License Agreement, we are required to pay Pfizer up to an aggregate of \$229.8 million upon achievement of certain commercial milestone events. We will pay Pfizer tiered royalties on sales of PD-0325901 ranging from mid-single digit to low second decile percentages, which may be subject to deductions for expiration of valid claims, amounts due under third-party licenses and generic competition.

In connection with entering into the Pfizer license agreements, we issued an aggregate of 6,437,500 Junior Series A convertible preferred units to Pfizer, which units were converted into 6,437,500 shares of our Junior Series A convertible preferred stock pursuant to the Reorganization. As of December 31, 2018, we had not made any milestone or royalty payments under the Pfizer license agreements.

#### ***BeiGene clinical collaboration agreement***

In August 2018, we entered into a clinical collaboration agreement with BeiGene, or the BeiGene Collaboration Agreement, to evaluate the safety, tolerability and preliminary efficacy of combining lifirafenib and PD-0325901, in a Phase 1b clinical trial for patients with advanced or refractory solid tumors. Each party will be solely responsible for its costs associated with manufacturing and supply of its compound for the clinical trial. We and BeiGene will share equally the other costs associated with the clinical trial.

See “Business—License and collaboration agreements” for more information on our license and collaboration agreements.

### **Components of our results of operations**

#### ***Revenue***

We have not generated any revenue since our inception and do not expect to generate any revenue from the sale of products in the near future, if at all. If our development efforts for our current product candidates or additional product candidates that we may develop in the future are successful and can be commercialized, we may generate revenue in the future from product sales. Additionally, we may enter into collaboration and license agreements from time to time that provide for certain payments due to us. Accordingly, we may generate revenue from payments from such collaboration or license agreements in the future.

#### ***Research and development expenses***

Our research and development expenses consist of expenses incurred in connection with the development of our product candidates. These expenses include:

- employee-related expenses, which include salaries, benefits and stock-based compensation for our research and development personnel;
- fees paid to consultants for services directly related to our research and development programs;

- expenses incurred under agreements with third-party contract research organizations, investigative clinical trial sites and consultants that conduct research and development activities on our behalf;
- costs associated with preclinical studies and clinical trials;
- costs associated with the manufacture of drug substance and finished drug product for preclinical testing and clinical trials;
- costs associated with technology and intellectual property licenses; and
- an allocated portion of facilities and facility related costs, which include expenses for rent and other facility related costs and other supplies.

Expenditures for clinical development, including upfront licensing fees and milestone payments associated with our product candidates, are charged to research and development expense as incurred. These expenses consist of expenses incurred in performing development activities, including salaries and benefits, materials and supplies, preclinical expenses, clinical trial and related clinical manufacturing expenses, depreciation of equipment, contract services and other outside expenses. Costs for certain development activities, such as manufacturing and clinical trials, are recognized based on an evaluation of the progress to completion of specific tasks using either time-based measures or data such as information provided to us by our vendors on their actual costs incurred.

We expect our research and development expenses to increase substantially for the foreseeable future as we continue to invest in activities related to developing our product candidates and our preclinical programs and as certain product candidates advance into later stages of development, including our ongoing potentially registrational Phase 3 clinical trial for nirogacestat and planned potentially registrational Phase 2b clinical trial for PD-0325901. The process of conducting the necessary clinical trials to obtain regulatory approval is costly and time-consuming, and the successful development of our product candidates is highly uncertain. As a result, we are unable to determine the duration and completion costs of our research and development projects or when and to what extent we will generate revenue from the commercialization and sale of any of our product candidates.

#### **General and administrative expenses**

General and administrative expenses consist primarily of salaries and related costs, including stock-based compensation, for personnel in executive, finance, corporate and business development and administrative functions. General and administrative expenses also include legal fees relating to patent and corporate matters; professional fees for accounting, auditing, tax and administrative consulting services; insurance costs; administrative travel expenses; and facility-related expenses, which include direct depreciation costs and allocated expenses for rent and maintenance of facilities and other operating costs.

We anticipate that our general and administrative expenses will increase in the future as we increase our headcount to support our continued development of our product candidates. We also anticipate that we will incur increased accounting, audit, legal, regulatory, compliance and director and officer insurance costs as well as investor and public relations expenses associated with being a public company.

#### **Other income (expense)**

Other income consists primarily of interest income. Interest income consists of interest earned on our cash equivalents, which consist of money market funds. We expect our interest income to increase due to our investment of cash received from the final closing of our last tranche of Series



A convertible preferred units in March 2019 prior to the Reorganization and the sale of Series B convertible preferred stock in March 2019, as well as the net proceeds from this offering.

### Income taxes

Since our inception, we have not recorded any income tax benefits for the net losses we have incurred in each year or for our research and development tax credits, as we believe, based upon the weight of available evidence, that it is more likely than not that all of our net operating loss carryforwards and tax credits will not be realized. As of December 31, 2018, we had U.S. federal, state and city net operating loss carryforwards of \$14.2 million, \$0.6 million and \$3.8 million, respectively, which may be available to offset future taxable income. Federal net operating loss carryforwards of \$4.3 million were recorded in 2017 and the state and city net operating loss carryforwards expire at various dates through 2038. Federal net operating loss carryforwards of \$9.9 million recorded in 2018 will be available to offset 80% of taxable income for an indefinite period of time, until fully utilized. As of December 31, 2018, we also had federal tax credits of \$0.4 million, which may be used to offset future tax liabilities. These tax credit carryforwards will expire in 2038. We have recorded a full valuation allowance against our net deferred tax assets at each balance sheet date.

### Results of operations

We commenced operations in August 2017. Accordingly, our consolidated financial statements and results of operations for the period from our inception through December 31, 2017 reflect only approximately three and a half months of operations. For that reason, there is limited comparability of our results of operations for the period from inception through December 31, 2017 with those for the full year 2018.

#### Comparison of the period from August 18, 2017 (inception) to December 31, 2017 and the year ended December 31, 2018

The following table summarizes our results of operations for the period from August 18, 2017 (inception) to December 31, 2017 and the year ended December 31, 2018:

(in thousands)	Period from August 18, 2017 (inception) to December 31, 2017	Year ended December 31, 2018
<b>Operating expenses:</b>		
Research and development	\$ 2,799	\$ 9,898
General and administrative	1,861	8,593
Total operating expenses	4,660	18,491
Loss from operations	(4,660)	(18,491)
<b>Other income:</b>		
Interest income	21	678
Total other income, net	21	678
Net loss	\$(4,639)	\$(17,813)

#### Research and development expenses

Research and development expenses were \$2.8 million for the period from August 18, 2017 (inception) to December 31, 2017, compared to \$9.9 million for the year ended December 31, 2018.

This increase was primarily related to additional direct costs of \$2.5 million; manufacturing and research costs of \$1.8 million to further progress the development activities for our product

candidates, including preparations for clinical trials; personnel-related costs of \$2.5 million and professional and consulting fees of \$1.5 million, primarily due to increased headcount and consultant expenses. These increases were offset, in part, because of \$2.0 million of expenses we incurred in 2017 relating to the issuance of Junior Series A convertible preferred units in connection with the execution of the Pfizer license agreements.

We track outsourced development and manufacturing costs as well as personnel costs and other internal costs to specific development of product candidates. These external and internal research and development expenses are summarized by program in the table below:

(in thousands)	Period from August 18, 2017 (inception) to December 31, 2017	Year ended December 31, 2018
Nirogacestat	\$1,238	\$5,560
PD-0325901	1,045	2,675
Other	516	1,663
Total research and development expenses	\$2,799	\$9,898

*General and administrative expenses*

(in thousands)	Period from August 18, 2017 (inception) to December 31, 2017	Year ended December 31, 2018
Personnel-related	\$ 911	\$3,645
Equity-based compensation expense	—	906
Professional and consulting fees	887	3,235
Facility-related and other	63	807
Total general and administrative expenses	\$1,861	\$8,593

General and administrative expenses for the period from August 18, 2017 (inception) to December 31, 2017 were \$1.9 million, compared to \$8.6 million for the year ended December 31, 2018. The increase in personnel-related costs of \$2.7 million was primarily due to the hiring of key executives in 2018, including the appointment of our Chief Executive Officer, Chief Business Officer, Chief Medical Officer and General Counsel, as well as additional personnel in our general and administrative functions as we continued to expand our operations to support the organization. The increase in equity-based compensation expense of \$0.9 million was primarily due to incentive units granted to certain executives in 2018. The increase in professional and consulting fees of \$2.3 million was primarily due to outsourcing various general and administrative activities to third parties.

*Interest income*

Interest income for the year ended December 31, 2018 was \$0.7 million due to interest earned on invested cash balances.

## Liquidity and capital resources

### Overview

Since inception through December 31, 2018, we funded our operations primarily by net proceeds of \$62.9 million from the sale of our Series A convertible preferred units prior to the Reorganization. At December 31, 2018, we had available cash and cash equivalents of \$45.6 million.

In March 2019, we completed the final closing of \$39.4 million in gross proceeds from the sale of Series A convertible preferred units prior to our Reorganization, and raised \$125 million in gross proceeds from the sale of our Series B convertible preferred stock.

We have incurred operating losses and experienced negative operating cash flows since our inception and anticipate that we will continue to incur losses for at least the foreseeable future. Our net loss was \$17.8 million for the year ended December 31, 2018 and, as of December 31, 2018, we had an accumulated deficit of \$22.5 million.

### Funding requirements

Our primary use of cash is to fund operating expenses, primarily research and development expenditures. Cash used to fund operating expenses is impacted by the timing of when we pay these expenses, as reflected in the change in our outstanding accounts payable, accrued expenses and prepaid expenses.

We believe that our net proceeds from this offering, together with our cash and cash equivalents as of December 31, 2018, and cash proceeds received in March 2019 from the sale of Series A convertible preferred units prior to our Reorganization and the sale of our Series B convertible preferred stock, will be sufficient to meet our projected operating requirements through . We have based this estimate on assumptions that may prove to be wrong, and we could utilize our available capital resources sooner than we currently expect.

Our future funding requirements will depend on many factors, including the following:

- the initiation, progress, timing, costs and results of preclinical studies and clinical trials for our product candidates, including our ongoing potentially registrational Phase 3 clinical trial for nirogacestat and planned potentially registrational Phase 2b clinical trial for PD-0325901;
- the clinical development plans we establish for these product candidates;
- the number and characteristics of product candidates that we develop;
- the outcome, timing and cost of meeting regulatory requirements established by the FDA, EMA and other comparable foreign regulatory authorities;
- the terms of our existing and any future license or collaboration agreements we may choose to enter into, including the amount of upfront, milestone and royalty obligations;
- the other costs associated with in-licensing new technologies, such as any increased costs of research and development and personnel;
- the cost of filing, prosecuting, defending and enforcing our patent claims and other intellectual property rights;
- the cost of defending intellectual property disputes, including patent infringement actions brought by third parties against us or our product candidates;
- the effect of competing technological and market developments;

- the cost and timing of completion of commercial-scale outsourced manufacturing activities; and
- the cost of establishing sales, marketing and distribution capabilities for any product candidates for which we may receive regulatory approval in regions where we choose to commercialize our products on our own.

We will need additional funds to meet operational needs and capital requirements for clinical trials, other research and development expenditures, and business development activities. Because of the numerous risks and uncertainties associated with the development and commercialization of our product candidates, we are unable to estimate the amounts of increased capital outlays and operating expenditures associated with our current and anticipated clinical studies.

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

### Cash flows

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

(in thousands)	Period from August 18, 2017 (inception) to December 31, 2017	Year ended December 31, 2018
Cash used in operating activities	\$ (2,239)	\$(14,706)
Cash used in investing activities	(44)	(293)
Cash provided by financing activities	12,554	50,376
Net increase (decrease) in cash and cash equivalents	\$10,271	\$ 35,377

#### Cash flows used in operating activities

Net cash used in operating activities was \$14.7 million for the year ended December 31, 2018 and \$2.2 million for the period from August 18, 2017 (inception) to December 31, 2017.

Cash used in operating activities in the year ended December 31, 2018, was primarily due to our net loss for the year of \$17.8 million, adjusted by non-cash charges of \$1.1 million and a net change of \$2.0 million in our net operating assets and liabilities. The non-cash charges primarily consisted of \$1.1 million for equity-based compensation expense. The change in our net operating assets and liabilities was primarily due to an increase of \$2.7 million in accounts payable and accrued expenses and a \$1.5 million increase in deferred rent, partially offset by a \$2.2 million increase of other non-current assets.

Cash used in operating activities in the period from August 18, 2017 (inception) to December 31, 2017 was primarily due to our net loss for the year of \$4.6 million, adjusted by non-cash charges of \$2.0 million and net change of \$383,000 in our net operating assets and liabilities. The non-cash charges primarily consisted of \$2.0 million for expenses relating to the issuance of Junior Series A convertible preferred units in connection with the execution of the Pfizer licenses. The change in our net operating assets and liabilities was primarily due to an increase of \$653,000 in accounts payable and accrued expenses and a \$270,000 increase in other non-current assets.

#### *Cash flows from investing activities*

During the period from August 18, 2017 (inception) to December 31, 2017 and the year ended December 31, 2018, cash used from investing activities was \$44,000 and \$293,000, respectively, primarily related to purchases of property and equipment.

#### *Cash flows provided by financing activities*

During the period from August 18, 2017 (inception) to December 31, 2017, cash provided by financing activities was \$12.6 million from the issuance of Series A convertible preferred units prior to the Reorganization.

During the year ended December 31, 2018, cash provided by financing activities was \$50.4 million from the issuance of Series A convertible preferred units prior to the Reorganization.

### **Contractual obligations and other commitments**

The following table summarizes our contractual obligations as of December 31, 2018 and the effects that such obligations are expected to have on our liquidity and cash flows in future periods:

(in thousands)	Payments due by period				
	Total	Less than 1 year	1 to 3 years	4 to 5 years	More than 5 years
Operating lease commitments <sup>(1)</sup>	\$5,464	\$ 1,316	\$4,013	\$135	\$ —
Total	\$5,464	\$ 1,316	\$4,013	\$135	\$ —

(1) Amounts in the table reflect payments due for our facility in Durham, North Carolina and our headquarters in Stamford, Connecticut under two operating lease agreements that expire in August 2023 and November 2022, respectively.

We enter into contracts in the normal course of business with third-party contract research organizations for clinical trials, preclinical studies, manufacturing and other services and products for operating purposes. These contracts generally provide for termination following a certain period after notice and therefore we believe that our non-cancelable obligations under these agreements are not material and they are not included in the table above.

We have not included milestone or royalty payments or other contractual payment obligations in the table above if the timing and amount of such obligations are unknown or uncertain.

We have not recorded any reserves for uncertain tax positions as of December 31, 2017 or 2018.

### **Off-balance sheet arrangements**

We have not entered into any off-balance sheet arrangements and do not have holdings in any variable interest entities.

**Quantitative and qualitative disclosures about market risk**

The primary objectives of our investment activities are to ensure liquidity and to preserve capital. 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 \$10.3 million and \$45.6 million as of December 31, 2017 and 2018, respectively, which consisted of bank deposits and highly liquid money market funds. Historical fluctuations in interest rates have not been significant for us. We had no outstanding debt as of December 31, 2017 and 2018. Due to the short-term maturities of our cash equivalents, an immediate one percentage point change in interest rates would not have a material effect on the fair market value of our cash equivalents. To minimize the risk in the future, we intend to maintain our portfolio of cash equivalents in institutional market funds that are composed of U.S. Treasury and U.S. Treasury-backed repurchase agreements or short-term U.S. Treasury securities. We do not believe that inflation, interest rate changes or exchange rate fluctuations had a significant impact on our results of operations for any periods presented herein.

**Critical accounting policies and estimates**

This management's discussion and analysis of our financial condition and results of operations is based on our consolidated financial statements, which have been prepared in accordance with U.S. generally accepted accounting principles. The preparation of these consolidated 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 consolidated 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 described in more detail in Note 3 to our consolidated financial statements appearing elsewhere in this prospectus, we believe that the following accounting policies are those most critical to the judgments and estimates used in the preparation of our consolidated financial statements.

***Accrued research and development costs***

We record accrued expenses for estimated costs of our research and development activities conducted by third-party service providers, which include the conduct of clinical trials and preclinical studies. We record the estimated costs of research and development activities based upon the estimated amount of services provided but not yet invoiced and include these costs in accrued liabilities in the consolidated balance sheets and within research and development expense in the consolidated statement of operations. These costs are a significant component of our research and development expenses. We record accrued expenses for these costs based on factors such as estimates of the work completed and in accordance with agreements established with these third-party service providers. Any payments made in advance of services provided are recorded as prepaid assets, which are then expensed as the contracted services are performed.

We estimate the amount of work completed based on discussions with internal personnel and external service providers as to the progress or stage of completion of the services and the agreed-upon fee to be paid for such services. We make significant judgments and estimates in determining the accrued balance in each reporting period. As actual costs become known, we adjust our accrued estimates. Although we do not expect our estimates to be materially different

from amounts actually incurred, our understanding of the status and timing of services performed, the number of patients enrolled and the rate of patient enrollment may vary from our estimates and could result in us reporting amounts that are too high or too low in any particular period. Our accrued expenses are dependent, in part, upon the receipt of timely and accurate reporting from clinical research organizations and other third-party service providers. For the periods presented, we have experienced no material differences between our accrued expenses and actual expenses.

#### **Equity-based compensation**

Prior to the Reorganization, our predecessor, SpringWorks Therapeutics, LLC, granted incentive units, which we accounted for as equity-classified awards. As part of the Reorganization, the incentive units were exchanged for shares of our common stock, in the case of vested incentive units, and restricted common stock, in the case of unvested incentive units.

Our predecessor entity measured employee equity-based compensation based on the grant date fair value of the equity-based awards and recognized equity-based compensation expense on a straight-line basis over the requisite service period of the awards, which generally vest over a four-year period with the first 25% vesting following 12 months of employment or service and the remaining incentive units vesting in equal quarterly installments over the following 36 months. For awards subject to performance conditions, we recognize equity-based compensation expense using an accelerated recognition method over the remaining period when we determine that achievement of the milestone is probable. In 2018, our predecessor made an accounting policy election to recognize forfeitures as they occur upon adoption of guidance per Accounting Standard Update, or ASU, No. 2016-09, Compensation—Stock Compensation, or ASU 2016-09. The adoption of ASU 2016-09 did not have a material impact on our consolidated financial statements. The term “forfeitures” is distinct from “cancellations” or “expirations” and represents only the unvested portion of the surrendered equity-based award. Following the Reorganization, we expect to employ the same approach towards equity-based compensation.

We recognize compensation expense for equity-based awards granted to non-employees over the related service period of the award.

We classify equity-based compensation expense in our consolidated statement of operations in the same manner in which the award recipient's salary and related costs are classified or in which the award recipient's service payments are classified.

For any incentive units or options that our predecessor entity issued and for any future stock options that we may issue, 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 recognized on a straight-line basis over the requisite service periods, which are generally the vesting period of the respective awards. Forfeitures are accounted for as they occur.

The Black-Scholes option-pricing model requires the use of subjective assumptions which determine the fair value of stock-based awards, including the expected term and the price volatility of the underlying stock. These assumptions include:

- *Fair value of common units*—See “Determination of the fair value of equity-based awards” below.
- *Expected term*—The expected term represents the period that the equity-based awards are expected to be outstanding. The expected term for our unit options and stock options was calculated based on the weighted average vesting term of the awards and the contract period, or simplified method, as allowed by the SEC.

- *Expected volatility*—Since we are not yet a public company and do not have any trading history for our common stock, the expected volatility was estimated based on the average historical volatilities of common stock of comparable publicly traded entities over a period equal to the expected term of the unit options and stock option grants. The comparable companies were chosen based on their size, stage in the life cycle or area of specialty. We will continue to apply this process until enough historical information regarding the volatility of our own stock price becomes available.
- *Risk-free interest rate*—The risk-free interest rate is based on the U.S. Treasury yield in effect at the time of grant for zero-coupon U.S. Treasury notes with maturities approximately equal to the expected term of the awards.
- *Expected dividend*—We have never paid dividends on our common stock and have no plans to pay dividends on our common stock. Therefore, we used an expected dividend yield of zero.

#### *Determination of the fair value of equity-based awards*

As there has been no public market to date for the common units or incentive units of our predecessor entity which operated as a limited liability company, the estimated fair value of our common units and incentive units has been approved by our board of directors, with input from management, as of the date of each award grant, considering our most recently available independent third-party valuations of common units and incentive units and our board of directors assessment, with input from management, of additional objective and subjective factors that we believed were relevant and which may have changed from the date of the most recent valuation through the date of the grant. In addition, following the Reorganization there remains no public market for our common stock to date. The estimated fair value of our common stock has been determined by our board of directors as of the date of each award grant considering our most recently available independent third-party valuations of common stock and our board of directors' assessment of additional objective and subjective factors that it believed were relevant and which may have changed from the date of the most recent valuation through the date of the grant. These independent third-party valuations were performed in accordance with the guidance outlined in the American Institute of Certified Public Accountants' Accounting and Valuation Guide, Valuation of Privately-Held-Company Equity Securities Issued as Compensation. We estimated the value of our equity using the market approach, including the guideline public company method and a precedent transaction method which "backsolves" to a preferred price. We allocated equity value to our common units, incentive units and convertible preferred units or to our shares of common stock and shares of our convertible preferred stock, as the case may be, using an option-pricing method, or OPM. The OPM treats common securities and preferred securities as call options on the total equity value of a company, with exercise prices based on the value thresholds at which the allocation among the various holders of a company's securities changes. Under this method, the common and incentive units have value only if the funds available for distribution exceed the value of the convertible preferred units' liquidation preferences at the time of a liquidity event, such as a strategic sale, merger or initial public offering, or IPO.

As of January 31, 2018, our third-party valuation report estimated a valuation of our common and incentive units of \$0.12 per unit. As of April 17, 2018, our third-party valuation report estimated a valuation of our common and incentive units of \$0.22 per unit. As of February 28, 2019, our third-party valuation report estimated a valuation of our common and incentive units of \$0.25 per unit. As of March 31, 2019, our third-party valuation report estimated a value of our common and incentive units of \$0.35 per unit.

In addition to considering the results of these third-party valuations, management considered various objective and subjective factors to determine the fair value of our common units,



incentive units and common stock as of each grant date, which may be a date later than the most recent third-party valuation date, including:

- the prices of our preferred securities sold to or exchanged between outside investors in arm's length transactions, and the rights, preferences and privileges of our preferred securities as compared to those of our common units, incentive units or common stock, including the liquidation preferences of our preferred securities;
- the progress of our research and development efforts, including the status of preclinical studies and planned clinical trials for our product candidates;
- our financial position, including cash on hand, and our historical and forecasted performance and operating results;
- our stage of development and business strategy and the material risks related to our business and industry;
- the achievement of enterprise milestones, including entering into collaboration and license agreements;
- the valuation of publicly traded companies in the life sciences and biotechnology sectors, as well as recently completed mergers and acquisitions of peer companies;
- any external market conditions affecting the biotechnology industry, and trends within the biotechnology industry;
- the likelihood of achieving a liquidity event for the holders of our common units, incentive units and common stock, such as an IPO, or a sale of our company, given prevailing market conditions; and
- the analysis of IPOs and the market performance of similar companies in the biopharmaceutical industry.

The assumptions underlying these valuations represent management's best estimates, which involve inherent uncertainties and the application of management judgment. As a result, if factors or expected outcomes change and we use significantly different assumptions or estimates, our equity-based compensation expense could be materially different. Following the completion of this offering, the fair value of our common stock will be determined based on the quoted market price of our common stock.

Stock-based compensation expense was \$0 and \$1.1 million for the period from August 18, 2017 (inception) to December 31, 2017 and the year ended December 31, 2018, respectively.

### **Recent accounting pronouncements**

See Note 3 to our consolidated financial statements "Summary of Significant Accounting Policies—Recently Issued Accounting Pronouncements" for more information.

### **Emerging growth company status and JOBS Act accounting election**

We qualify as an "emerging growth company," or EGC, as defined in the Jumpstart Our Business Startups Act of 2012, as amended, or the JOBS Act. As an EGC, we may take advantage of specified reduced disclosure and other requirements that are otherwise applicable generally to public companies. These provisions include, but are not limited to:

- being permitted to present only two years of audited financial statements in this prospectus and only two years of related “Management’s discussion and analysis of financial condition and results of operations” in our periodic reports and registration statements, including this prospectus;
- not being required to comply with the auditor attestation requirements of Section 404 of the Sarbanes-Oxley Act of 2002, as amended;
- reduced disclosure obligations regarding executive compensation in our periodic reports, proxy statements and registration statements, including in this prospectus; and
- exemptions from the requirements of holding a nonbinding advisory vote on executive compensation and stockholder approval of any golden parachute payments not previously approved.

We may take advantage of these exemptions until we are no longer an EGC. We will cease to be an EGC on the date that is the earliest of (i) the last day of the fiscal year in which we have total annual gross revenues of \$1.07 billion or more; (ii) the last day of 2024; (iii) the date on which we have issued more than \$1.0 billion in nonconvertible debt during the previous three years; or (iv) the last day of the fiscal year in which we are deemed to be a large accelerated filer under the rules of the Securities and Exchange Commission, or SEC, which means the market value of our common stock that is held by non-affiliates exceeds \$700 million as of the prior June 30th. We may choose to take advantage of some but not all of these exemptions. We have taken advantage of reduced reporting requirements in this prospectus. Accordingly, the information contained herein may be different from the information you receive from other public companies in which you hold stock. In addition, the JOBS Act provides that an EGC can take advantage of an extended transition period for complying with new or revised accounting standards. This provision allows an EGC to delay the adoption of some accounting standards until those standards would otherwise apply to private companies. We have elected to use this extended transition period for complying with new or revised accounting standards that have different effective dates for public and private companies until the earlier of the date we (i) are no longer an EGC or (ii) affirmatively and irrevocably opt out of the extended transition period provided in the JOBS Act. As a result, our financial statements may not be comparable to companies that comply with new or revised accounting pronouncements as of public company effective dates.

## Business

### Overview

We are a clinical-stage biopharmaceutical company applying a precision medicine approach to acquiring, developing and commercializing life-changing medicines for underserved patient populations suffering from devastating rare diseases and cancer. We have a differentiated portfolio of small molecule targeted oncology product candidates and are advancing two potentially registrational clinical trials in rare tumor types, as well as several other programs addressing highly prevalent, genetically defined cancers. Our strategic approach and operational excellence in clinical development have enabled us to rapidly advance our two lead product candidates into late-stage clinical trials while simultaneously entering into multiple shared-value partnerships with industry leaders to expand our portfolio. From this foundation, we are continuing to build a differentiated, global biopharmaceutical company intensely focused on understanding patients and their diseases in order to develop transformative targeted medicines.

Our most advanced product candidate, nirogacestat, is an oral, small molecule gamma secretase inhibitor, or GSI, initially in development for the treatment of desmoid tumors, a rare and often debilitating and disfiguring soft tissue tumor for which there are currently no therapies approved by the U.S. Food and Drug Administration, or FDA. We believe nirogacestat may address the significant limitations associated with existing treatment options and has the potential to become the first therapy approved by the FDA for both newly diagnosed and previously treated desmoid tumors. Since we licensed nirogacestat from Pfizer Inc., or Pfizer, in August 2017, the FDA has granted us both Orphan Drug Designation and Fast Track Designation for this indication. In May 2019, we announced the initiation of the DeFi trial, a potentially registrational Phase 3 clinical trial of nirogacestat for patients with desmoid tumors. We expect to provide an update on the DeFi trial in 2020.



Our second product candidate is PD-0325901, an oral, small molecule MEK inhibitor initially in development for the treatment of neurofibromatosis type 1-associated plexiform neurofibromas, or NF1-PN, a rare tumor of the peripheral nerve sheath that causes significant pain and disfigurement, and that most often manifests in children. We believe that PD-0325901 has the potential to offer a best-in-class combination of tolerability and efficacy to enable the long-term treatment required for this patient population, as compared to other MEK inhibitors. As with nirogacestat, we licensed PD-0325901 from Pfizer in August 2017; since then, the FDA has granted us both Orphan Drug Designation and Fast Track Designation for NF1-PN. We expect to commence a potentially registrational Phase 2b clinical trial of PD-0325901 for patients with NF1-PN in the third quarter of 2019.

In addition to our late-stage programs in rare oncology indications, we have expanded our portfolio to develop targeted therapies for the treatment of highly prevalent, genetically defined cancers. To advance this strategy, we are taking a precision medicine approach in collaboration with industry leaders, including BeiGene, Ltd., or BeiGene, to develop combination therapies with nirogacestat and PD-0325901, as well as new standalone medicines. The first of these efforts is our ongoing collaboration with BeiGene, under which patients with advanced or refractory solid tumors harboring *RAS* mutations, *RAF* mutations and other MAPK pathway aberrations are being enrolled in a Phase 1b clinical trial evaluating the combination of PD-0325901 and BeiGene's investigational *RAF* dimer inhibitor lifirafenib.

Furthermore, we intend to continue to expand our portfolio by licensing additional programs with strong biological rationales and validated mechanisms of action. We also plan to continue using shared-value partnerships to maximize the potential of our therapies to serve patients. We believe that our clinical development capabilities and innovative partnership approach will

continue to allow us to expand our shared-value relationships with innovators and maximize the potential of our existing and future portfolio.

The following table summarizes our current portfolio of product candidates:

	Indication	Preclinical	Phase 1	Phase 2	Phase 3	FDA Regulatory Designations	Key Anticipated Milestones	Partner / Collaborator
<b>Nirogacestat</b> <i>Gamma secretase inhibitor</i>	Desmoid Tumors	PHASE 3 (DeFi Trial)				<ul style="list-style-type: none"> <li>Orphan Drug Designation</li> <li>Fast Track Designation</li> </ul>	<ul style="list-style-type: none"> <li>Trial update: 2020</li> </ul>	
<b>PD-0325901</b> <i>MEK 1/2 inhibitor (MEK)</i>	NF1-Associated Plexiform Neurofibromas	PHASE 2B				<ul style="list-style-type: none"> <li>Orphan Drug Designation</li> <li>Fast Track Designation</li> </ul>	<ul style="list-style-type: none"> <li>Potentially registrational trial start: 3Q19</li> </ul>	
<b>PD-0325901 + Lirafenib</b> <i>MEK1 + RAF dimer inhibitor</i>	RAS/RAF Mutant and Other MAPK Pathway Aberrant Solid Tumors	PHASE 1B					<ul style="list-style-type: none"> <li>Trial update: 2020</li> </ul>	
<b>BGB-3245<sup>(1)</sup></b> <i>RAF dimer inhibitor</i>	RAF Mutant Solid Tumors	PC					<ul style="list-style-type: none"> <li>Initiate clinical trial.</li> </ul>	

(1) Being developed by MapKure, LLC, or MapKure, a newly formed entity jointly owned by us and BeiGene.

**Nirogacestat** is currently in the potentially registrational Phase 3 DeFi clinical trial for the treatment of desmoid tumors, which are rare and often debilitating and disfiguring soft tissue tumors. Desmoid tumors can aggressively invade surrounding healthy tissues and cause significant morbidities, including severe pain, internal bleeding, incapacitating loss of range of motion and, in rare cases, death. There are currently no therapies approved by the FDA for the treatment of desmoid tumors. Nirogacestat has been generally well tolerated in over 200 subjects and clinical activity was observed in the desmoid tumor patients enrolled in two previous clinical trials, many of whom had been heavily pre-treated. Since then, the FDA has granted nirogacestat both Orphan Drug Designation and Fast Track Designation for the treatment of desmoid tumors. We are currently conducting the DeFi trial, a double-blind, randomized, placebo-controlled clinical trial in adults with progressing desmoid tumors. We believe that we have designed the DeFi trial such that, if nirogacestat demonstrates clinical activity consistent with that observed in desmoid tumor patients treated to date with nirogacestat, the primary endpoint of this clinical trial should be met. If the results are favorable, we plan to file for marketing approval for nirogacestat in the United States and select international markets.

**PD-0325901** is expected to begin a potentially registrational Phase 2b clinical trial for the treatment of NF1-PN in the third quarter of 2019. NF1-PN is a rare tumor of the peripheral nerve sheath that causes significant pain and disfigurement, and that most often manifests in children. There are currently no therapies approved by the FDA for the treatment of NF1-PN. In a previous Phase 2 clinical trial conducted in NF1-PN patients, PD-0325901 was observed to be clinically active and generally well tolerated. Since then, the FDA has granted PD-0325901 Orphan Drug Designation for the treatment of NF1 and Fast Track Designation for the treatment of NF1-PN. Our upcoming Phase 2b clinical trial will be an open-label, single-arm trial that will enroll both pediatric and adult NF1-PN patients. Given the clinical activity and tolerability observed with PD-0325901 in the previous NF1-PN clinical trial and informed by our discussions with the FDA, we designed our Phase 2b clinical trial in a manner that we believe has the potential to generate sufficient data to support approval in both pediatric and adult NF1-PN patients. If the results are favorable, we plan to file for marketing approval for PD-0325901 in the United States and select international markets.

**PD-0325901 + lifirafenib** is a combination therapy that we are evaluating with BeiGene in patients with advanced or refractory solid tumors that harbor various oncogenic driver mutations in the mitogen activated protein kinase, or MAPK, pathway, a signaling pathway whose constitutive activation has been reported in approximately 25% of human cancers owing to mutations in genes such as *RAS* and *RAF*. Lifirafenib is a RAF dimer inhibitor that was observed to be clinically active in advanced solid tumor patients with *RAS* and *RAF* mutations. We believe that lifirafenib's clinical activity should be enhanced with the addition of a potent and selective MEK inhibitor like PD-0325901, and potentially provide a best-in-class combination therapy for cancers whose growth is reliant on MAPK pathway signaling, such as those with mutations in *RAS* or *RAF*. In May 2019, we announced the initiation of an adaptive Phase 1b clinical trial that is currently enrolling patients in Australia with advanced or refractory solid tumors harboring relevant genetic mutations in the MAPK pathway.

**BGB-3245** is an investigational, oral, selective small molecule inhibitor of specific *BRAF* driver mutations and genetic fusions. BGB-3245 is being advanced via MapKure, a newly formed entity jointly owned by us and BeiGene. BGB-3245 was exclusively licensed to MapKure by BeiGene and is intended to be initially developed as a monotherapy. Preclinical activity has been observed with BGB-3245 in a range of tumor models with *BRAF* mutations and *BRAF* fusions that are presently unaddressed with approved BRAF-directed therapies. MapKure expects to initiate an adaptive Phase 1 dose escalation and expansion clinical trial evaluating BGB-3245 in genetically defined solid tumors by

## Our history and team

We were founded in August 2017 and concurrently acquired rights to certain assets from Pfizer, including exclusive worldwide licenses to niraparic acid and PD-0325901. We have raised \$228 million from leading strategic and institutional investors. Our strategic investors include Pfizer and GlaxoSmithKline plc, and our institutional investors include OrbiMed Advisors LLC, Bain Capital, LifeArc, Perceptive Advisors, Boxer Capital of the Tavistock Group, HBM Healthcare Investments, BVF Partners, Surveyor Capital (a Citadel company), Samsara BioCapital, ArrowMark Partners and other institutional investors.

We are led by biopharmaceutical experts with extensive experience in building and operating organizations that develop and deliver innovative medicines to patients. Our team has broad experience in clinical development, regulatory affairs, manufacturing and commercialization of novel medicines, particularly in rare diseases. Our Chief Executive Officer, Saqib Islam, has more than 25 years of experience in biopharmaceuticals and finance, and has led our key business operations and strategic corporate planning activities since our inception. Members of our management team have held leadership positions at companies that have successfully discovered, acquired, developed and commercialized therapies for a range of devastating rare diseases and cancers. These companies include Alexion Pharmaceuticals, Inc., AstraZeneca plc, Bamboo Therapeutics, Inc., Bristol-Myers Squibb Company, GlaxoSmithKline plc, Merck & Co., Inc., Moderna, Inc., Pfizer and United Therapeutics Corporation.

## Our strategy

Our goal is to continue building a differentiated, global biopharmaceutical company by acquiring, developing and commercializing transformative medicines for underserved patient populations. We aim to be an industry leader in rare diseases and targeted oncology and are advancing a diversified portfolio of programs with the intention of efficiently delivering safe and effective medicines to patients.

The key elements of our strategy include:

- **Efficiently advance our lead product candidates towards marketing approval.** We believe that our leading drug development capabilities will enable us to continue efficiently advancing our product candidates towards marketing approval, and we will make use of accelerated regulatory pathways when possible. Since our inception in August 2017, we have made rapid progress advancing two product candidates towards marketing approval. Our first product candidate, nirogacestat, was granted Orphan Drug Designation and Fast Track Designation by the FDA for the treatment of desmoid tumors and is currently being evaluated in the potentially registrational DeFi trial; we expect to provide an update on this trial in 2020. Our second product candidate, PD-0325901, was granted Orphan Drug Designation by the FDA for the treatment of NF1 and Fast Track Designation for the treatment of NF1-PN, and we expect to commence enrollment in a potentially registrational Phase 2b clinical trial for the treatment of NF1-PN in the third quarter of 2019.
- **Maximize the potential of our portfolio through strategic partnerships.** We have entered into strategic partnerships to develop innovative combination therapies that leverage emerging insights into the fundamental mechanisms that drive cancer. Our strategy is to align incentives among parties by sharing development costs and downstream economics for selected partnered programs. By pursuing this strategy, we believe that we can access promising therapies being developed across the biopharmaceutical industry for which there is scientific and clinical rationale for combinations with our existing product candidates. We have announced collaborations with BeiGene, and we intend to execute additional strategic partnerships in the future.
- **Commercialize our product candidates, if approved, to bring new medicines to underserved patient populations.** We intend to market and commercialize our product candidates, if approved, in the United States and select international markets, either alone or in partnership with others. We expect to build our medical affairs organization and commercial infrastructure using a focused and efficient approach, initially establishing market access, sales and marketing capabilities in a targeted manner that is appropriate for the relevant product opportunity. We believe that this approach will allow us to effectively reach the patients and physicians that our product candidates have been developed for and to maximize the commercial potential of our portfolio.
- **Deploy our value-driven approach to identify, acquire and develop new medicines.** We follow a scientifically rigorous approach to evaluating new opportunities to broaden our portfolio. When evaluating assets, we consider a variety of factors, including unmet medical need, biological rationale, feasibility of clinical development, potential for regulatory approval, intellectual property position, costs required to achieve both near- and long-term milestones, competitive landscape and commercial potential. Utilizing this strategy, we have continued to expand our reach in targeted oncology by collaborating with BeiGene to form MapKure, a new research-stage company that was recently created to develop precision medicines to treat patients with life-threatening diseases, with an initial focus on cancer. We intend to continue to work closely with our existing partners and other asset originators to further expand our portfolio in our current focus areas of rare diseases and targeted oncology.
- **Continue to cultivate a tightly integrated network of patient advocacy groups, key opinion leaders, research institutions and healthcare providers.** We believe that in order to develop our portfolio in an efficient and impactful manner, it is imperative to cultivate a network of key stakeholders. Integrating the experiences and insights from these stakeholders, which include the Desmoid Tumor Research Foundation, the Children's Tumor Foundation and leading academic physicians and researchers, continues to inform our approach to developing therapies that can transform the lives of patients and their families suffering from devastating rare diseases and cancer.

## Our product candidates

### ***Nirogacestat***

#### *Overview*

Nirogacestat (PF-03084014), our most advanced product candidate, is an oral, selective GSI that we are developing for the treatment of certain oncology indications. Gamma secretase is a protease complex that cleaves numerous transmembrane proteins, including amyloid precursor protein, or APP, Notch, HER4, E-cadherin, N-cadherin, BCMA and CD44. Cleavage of these transmembrane proteins by gamma secretase leads to a variety of signaling events that result from the untethering of the cytoplasmic domains of these proteins. Several of gamma secretase's substrates have been implicated in a variety of diseases, including APP in Alzheimer's disease and Notch in cancer, forming the rationale for evaluating gamma secretase as a therapeutic target. We believe there is significant potential for nirogacestat to address both newly diagnosed and previously treated desmoid tumors and has the potential to be used more broadly in cancer, either alone or in combination with other therapies.

Desmoid tumors are rare, non-metastatic soft tissue tumors that can occur in both children and adults. Depending on tumor size and location, desmoid tumors can cause severe morbidities such as pain, disfigurement, internal bleeding and incapacitating loss of range of motion. We exclusively licensed worldwide rights to nirogacestat from Pfizer in August 2017. In June 2018, the FDA granted nirogacestat Orphan Drug Designation for the treatment of desmoid tumors and in November 2018 the FDA granted nirogacestat Fast Track Designation for the treatment of adult patients with progressive, unresectable, recurrent or refractory desmoid tumors or deep fibromatosis.

Nirogacestat has been evaluated in eight clinical trials and over 200 subjects have been exposed to treatment. Nirogacestat's clinical activity was observed in the two previous clinical trials that enrolled desmoid tumor patients, in which nirogacestat was generally well tolerated. Pfizer conducted a Phase 1 clinical trial of nirogacestat as a treatment for various types of solid tumors. Five of the seven evaluable desmoid tumor patients enrolled in this clinical trial experienced a partial response, or PR, as measured by Response Evaluation Criteria in Solid Tumors v1.0, or RECIST v1.0, a commonly used set of measures for evaluating the response of solid tumors to treatment, yielding a 71% objective response rate, or ORR. In these seven desmoid tumor patients, median progression free survival, or PFS, had not been reached at the time of publication owing to the lack of patients progressing on therapy.

The National Cancer Institute, or NCI, then conducted a Phase 2 clinical trial evaluating nirogacestat as a treatment for desmoid tumors. Of the 17 patients enrolled in this clinical trial, 16 were evaluable for a response, five of whom had a confirmed PR and 11 of whom had stable disease, or SD, yielding a disease control rate of 100%. Furthermore, due to the lack of patients progressing on therapy, at the time of publication median PFS had not been reached.

Nirogacestat has been generally well tolerated in desmoid tumor patients as evidenced by the duration of time on therapy. In the Phase 1 clinical trial, the mean time on therapy was approximately four years. In the Phase 2 clinical trial, 59% of patients remained on therapy for at least two years, and as of May 2019, six patients were continuing to receive nirogacestat.

Based on these encouraging results, in May 2019, we announced the initiation of the DeFi trial, a potentially registrational Phase 3, double-blind, randomized, placebo-controlled clinical trial. We believe that we have designed the DeFi trial such that if nirogacestat demonstrates clinical

activity consistent with that observed in desmoid tumor patients treated to date with nirogacestat, the primary endpoint of this clinical trial, which is PFS, should be met. If the results are favorable, we plan to apply for marketing approval for nirogacestat in the United States and select international markets.

#### *Nirogacestat for treatment of desmoid tumors*

##### **Disease background**

Desmoid tumors, also referred to as aggressive fibromatosis or desmoid-type fibromatosis, are rare and often debilitating and disfiguring soft tissue tumors characterized by a growth pattern that can invade surrounding healthy tissues, including joints, muscle and viscera. The morbidity of a desmoid tumor is driven by the location of the tumor and the aggressiveness of its growth pattern. Mesentery desmoid tumors, arising in the abdominal cavity, can cause potentially life-threatening abdominal vasculature and bowel obstructions. Similarly, if a desmoid tumor occurs in the head and neck region, it can result in potentially life-threatening impingement on vital structures. When desmoid tumors occur near joints, even small lesions can result in debilitating loss of range of motion, impaired mobility and severe pain. While variable in size, in rare cases, desmoid tumors have been documented to grow in excess of 30 cm in diameter.

Patients with desmoid tumors can experience severe impacts on their quality of life. The French desmoid tumor patient advocacy group, SOS Desmoïde, published a national survey of its members in 2015 to assess pain burden in desmoid tumor patients; out of 102 respondents, 63% noted the presence of pain associated with their disease, 38% of whom characterized their pain as permanent. During the prospective development of patient-reported outcome tools for desmoid tumors, Memorial Sloan Kettering and Quintiles evaluated the impacts of desmoid tumors in 31 patients and found that 81% reported disfigurement, 68% reported range-of-motion impairment and 65% reported a negative impact on their activities of daily living as a result of their tumors.

Desmoid tumors typically occur in patients between the ages of 15 to 60 years and are more commonly diagnosed in the second and third decades of life, with a two-to-three times higher prevalence in females. The yearly incidence is estimated to be two to five cases per million, and accordingly we estimate that there are approximately new desmoid tumor patients diagnosed each year in the United States and Europe. We believe that there is also a large prevalent pool of desmoid tumor patients due to poor treatment options and the relatively low mortality of the disease. Most cases of desmoid tumor occur spontaneously and are associated with one of several mutations in the *CTNNB1* gene, which encodes for the  $\beta$ -catenin protein. There is also a subset of desmoid tumor patients whose tumors are attributable to germline mutations in the *APC* gene, which encodes for a protein involved in the degradation of  $\beta$ -catenin. These patients have a syndrome known as familial adenomatous polyposis, or FAP, and the incidence of desmoid tumors is 800 to 1,000 times higher in FAP patients as compared to the general population. When *APC* or *CTNNB1* mutations are present, tissue trauma, including surgery, pregnancy or soft tissue injury, can lead to the formation of desmoid tumors.

The clinical course of desmoid tumors varies across the patient population. Within any given patient, desmoid tumors can alternate between periods of rapid growth and stabilization, and spontaneous regressions have been reported in up to 20% of patients. Desmoid tumors can vary significantly in terms of their morphology and radiographic appearance but are generally routine to diagnose. Desmoid tumors are usually first noted upon physical examination or by using various imaging techniques, such as ultrasound, computed tomography, or CT, or magnetic resonance imaging, or MRI. Histologically, desmoid tumors appear with variable collagen



deposition and are not clearly circumscribed. Definitive diagnosis relies upon immunohistochemical stains for nuclear localization of  $\beta$ -catenin. Diagnosis can also be confirmed by screening for mutations in the *CTNNB1* and *APC* genes.

#### ***Current treatment landscape for desmoid tumors***

There are currently no therapies approved by the FDA for the treatment of desmoid tumors. Historically, desmoid tumors were treated with surgical resection, but this approach has become less favored due to an emerging body of evidence showing a post-surgical tumor recurrence rate of up to 70%, which can potentially increase disease burden and require additional intervention. In addition to the high recurrence rates, surgery itself carries risk of complications and can also be highly morbid, occasionally requiring limb amputation. Given the potential morbidities of surgery and the uncertain magnitude and durability of its benefit, physicians now typically adopt a watchful waiting approach for patients who historically may have been candidates for surgery. Despite its limitations, surgery is still used when a desmoid tumor presents significant risk of morbidity or mortality, such as tumors arising in the head and neck. Radiation therapy may also be used alone or in conjunction with surgery but is generally not preferred given the reported risk of developing secondary neoplasms.

In addition to these local treatments, systemic therapies have been used off-label with varying degrees of activity and tolerability. These therapies include chemotherapeutic agents, such as liposomal doxorubicin and vinblastine/methotrexate, non-steroidal anti-inflammatory drugs, anti-hormonal therapies and tyrosine kinase inhibitors, such as sorafenib, imatinib and pazopanib. Of these agents, only sorafenib has been studied in a randomized, double-blind, placebo-controlled clinical trial in patients with desmoid tumors; this Phase 3 clinical trial was investigator-initiated and did not have a biopharmaceutical industry sponsor. Although sorafenib demonstrated a statistically significant improvement in PFS compared to placebo, tolerability was a substantial issue; 20% of treated patients discontinued due to adverse events and an additional 22% of treated patients withdrew consent. At a median follow-up time of 27 months, 61% of the patients receiving sorafenib had discontinued treatment. Overall, we believe that the available off-label systemic therapies are poorly suited for the treatment of desmoid tumors and have not demonstrated an acceptable balance of safety and activity in this population. Therefore, we believe a significant unmet medical need exists for the treatment of desmoid tumors.

#### ***Our solution—nirogacestat for the treatment of desmoid tumors***

Nirogacestat is an oral, small molecule inhibitor of gamma secretase. We believe that nirogacestat can address the significant limitations associated with existing treatment options and has the potential to become the first therapy approved by the FDA for both newly diagnosed and previously treated desmoid tumors. In May 2019, we announced the initiation of our potentially registrational Phase 3 DeFi trial evaluating nirogacestat in patients with desmoid tumors.

#### ***Mechanism of action***

Nirogacestat is an oral, potent, selective, reversible, noncompetitive small molecule inhibitor of gamma secretase, an integral protease complex that cleaves numerous functionally important transmembrane proteins, including Notch. Gamma secretase's cleavage of Notch causes the release of the Notch intracellular domain, or NICD, which shuttles into the nucleus and activates transcription of downstream target genes. Notch signaling is a regulator of cell proliferation and its dysregulation has been implicated in many forms of cancer. In desmoid tumor cell lines, nirogacestat has been observed to significantly decrease NICD release and reduce downstream activity of the Notch signaling pathway and decrease tumor cell migration, invasion and growth.

**Clinical experience with nirogacestat**

Over 200 subjects have been exposed to nirogacestat across eight clinical trials, not including our ongoing DeFi trial in desmoid tumor patients. Nirogacestat's clinical activity was observed in the two previous clinical trials that enrolled desmoid tumor patients. Pfizer conducted a Phase 1 dose-escalation clinical trial in patients with solid tumors (A8641014), a subset of whom had a diagnosis of desmoid tumor. Given the activity of nirogacestat in the desmoid tumor patients treated in this Phase 1 clinical trial, the NCI conducted a Phase 2 clinical trial in desmoid tumor patients (W1180798), which evaluated nirogacestat at 150 mg twice daily, or BID, the same dose being used in our DeFi trial. Nirogacestat was initially intended to be developed as a potential treatment for Alzheimer's disease, but early clinical trials evaluating its pharmacokinetics and biodistribution did not demonstrate adequate brain exposure to pursue this indication. Given Notch's role in cancer, nirogacestat was subsequently investigated as a potential antitumor agent. We believe that the peripherally restricted exposure of nirogacestat, as well as the tolerability profile it has demonstrated across clinical trials to date, positions it as a potentially best-in-class GSI for oncology indications.

Nirogacestat was also investigated in three Phase 1 clinical trials conducted in healthy adult subjects to assess the pharmacokinetics and pharmacodynamics of single and multiple doses (A8641001, A8641002 and A8641008). Nirogacestat was further studied in clinical trials in patients with advanced cancers either as a monotherapy or in combination with other agents (A8641016, A8641019 and A8641020). Across all clinical trials, summarized in the table below, the dose range evaluated for nirogacestat was 1 mg once daily, or QD, to 330 mg BID.

<b>Trial sponsor</b>	<b>Trial ID (Phase)</b>	<b>Subjects exposed</b>	<b>Agent used in combination</b>
<b>Pfizer</b>	A8641001 (Phase 1)	26 NHV	N/A
	A8641002 (Phase 1)	42 NHV	N/A
	A8641008 (Phase 1)	10 NHV	N/A
	A8641014 (Phase 1)	64 solid tumor patients, including 7 evaluable with desmoid tumors 8 T-ALL/LBL patients	N/A
	A8641016 (Phase 1b)	29 metastatic TNBC or locally recurrent/advanced TNBC patients	Docetaxel (chemotherapeutic agent)
	A8641019 (Phase 1/2)	3 treatment naïve mPDAC patients	Nab-paclitaxel and gemcitabine (chemotherapeutic agents)
	A8641020 (Phase 2)	19 metastatic TNBC patients	N/A
<b>NCI</b>	W1180798 (Phase 2)	17 desmoid tumor patients	N/A

*Abbreviations: normal healthy volunteers (NHV), T-cell acute lymphoblastic leukemia (T-ALL), triple negative breast cancer (TNBC), lymphoblastic leukemia (LBL) and metastatic pancreatic ductal adenocarcinoma (mPDAC).*

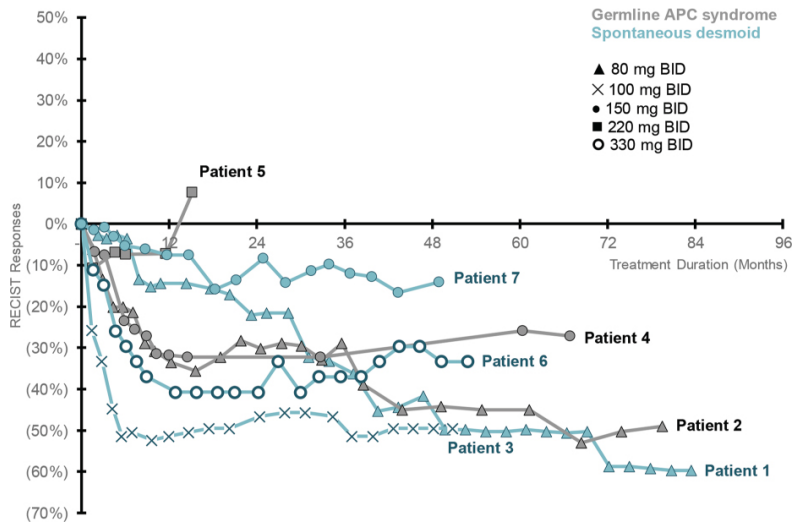
**Phase 1 dose-escalation clinical trial (A8641014)**

In June 2009, Pfizer commenced a Phase 1 dose-escalation clinical trial in patients with various solid tumors. This clinical trial was designed to determine the maximum tolerated dose, or MTD, ascertain the recommended Phase 2 dose and evaluate the safety and tolerability of nirogacestat. Sixty-four patients with solid tumors received doses of nirogacestat and the MTD was determined to be 220 mg BID. The recommended Phase 2 dose was determined to be 150 mg BID, given its comparable pharmacodynamic activity but more tolerable profile as compared to 220 mg BID.

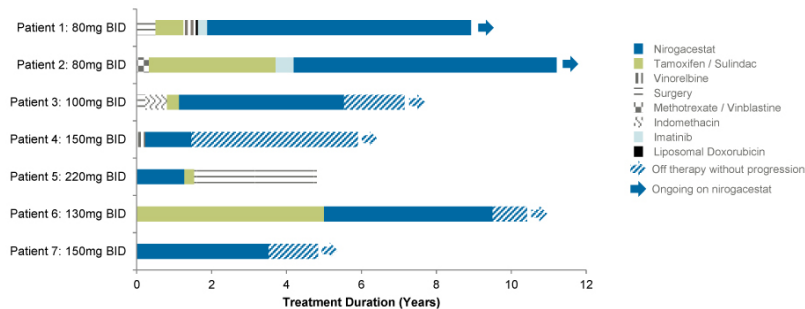
Of the 64 solid tumor patients enrolled, 46 were evaluable for response, seven of whom had desmoid tumors. Of these desmoid tumor patients, five experienced a PR (defined as at least a 30% reduction in the target lesion as measured by RECIST v1.0), yielding a 71% ORR. In the

evaluable desmoid tumor patients, median PFS had not been reached at the time of publication owing to the lack of patients progressing on therapy. Patients whose desmoid tumors arose from either germline mutations in *APC* or spontaneous mutations were enrolled in this clinical trial. Patients with both of these tumor mutational characteristics experienced an objective response. Of the 39 evaluable non-desmoid tumor patients in this clinical trial, whose diagnoses included colon, breast, thyroid, non-small cell lung and pancreatic cancer, only one patient experienced an objective response. The results of this clinical trial were reported in peer-reviewed medical journals in 2014 and 2017.

The following graph shows RECIST v1.0 responses for the seven evaluable desmoid tumor patients enrolled in this Phase 1 clinical trial:



The following chart depicts the treatment course for each of the seven evaluable desmoid tumor patients in the Phase 1 clinical trial. Each bar shows the duration of clinical benefit for all therapies received since the time of diagnosis. Arrows on the right indicate patients who were still free of a new intervention, either on nirogacestat treatment (solid) or off nirogacestat treatment (striped), at the time of publication. As shown in the table below the chart, several of these patients were refractory to a number of previous interventions. The mean treatment duration for these patients was greater than four years, suggesting favorable, long-term tolerability of nirogacestat.



Patient # Dose	Treatment Method / Duration					
	1 <sup>st</sup> Regimen	2 <sup>nd</sup> Regimen	3 <sup>rd</sup> Regimen	4 <sup>th</sup> Regimen	5 <sup>th</sup> Regimen	6 <sup>th</sup> Regimen
Patient 1 80mg BID	Surgery 26 weeks	Tamoxifen / Sulindac 39 weeks	Vinorelbine 17 weeks	Liposomal Doxorubicin 3 weeks	Imatinib 13 weeks	Nirogacestat 366 weeks
Patient 2 80mg BID	Methotrexate / Vinblastine 17 weeks	Tamoxifen / Sulindac 176 weeks	Imatinib 25 weeks	Nirogacestat 365 weeks	Nirogacestat 84 weeks	Nirogacestat
Patient 3 100mg BID	Surgery 12 weeks	Indomethacin 30 weeks	Tamoxifen / Sulindac 17 weeks	Nirogacestat 229 weeks	Off therapy w/o progression 84 weeks	Off therapy w/o progression
Patient 4 150mg BID	Vinorelbine 12 weeks	Nirogacestat 64 weeks	Off therapy w/o progression 231 weeks	Off therapy w/o progression 48 weeks	Off therapy w/o progression	Off therapy w/o progression
Patient 5 220mg BID	Nirogacestat 66 weeks	Tamoxifen / Sulindac 14 weeks	Surgery 170 weeks	Off therapy w/o progression	Off therapy w/o progression	Off therapy w/o progression
Patient 6 130mg BID	Tamoxifen / Sulindac 260 weeks	Nirogacestat 234 weeks	Off therapy w/o progression 48 weeks	Off therapy w/o progression	Off therapy w/o progression	Off therapy w/o progression
Patient 7 150mg BID	Nirogacestat 183 weeks	Off therapy w/o progression 69 weeks	Off therapy w/o progression	Off therapy w/o progression	Off therapy w/o progression	Off therapy w/o progression

The 64 patients enrolled in the Phase 1 clinical trial received nirogacestat doses ranging from 20 mg BID to 330 BID. The most common treatment-related adverse events (recorded in greater than 10% of patients) were diarrhea (55%), nausea (38%), fatigue (30%), hypophosphatemia (27%), vomiting (23%), rash (20%) and decreased appetite (17%). The majority of adverse events were Grade 1 through 3 and dose reductions due to treatment-related adverse events were infrequent. Treatment-related adverse events that led to temporary discontinuation or dose reduction included diarrhea, hypophosphatemia, rash, nausea, vomiting and fatigue, and most of these subsequently resolved. Seven patients (11%) permanently discontinued treatment due to adverse events. Of these, four patients (6%) discontinued due to a treatment-related adverse event (one for Grade 4 anaphylactic shock, one for Grade 1 visual impairment, one for a Grade 3 drug hypersensitivity reaction and one for Grade 3 rash). The Grade 4 anaphylactic shock adverse event was considered by the trial investigator to be related to intravenous treatment with morphine for pain control, as this adverse event started 25 minutes after morphine administration. However, treatment-related causality could not be excluded because the patient had received their first dose of nirogacestat before intravenous administration of morphine.

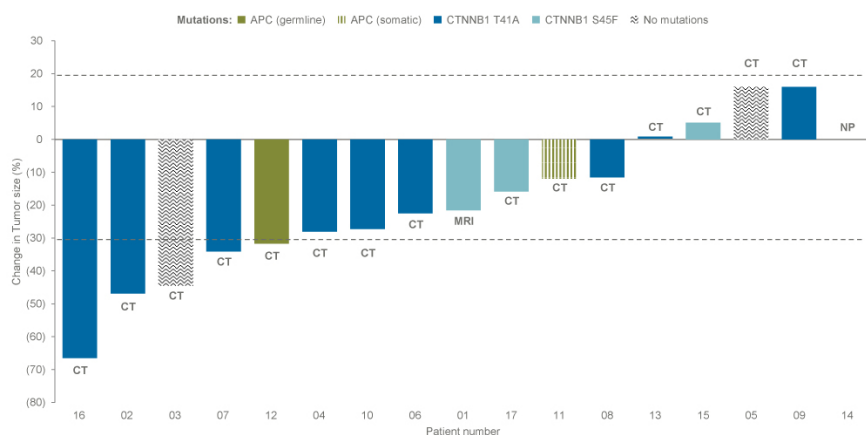
Long-term follow-up of the seven evaluable desmoid tumor patients in the Phase 1 clinical trial confirmed that all five patients who achieved a PR continued to maintain their responses between 48 and 73+ months. As of December 2016, four patients (patients 3, 4, 6 and 7) had stopped receiving nirogacestat but continued to be followed and remain free of progression between 11 and 53+ months after cessation of therapy. In all, the mean duration of clinical benefit observed was greater than 63 months. In addition, two patients continued to receive nirogacestat under a compassionate access protocol beyond the 2017 publication date, and as of November 2018, one of these patients remained on treatment, having received nirogacestat for over nine years. We believe the duration of clinical benefit and the tolerability profile observed in this Phase 1 clinical trial supported the rationale for the NCI's subsequent clinical investigation of nirogacestat in desmoid tumor patients.

*Phase 2 clinical trial (W1180798)*

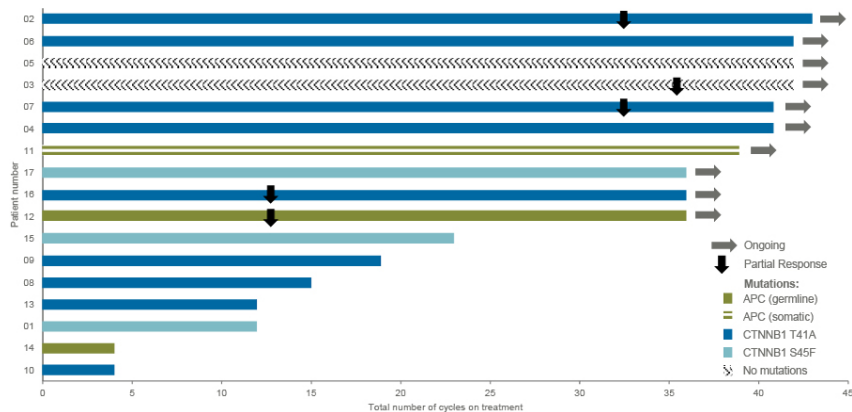
The NCI commenced a Phase 2 clinical trial in desmoid tumor patients in November 2014. This clinical trial enrolled 17 desmoid tumor patients, who received nirogacestat every day in three-week cycles at the recommended Phase 2 dose of 150 mg BID. Patients were enrolled irrespective of their underlying mutation, which included germline and spontaneous APC mutations, as well as spontaneous CTNNB1 mutations (T41A and S45F). These patients were heavily pre-treated, having failed a median of four prior treatments (with a range of one to nine), which included various systemic therapies and local interventions, including surgery.

Sixteen patients were evaluable for a response using RECIST v1.1. Five patients had a confirmed PR and eleven patients had SD, yielding a disease control rate of 100% among the evaluable patients. Four of the five patients with a confirmed PR on nirogacestat had previously been treated with tyrosine kinase inhibitors, including sorafenib and imatinib, without a reported response. Median PFS had not been reached at the time of publication owing to the lack of patients progressing on therapy. Clinical benefit was observed independent of underlying mutation, number of previous treatments and type of previous treatments. As of May 2019, six of the patients enrolled in the Phase 2 clinical trial were still receiving nirogacestat.

Best responses in the Phase 2 clinical trial, as measured by RECIST v1.1, are shown in the following chart. Dotted lines represent cutoffs for PR (defined as a 30% reduction from baseline) and for progressive disease (defined as a 20% increase from baseline). SD is reflected between the dotted lines. Patient #01 was missing a baseline CT measurement and therefore MRI was used. Response evaluation was not possible for patient #14.



The following chart depicts treatment duration, clinical response and mutational status of desmoid tumor patients in the Phase 2 clinical trial. PR is denoted using black arrows, and the ten patients continuing on therapy at the time of publication are denoted using gray arrows.



All patients in the Phase 2 clinical trial experienced at least one Grade 1 or Grade 2 adverse event. The most commonly reported adverse events regardless of grade and occurring in at least 30% of patients included diarrhea (76%), hypophosphatemia (76%), maculopapular rash (71%), aspartate aminotransferase increase (59%), nausea (53%), lymphocyte count decrease (53%), dry mouth (41%), alanine aminotransferase increase (35%) and anemia (35%). With the exception of hypophosphatemia, these adverse events were all reported as Grade 1 or Grade 2. The only Grade 3 adverse event occurring in at least 20% of patients was hypophosphatemia (47%), which is a known class effect of GSIs and was reversible with oral phosphate replacement therapy in the trial. Four patients required a dose reduction and one patient discontinued therapy due to Grade 2 urticaria that was not responsive to dose reduction. There were no Grade 4 adverse events reported.

**DeFi trial and regulatory pathway for nirogacestat in desmoid tumors**

Based upon the degree of clinical benefit for desmoid tumor patients observed in the Phase 1 and Phase 2 clinical trials, as well as our discussions with the FDA, in May 2019, we announced the initiation of our potentially registrational DeFi trial. The DeFi trial is being conducted under our open Investigational New Drug application, or IND, for nirogacestat.

The DeFi trial is a Phase 3, double-blind, randomized, placebo-controlled clinical trial being conducted at clinical sites in North America and Europe. The DeFi trial is designed to evaluate the efficacy, safety and tolerability of nirogacestat compared to placebo in patients with progressing desmoid tumors. This clinical trial will consist of two phases: a double-blind phase and an optional open-label extension, or OLE, phase. This clinical trial is enrolling desmoid tumor patients whose tumors have grown by at least 20% in the last 12 months as measured by RECIST v1.1 and will include both treatment-naïve and relapsed and refractory patients. Given the treatment effect observed in previous clinical trials, patients are eligible for enrollment irrespective of the number and type of previous treatments or the specific underlying mutations in APC or CTNNB1.

Patients are being randomized in a 1:1 ratio to receive 150 mg BID of nirogacestat or placebo every day for 28-day cycles. Eligible patients with confirmed disease progression on trial may enter the optional OLE phase to receive 150 mg BID of nirogacestat. We expect to enroll approximately 100 patients in this clinical trial. The primary PFS endpoint is defined as the time from randomization until the date of assessment of progression as determined using RECIST v1.1,

or death by any cause. The documented date of radiographic progression will be determined by blinded independent central review. The FDA has stated that a PFS primary endpoint may support registration in an adequately designed trial with sufficient follow-up. In addition, the DeFi trial has been designed to enable a potential interim analysis.

The design of the DeFi trial is summarized in the schematic below:



Key secondary endpoints of the DeFi trial include safety and tolerability, ORR, duration of response and change in tumor volume. Patient-reported outcomes will also be key secondary endpoints in the DeFi trial and will be evaluated using several outcome instruments, including the Memorial Sloan Kettering/Desmoid Tumor Research Foundation Desmoid Tumor Impact and Desmoid Tumor Symptom scales, the Patient-Reported Outcomes Measurement Information System Physical Function scale, the European Organization for Research and Treatment of Cancer Quality of Life Questionnaire-Core 30 and the Brief Pain Inventory. These instruments were selected to measure symptoms, impact of symptoms on daily living and outcomes that are most relevant to desmoid tumor patients.

In June 2018, the FDA granted nirogacestat Orphan Drug Designation for the treatment of desmoid tumors and in November 2018 the FDA granted nirogacestat Fast Track Designation for the treatment of adult patients with progressive, unresectable, recurrent or refractory desmoid tumors or deep fibromatosis. If the results from the DeFi trial are favorable, we plan to file for marketing approval for nirogacestat in the United States and select international markets.

### **PD-0325901**

#### *Overview*

PD-0325901 is an oral, small molecule inhibitor of MEK1 and MEK2. MEK proteins occupy a pivotal position in the MAPK pathway, a key signaling network that regulates cell growth and survival, and that plays a central role in multiple oncology and rare disease indications.

We are initially investigating PD-0325901 as a monotherapy for the treatment of patients with NF1-PN, a rare disorder characterized by mutations in the MAPK pathway that lead to the growth of peripheral nerve sheath tumors, which cause significant pain, disfigurement and morbidity. NF1-PN are most often diagnosed in the first two decades of life and are characterized by aggressive tumor growth, which is typically more rapid during childhood. In August 2017, we exclusively licensed worldwide rights to PD-0325901 from Pfizer. In October 2018, the FDA granted PD-0325901 Orphan Drug Designation for the treatment of NF1, and in May 2019, the FDA granted PD-0325901 Fast Track Designation for the treatment of NF1-PN.

PD-0325901 has been evaluated in eight Phase 1 and 2 clinical trials, with over 200 subjects having been exposed to treatment. A Phase 2 clinical trial was conducted by the Neurofibromatosis Clinical Trial Consortium, which evaluated PD-0325901 in 19 NF1-PN patients. In this clinical trial, 42% of patients experienced an objective response (defined as at least a 20% volumetric reduction in their target PN tumor) by 12 months of treatment. Based on the strength of these data and our interactions with the FDA, we expect to initiate our potentially registrational single-arm, open-label Phase 2b clinical trial of PD-0325901 in NF1-PN patients in

the third quarter of 2019. The primary endpoint for this clinical trial will be ORR, with an objective response defined as at least a 20% reduction in tumor volume from baseline as determined by volumetric MRI assessment. If the results of this clinical trial are favorable, we plan to file for marketing approval for PD-0325901 in the United States and select international markets.

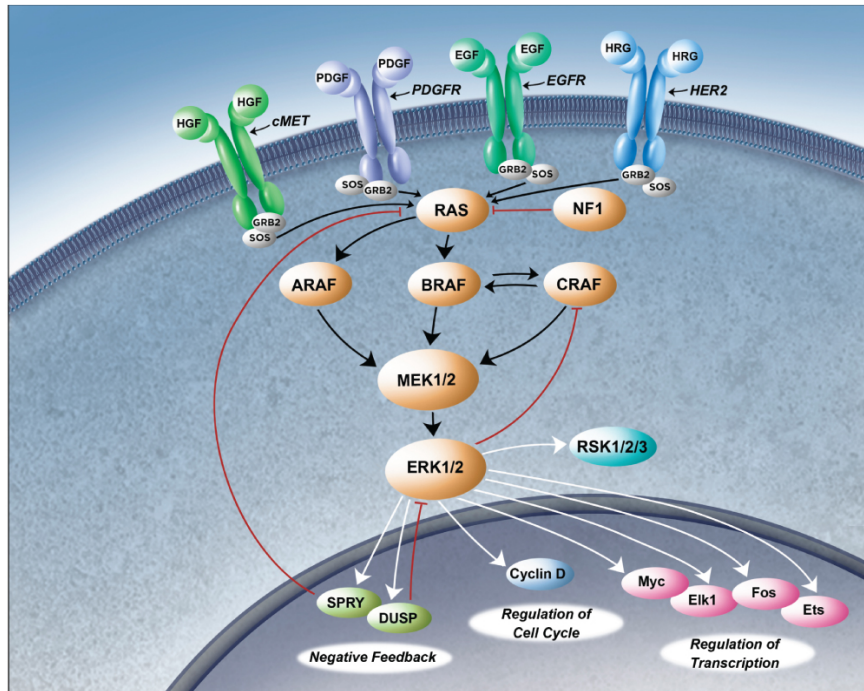
In addition to our monotherapy program in NF1-PN, we believe that PD-0325901 holds promise for use in multiple targeted combination therapies in oncology. Our first such effort is evaluating PD-0325901 in combination with BeiGene's RAF dimer inhibitor, lifirafenib (BGB-283). In May 2019, we announced the initiation of an adaptive Phase 1b clinical trial of this combination that is being conducted by BeiGene. This trial is currently enrolling patients in Australia with advanced or refractory solid tumors harboring relevant genetic mutations in the MAPK pathway.

#### *Overview of the MAPK pathway*

The MAPK pathway, which relies upon the RAS-RAF-MEK-ERK signaling cascade, represents a central biological pathway in all human cells that is responsible for helping to regulate cellular transcription, proliferation and survival. The general structure of the pathway consists of RAS, a small GTPase, and three downstream protein kinases, RAF, MEK and ERK. In addition, at the level of RAS, the pathway is negatively regulated by several proteins, including neurofibromin, the protein encoded by the *NF1* gene. Given its direct regulation of ERK, which directly controls downstream signaling through the MAPK pathway, MEK occupies a pivotal position in this signaling cascade and represents a rational therapeutic target for addressing indications where overactivation of the MAPK pathway contributes significantly to disease onset and/or progression.

Constitutive activation of the MAPK pathway has been reported in approximately 25% of human cancers, including colon, lung, breast, pancreatic, ovarian and renal tumors. The cause of pathway activation is varied and tissue-specific, but is driven by one or more of the following mechanisms, each of which is depicted in the illustration below: (i) upstream activation of one or more receptor tyrosine kinases, such as EGFR, (ii) mutations in a *RAS* isoform, such as *KRAS* and (iii) other mutations or aberrations within the pathway, such as in *BRAF* and *NF1*.





PD-0325901 for treatment of NF1-PN

#### Disease background

NF1 is a rare, autosomal dominant tumor predisposition disorder that arises from mutations in the *NF1* gene, which encodes for neurofibromin, a key negative regulator of the MAPK pathway. NF1 is the most common form of neurofibromatosis, with an estimated global birth incidence of approximately 1 in 3,000 individuals. We estimate that there are approximately patients living with NF1 in the United States and Europe. NF1 is clinically heterogeneous and manifests in a variety of symptoms across numerous organ systems, including abnormal pigmentation, skeletal deformities, tumor growth and neurological complications, such as cognitive impairment. Patients with NF1 have a 15-year mean reduction in their life expectancy compared to the general population.

NF1 patients have an approximately 30% to 50% lifetime risk of developing plexiform neurofibromas, or PN, which are tumors that grow in an infiltrative pattern along the peripheral nerve sheath and that can cause severe disfigurement, pain and functional impairment; in rare cases, NF1-PN may be fatal. NF1-PN are most often diagnosed in the first two decades of life and can be confirmed using routine imaging techniques. These tumors are characterized by aggressive growth, which is typically more rapid during childhood. NF1-PN have generally not been observed to spontaneously regress.

While NF1-PN are benign, these tumors can undergo malignant transformation, leading to malignant peripheral nerve sheath tumors, or MPNST. NF1 patients have an 8% to 15% lifetime risk of developing MPNST, a diagnosis that carries with it a 12-month survival rate of under 50%. In addition to MPNST, NF1 patients are at an increased risk of developing other malignancies, including breast cancer and gliomas.

#### ***Current treatment landscape for NF1-PN***

There are currently no therapies approved by the FDA for NF1-PN. The only definitive treatment for NF1-PN is surgical resection with wide margins, an outcome that can rarely be achieved in NF1-PN patients. This is because NF1-PN arise from nerve cells and grow in an infiltrative pattern, making it challenging to successfully resect tumors without severe comorbidities, such as permanent nerve damage and disfigurement. Patients that are ineligible for surgery or those who have had a recurrence post-surgery are often treated with a variety of off-label therapies. Among these off-label therapies are various systemic treatments, such as chemotherapy and immunotherapy, which have not been shown to consistently confer a clinical benefit.

The inadequacy of surgery and currently available off-label therapies highlights the need for improved systemic therapies. Given that NF1-PN is driven by overactivation of the MAPK pathway, MEK inhibitors have emerged as a class of therapies that hold significant promise for the treatment of NF1-PN, and we believe that MEK inhibitors have the potential to become the standard of care.

We are aware of at least three other MEK inhibitors in Phase 2 clinical trials for this indication, including a MEK inhibitor approved for other oncology indications that is sometimes used off-label in NF1-PN patients. Given the lifelong and devastating nature of NF1-PN, as well as the need to begin treating patients at a young age, we believe that the optimal MEK inhibitor is one that will have a tolerability profile suitable for long-term dosing while simultaneously arresting or reversing tumor growth.

#### ***Our solution — PD-0325901 for the treatment of NF1-PN***

PD-0325901 is an oral, small molecule inhibitor of MEK1 and MEK2, which we are developing as a monotherapy in NF1-PN. Based on results from prior clinical trials, we believe that PD-0325901, using the dose and schedule from the NF1-PN Phase 2 clinical trial, has the potential to offer a best-in-class tolerability and efficacy profile in order to enable the long-term treatment required for this patient population, as compared to other MEK inhibitors. Given the clinical activity and tolerability profile observed with PD-0325901 in the previous NF1-PN clinical trial, and following our discussions with the FDA, we designed our potentially registrational Phase 2b clinical trial in a manner that we believe has the potential to generate sufficient data to support approval in both pediatric and adult NF1-PN patients. We intend to initiate this Phase 2b clinical trial in the third quarter of 2019. If the results are favorable, we plan to file for marketing approval for PD-0325901 in the United States and select international markets.

#### ***Mechanism of action***

Neurofibromin is a critical repressor of RAS signaling and is impaired in patients with a mutated *NF1* gene, resulting in constitutive activation of the MAPK pathway. MEK inhibitors can reduce MAPK pathway activity and therefore arrest or reverse NF1-PN growth, which has been observed clinically with several MEK inhibitors, including PD-0325901.

#### ***Clinical experience with PD-0325901***

Over 200 subjects have been exposed to PD-0325901 across eight clinical trials. PD-0325901 has shown clinical activity in a previous Phase 2 clinical trial conducted by the Neurofibromatosis

Clinical Trial Consortium that enrolled adolescent and adult NF1-PN patients (WI176190). Given the activity and tolerability of PD-0325901 in this clinical trial, we are utilizing the same dose and schedule in our potentially registrational Phase 2b clinical trial. Furthermore, based on discussions with the FDA, we will be enrolling pediatric NF1-PN patients in our Phase 2b clinical trial, in addition to adolescent and adult patients.

PD-0325901 has been investigated in a Phase 1 clinical trial conducted in healthy adult subjects to assess the pharmacokinetics and pharmacodynamics of single and multiple doses (A4581004). PD-0325901 was further studied in additional clinical trials in patients with advanced cancers either as a monotherapy or in combination with other agents (A4581001, A4581002, B1271002, 13-506, M13DAP and MErCuRIC1). The table below summarizes these clinical trials.

<b>Trial sponsor</b>	<b>Trial ID (Phase)</b>	<b>Subjects exposed</b>	<b>Agent used in combination</b>
<b>Pfizer</b>	A4581004 (Phase 1)	23 NHV	N/A
	A4581001 (Phase 1/2)	79 solid tumor patients	N/A
	A4581002 (Phase 2)	34 advanced NSCLC patients	N/A
	B1271002 (Phase 2)	7 <i>KRAS/BRAF</i> -mutant solid tumor patients 36 <i>KRAS</i> -mutant CRC patients	N/A
<b>Dana-Farber Cancer Institute</b>	13-506 (Phase 1/2)	60 <i>KRAS</i> -mutant NSCLC and solid tumor patients	Palbociclib (CDK 4/6 inhibitor)
<b>Netherlands Cancer Institute</b>	M13DAP (Phase 1/2)	36 <i>KRAS</i> -mutant CRC, NSCLC, PDAC patients	Dacomitinib (EGFR inhibitor)
<b>University of Oxford</b>	MErCuRIC1 (Phase 1)	~25 <i>RAS</i> mutant and <i>RAS</i> wild type/aberrant cMET CRC patients	Crizotinib (ALK/cMET inhibitor)
<b>University of Alabama at Birmingham (via Neurofibromatosis Clinical Trial Consortium)</b>	WI176190 (Phase 2)	19 NF1-PN patients	N/A

*Abbreviations: normal healthy volunteer (NHV), non-small cell lung cancer (NSCLC), colorectal cancer (CRC) and pancreatic ductal adenocarcinoma (PDAC).*

In the monotherapy clinical trials, PD-0325901 was tested across a broad dose range (from 1 mg QD to 30 mg BID), with the initial MTD determined to be 15 mg BID and the recommended Phase 2 dose determined to be 10 mg BID administered on a five days-on, two days-off schedule. Post-treatment biopsies taken in the A4581001 clinical trial showed a pharmacodynamic effect at doses as low as 1 mg QD, as measured by a greater than 90% decrease in levels of phosphorylated ERK from baseline, demonstrating inhibition of the MAPK pathway. Furthermore, in the Phase 2 clinical trial in NF1-PN patients, clinical activity was observed at doses of 4 mg BID and below. These pharmacodynamic and clinical activity data at doses below the MTD formed the rationale for continuing to advance PD-0325901 in NF1-PN and in genetically defined solid tumors, either alone or in combination.

To date, the safety profile of monotherapy PD-0325901 in patients with advanced cancers at doses lower than 10 mg BID using an intermittent schedule has been characterized by mostly manageable and reversible toxicities. The most frequently reported of these adverse events have been rash, nausea, vomiting, diarrhea and fatigue.

Other adverse events have been reported at a lower frequency, though these adverse events primarily occurred in patients who received doses above 10 mg and up to 30 mg BID. These adverse events included ocular disorders (visual disturbances, blurred vision and retinal vein occlusion), nervous system disorders (confusion, slowed ideation, slurred speech and hallucinations), musculoskeletal and connective tissue disorders (general weakness and neck muscle weakness associated with mild and moderate elevations in creatine kinase) and cardiac disorders (decreased left ventricular ejection fraction and congestive heart failure). Due to the adverse events observed, a prior Phase 2 clinical trial (A4581002) was terminated and enrollment in the Phase 2 portion of a Phase 1/2 clinical trial (A4581001) was halted. In each of these trials, PD-0325901 at doses of 15 mg BID or above was being evaluated using both intermittent and continuous dosing schedules. These doses were significantly higher than the maximum allowable dose of 4 mg BID in the Phase 2 NF1-PN trial described below, in which PD-0325901 was observed to be generally well tolerated. Our planned potentially registrational Phase 2b trial in NF1-PN will have this same maximum allowable dose of 4 mg BID.

*Phase 2 clinical trial in NF1-PN (WI176190)*

The Phase 2 clinical trial evaluating PD-0325901 in adolescents and adults with NF1-PN enrolled 19 patients between 16 and 39 years of age. This clinical trial commenced in June 2014 and preliminary results were presented in 2017 at a conference organized by the Children's Tumor Foundation. Patients received an oral dose of 2 mg/m<sup>2</sup> BID with a maximum dose of 4 mg BID on a four-week cycle of three weeks-on, one week-off. Eight patients (42%) achieved an objective response by cycle 12, prospectively defined as a volumetric reduction in their target PN of at least 20%.

The protocol specified that patients were to be removed from the clinical trial if they did not achieve at least a 15% volumetric reduction in their target PN by cycle eight of treatment, corresponding to approximately eight months on therapy. Patients achieving at least a 15% reduction in their target PN by cycle eight of treatment, but who did not achieve at least a 20% reduction in their target PN by cycle 12 of treatment, were also removed from the trial. Importantly, it has been observed in subsequent clinical trials of other MEK inhibitors that some NF1-PN patients achieved their first objective response to therapy 12 months or more following the start of treatment. Therefore, we believe that the design of this clinical trial was not optimized to demonstrate the full potential of PD-0325901's antitumor activity in the NF1-PN patients that were enrolled, a consideration that we have aimed to address in our upcoming potentially registrational Phase 2b clinical trial by allowing patients to remain on treatment for up to 24 months.

PD-0325901 was generally well tolerated in this trial. There were no Grade 4 adverse events reported. Related treatment-emergent Grade 2 and Grade 3 adverse events occurring in at least 20% of patients included acneiform rash (53%), fatigue (26%) and nausea (21%). The only Grade 3 treatment-related adverse event reported was pain. Five patients (26%) had dose reductions due to adverse events, including two patients for Grade 2 rash, one patient for Grade 2 nausea, one patient for Grade 2 fatigue and one patient for Grade 2 pain. Two patients permanently discontinued PD-0325901 in this trial, both at cycle four; one of these discontinuations was due to noncompliance with the trial protocol and other was due to a Grade 2 rash.

***PD-0325901 planned future clinical trial in NF1-PN and regulatory pathway***

Given the degree of clinical benefit observed in patients with NF1-PN in the previous Phase 2 clinical trial of PD-0325901, and informed by our discussions with the FDA, we expect to initiate a potentially registrational clinical trial in the third quarter of 2019. This clinical trial will be conducted under our IND for PD-0325901 that became effective in April 2019, and will be a Phase 2b, longitudinal, open-label clinical trial designed to evaluate the efficacy, safety and tolerability of PD-0325901 in patients at least two years of age with an inoperable NF1-PN that is causing significant morbidity or major deformity. This clinical trial will be conducted at clinical sites in North America. As in the previous Phase 2 clinical trial in NF1-PN patients, PD-0325901 will be administered orally at a 2 mg/m<sup>2</sup> BID dose with a maximum dose of 4 mg BID. Dosing will occur on a four-week cycle with a three weeks-on, one week-off schedule. The intervention period will last for up to 24 cycles. In contrast to the previous Phase 2 clinical trial, we have designed our Phase 2b clinical trial with an intervention period that we believe is optimized to demonstrate the full antitumor activity of PD-0325901 in NF1-PN patients.

We anticipate enrolling approximately 100 patients in the Phase 2b clinical trial, roughly half of whom will be pediatric patients. The primary endpoint will be ORR measured using three-dimensional MRI volumetric analysis. As in the previous Phase 2 clinical trial, an objective response will be defined as a decrease of at least 20% in the target NF1-PN using central review. Key secondary endpoints will include the duration of response and health-related quality-of-life measurements.

In October 2018, the FDA granted PD-0325901 Orphan Drug Designation for the treatment of NF1 and in May 2019, the FDA granted PD-0325901 Fast Track Designation for the treatment of patients at least two years of age with NF1-associated inoperable PN that are progressing or causing significant morbidity. If the results of the Phase 2b clinical trial are favorable, we plan to file for marketing approval for PD-0325901 in the United States and select international markets.

***PD-0325901 in combination with a RAF dimer inhibitor (lifirafenib)******Overview***

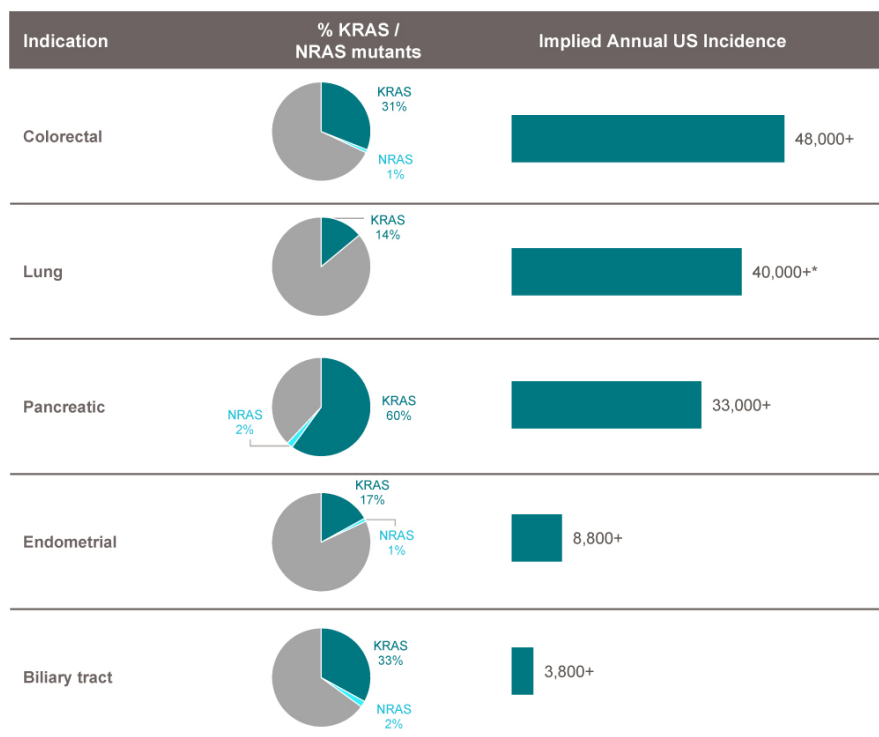
In September 2018, we announced that we entered into a global clinical collaboration with BeiGene to evaluate the combination of PD-0325901 with BeiGene's RAF dimer inhibitor, lifirafenib, in patients with advanced or refractory solid tumors harboring *RAS* mutations, *RAF* mutations or other MAPK pathway aberrations. Lifirafenib has been observed to potently inhibit BRAF, CRAF and ARAF across all homodimeric and heterodimeric conformations of these proteins that have been evaluated. Furthermore, monotherapy lifirafenib has shown activity in tumors harboring *RAS* and *RAF* mutations in a multicenter, open-label Phase 1 clinical trial conducted by BeiGene. We believe that lifirafenib's clinical activity can be enhanced with the addition of a potent and selective MEK inhibitor like PD-0325901, and potentially provide a best-in-class combination therapy for cancers whose growth is reliant on MAPK pathway signaling, such as those with mutations in *RAS* or *RAF*. In May 2019, we announced the initiation of an adaptive Phase 1b clinical trial being conducted by BeiGene that is currently enrolling patients in Australia with advanced or refractory solid tumors harboring relevant genetic mutations in the MAPK pathway.

***Disease background******RAS mutations***

*RAS* mutations are one of the most common genetic aberrations found in human cancers and these driver mutations are found in approximately 25% of all solid tumors, representing over 200,000 new patients diagnosed in the United States each year. *RAS* proteins, which are

comprised of the KRAS, HRAS and NRAS isoforms, are central to the transduction of receptor tyrosine kinase signaling and lead to downstream activation of the canonical RAF-MEK-ERK signaling cascade of the MAPK pathway.

The following table illustrates the reported prevalence of KRAS and NRAS mutations in selected types of solid tumors.



\* represents NSCLC patients.

We believe that effective therapies for patients harboring RAS mutations represent a significant clinical need. To date, MEK or RAF inhibitors used as monotherapies have generally demonstrated only limited clinical activity in patients whose tumors harbor RAS mutations. These tumors are generally poorly responsive to targeted therapies and RAS mutations typically confer poor prognosis, although outcomes can vary across different cancer types with RAS mutations.

**RAF mutations**

RAF mutations have been reported in up to 7% of all solid tumors, with the most widely described being the BRAF V600 mutations, commonly found in patients with metastatic melanoma. While there are approved MEK-RAF targeted combination therapies for patients with BRAF V600 mutations, patients eventually progress on these therapies representing a significant unmet clinical need.

In addition, there have been numerous non-V600 *BRAF* mutations described, which are not responsive to the currently approved therapies, and the use of the existing therapies has been shown to paradoxically increase the ability of tumor cells with these non-V600 *BRAF* mutations to proliferate.

#### *Other MAPK aberrations*

Patients with mutations and aberrations in the MAPK pathway aside from *RAS* and *RAF* mutations also represent a substantial unmet clinical need owing to a lack of approved therapies. Such tumors include malignant cancers driven by *NF1* mutations, such as MPNST.

#### **Current treatment landscape**

We are not aware of any therapies currently approved by the FDA specifically for the treatment of cancers harboring *RAS* mutations. There are several approved therapies in indications where *RAS* mutations are frequent, though these therapies are not specifically designed to address *RAS* mutations. There are multiple programs in clinical development today for *RAS*-mutant solid tumors that are evaluating various mechanisms of action.

For *RAF* mutations, we are not aware of any therapies currently approved by the FDA for treatment of patients harboring non-V600 *BRAF* mutations. There are several approved therapies in indications where *RAF* mutations are frequent, though none are designed to address *RAF* mutations aside from those therapies targeting *BRAF* V600 mutations, and even for these an unmet medical need exists because patients eventually progress on these therapies.

For patients whose tumors harbor other MAPK aberrations, we are not aware of any therapies currently approved by the FDA. There are several approved therapies in indications where we believe such MAPK pathway aberrations are frequent, though these therapies are not specifically designed to address these aberrations.

#### **Our solution—combination of PD-0325901 and lifirafenib**

We believe that the biological rationale and the differentiated pharmacological properties of PD-0325901 in combination with lifirafenib support the potential to provide significant clinical benefit in these large genetically defined tumor populations with significant unmet medical need. Our ongoing Phase 1b clinical trial of the novel combination of PD-0325901 and lifirafenib is among the first clinical trials evaluating vertical inhibition of the MAPK pathway using a *RAF* dimer inhibitor and a *MEK* inhibitor. We believe this combination has the potential to provide meaningful clinical benefit in patients with solid tumors harboring *RAS* mutations, *RAF* mutations and other MAPK pathway aberrations.

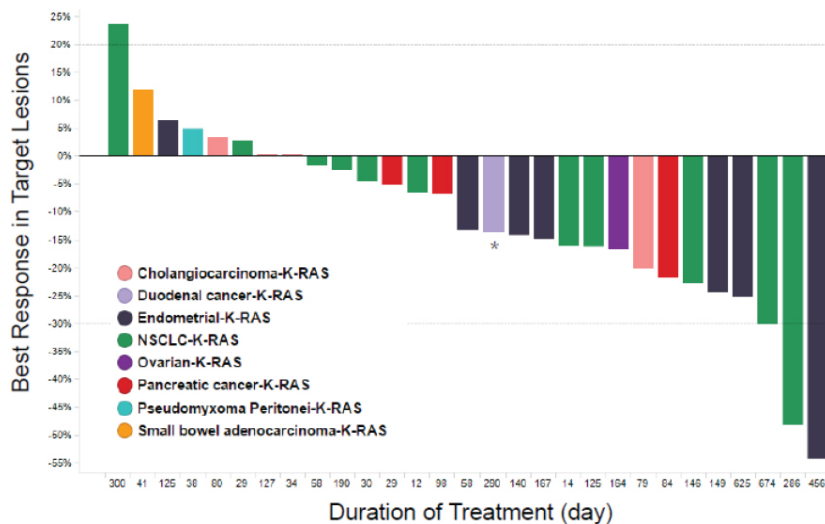
#### **Preclinical and clinical experience**

Preclinical data with the combination of PD-0325901 and lifirafenib demonstrating antitumor activity in *RAS* mutant cancer models were presented at the 2015 American Association for Cancer Research Conference. A variety of *MEK* inhibitors were evaluated in combination with lifirafenib in this preclinical study, and PD-0325901 was observed to be among the *MEK* inhibitors with the highest synergy and the most potent antitumor activity in combination.

While PD-0325901 and lifirafenib have not previously been clinically tested in combination, each compound has been evaluated in clinical trials as a monotherapy. Lifirafenib has been tested by BeiGene in one completed and one ongoing clinical trial. A Phase 1 open-label, multiple-dose, dose-escalation clinical trial (BGB-283-AU-001), which was initiated in Australia in November

2013, investigated the preliminary antitumor activity, safety, tolerability and pharmacokinetics of lifirafenib in patients with *RAS* and *RAF* mutated solid tumors. A second Phase 1 clinical trial (BGB-283-CN-001) was initiated in October 2015 in China and is ongoing.

In the BGB-283-AU-001 clinical trial, lifirafenib was observed to be generally well tolerated; treatment-related adverse events were mostly Grade 1 and Grade 2 in severity and included fatigue, thrombocytopenia, dysphonia, decreased appetite and palmar-plantar erythrodysesthesia syndrome. The MTD was determined to be 40 mg QD and 30 mg QD was selected as the recommended Phase 2 dose. Evidence of antitumor activity was observed in patients with certain types of *RAS*-mutant tumors, non-V600 *BRAF*-mutant tumors and treatment-naïve and treatment-refractory *BRAF*-mutant V600 tumors. The following chart shows the best objective responses in *KRAS* mutant cancers.



\* Represents patient that remained on treatment as of September 2016.

#### Combination mechanism of action

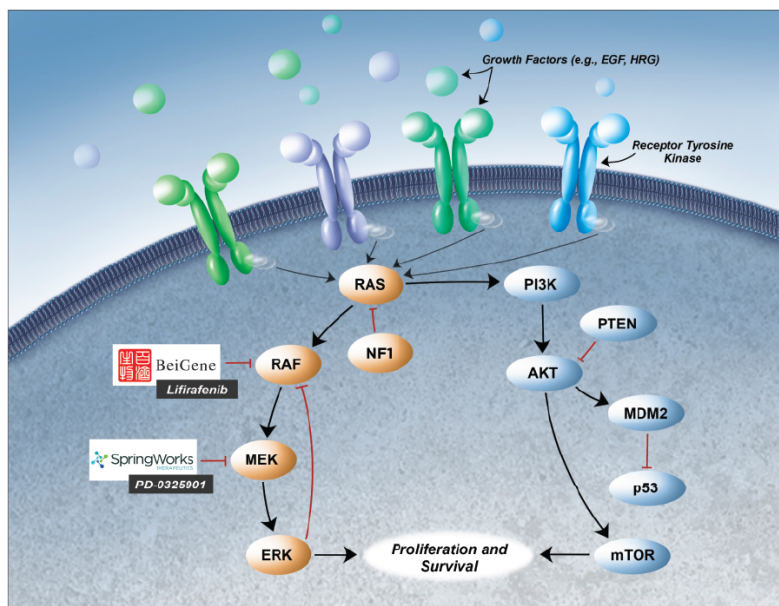
Given lifirafenib's activity profile, we believe that it is a potentially best-in-class *RAF* inhibitor. In particular, lifirafenib has been observed to inhibit both dimeric and monomeric forms of *RAF*, which we believe should overcome the paradoxical *MAPK* pathway activation seen with several other *RAF* inhibitors. Furthermore, lifirafenib has shown potent inhibition in preclinical studies across all *RAF* isoforms tested. We believe these two attributes are primarily responsible for the monotherapy activity data observed with this compound in its Phase 1 clinical trial.

Currently approved *RAF* inhibitors were designed to address tumors whose growth is reliant upon signaling via monomeric forms of *BRAF*, such as those with *BRAF* V600 mutations, a subset of *MAPK* aberrations commonly found in metastatic melanoma. In this setting, the addition of a *MEK* inhibitor to a *BRAF* V600 inhibitor showed significant clinical activity beyond monotherapy *BRAF* inhibition. By targeting both monomeric and dimeric forms of *RAF*, *RAF* dimer inhibitors, such as lifirafenib, are designed to work in tumors beyond just those harboring *BRAF* V600



mutations and therefore have the potential to address a much broader range of genetically defined patient populations. This includes *RAS*-mutant cancers, which predominantly signal through hetero- and homodimeric *RAF*; both of these conformations are potentially addressed by lifirafenib.

The following illustration depicts how the combination of PD-0325901 and lifirafenib is intended to vertically inhibit the MAPK pathway to prevent the proliferation and survival of cancer cells reliant upon this pathway.



We believe that by vertically inhibiting two key, adjacent constituents of the MAPK pathway, the combination of PD-0325901 and lifirafenib can potentially address the resistance mechanisms and feedback loops that have prevented development of therapies for many devastating cancers harboring MAPK pathway gene mutations, such as those in *RAS*, *RAF* and *NF1*. In particular we believe that the Phase 1 clinical data demonstrated lifirafenib's activity across both monomeric and dimeric forms of *RAF*, as well as PD-0325901's observed clinical pharmacodynamic activity at low doses, provide the opportunity for a leading combination therapy to address tumors with aberrant MAPK signaling.

#### **Combination of PD-0325901 and lifirafenib clinical trial**

In May 2019, we announced the initiation of an adaptive Phase 1b clinical trial evaluating the combination of PD-0325901 and lifirafenib. This clinical trial is enrolling patients with advanced or refractory solid tumors harboring relevant genetic mutations in the MAPK pathway. This clinical trial is being conducted by BeiGene in collaboration with us under an open Clinical Trial Application in Australia. The clinical trial is comprised of two stages. In the first stage, we intend to determine the MTD and recommended Phase 2 dose of the combination therapy; we will be evaluating doses of PD-0325901 between 2 mg QD and 8 mg QD and doses of lifirafenib between

15 mg QD and 25 mg QD. In the second stage, the trial is expected to enroll cohorts of approximately 15 patients each in tumor types of interest, which may include non-small cell lung cancer and endometrial cancer with *KRAS* mutations, to assess antitumor efficacy, safety and tolerability of the combination therapy at the recommended Phase 2 dose. We expect to provide an update on this clinical trial in 2020.

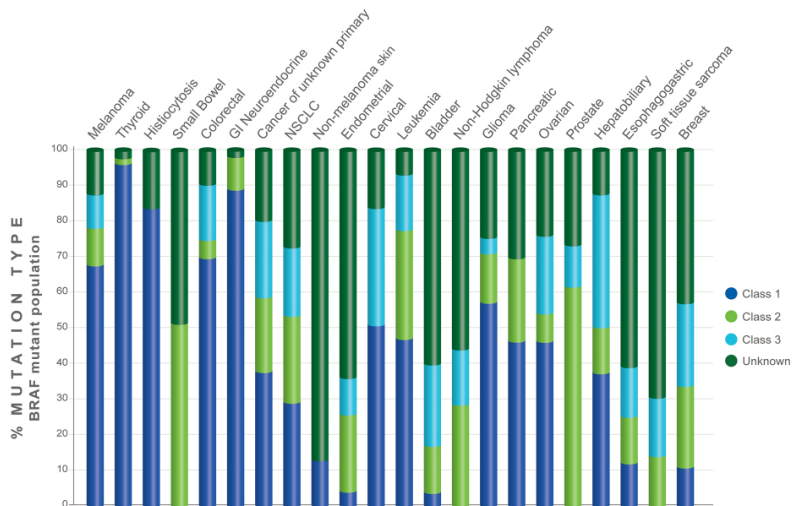
*BGB-3245 in genetically defined BRAF-mutant solid tumors*

In June 2019, we announced the formation of MapKure, which is jointly owned by us and BeiGene. BeiGene licensed to MapKure exclusive rights to BGB-3245, a novel, oral, selective small molecule inhibitor of specific *BRAF* driver mutations and *BRAF* fusions. MapKure intends to advance BGB-3245 into clinical development for solid tumor patients harboring *BRAF* driver mutations and *BRAF* fusions that were observed to be sensitive to the compound in preclinical studies. By [REDACTED], MapKure expects to initiate an adaptive Phase 1 dose-escalation and expansion clinical trial.

In addition to our equity ownership in MapKure, we are a member of MapKure's joint steering committee and board of directors. We also expect to contribute to some of the clinical development of BGB-3245 and other operational activities through a service agreement with MapKure.

Based on preclinical data, we believe that BGB-3245 may be unique in its *BRAF* binding and disassociation properties, potentially enabling differentiated antitumor activity as compared to other known *RAF* inhibitors. We believe this may better position BGB-3245 for clinical development as a monotherapy in certain biomarker defined patient populations. These biomarkers include de novo Class 2 *BRAF* mutations, de novo *BRAF* fusions and *BRAF* resistance mutations following treatment with *BRAF* V600 inhibitors.

To date, approximately 200 unique mutant *BRAF* alleles have been identified in human tumors. Activating *BRAF* mutations have been categorized into three classes: Class 1 mutants, comprised of constitutively active monomers, such as V600E mutations, Class 2 mutants, comprised of constitutively active dimers, and Class 3 mutants, which are kinase-impaired or kinase-dead. Today, only Class 1 *BRAF* mutations have any approved targeted therapeutic options, such as vemurafenib, dabrafenib and encorafenib for the treatment of *BRAF* V600E/K-mutant metastatic melanoma. The following table summarizes the distribution of *BRAF* mutations that have been described in the scientific literature as of 2017.



Despite the clinical activity of approved BRAF inhibitors in patients with Class 1 *BRAF* mutations, emerging evidence suggests that resistance commonly develops via mutations that enable ligand independent signaling by dimerization of the protein, such as p61 *BRAF* V600E and *BRAF* V600E/L514V, which represent an area of unmet medical need. BGB-3245 has demonstrated preclinical activity against these mutations.

Furthermore, BRAF fusion proteins have recently been described as drivers of cancer cell growth, and patients can now be screened for such fusions in the clinical setting. Recent literature suggests that these mutations may account for 0.3% of all human cancers, with 20 novel BRAF fusions now identified across 12 distinct tumor types, with enrichment in specific cancers. We believe that BGB-3245 may also address patients with these BRAF fusions.

## License and collaboration agreements

### *Pfizer license agreements*

We were originally conceived by Pfizer as an innovative way to advance investigational therapies that may hold significant promise for underserved patients, and Freda Lewis-Hall, M.D., DFAPA the Executive Vice President and Chief Patient Officer of Pfizer, is a member of our board of directors. Pfizer initially made an equity investment and also contributed royalty- and milestone-bearing product licenses, including for our two lead product candidates, nirogacestat and PD-0325901.

Further, Pfizer has agreed to provide us, once per calendar year until October 2020, with a list of compounds that are available for license or acquisition from Pfizer. As of June 1, 2019, we have not licensed or acquired any additional compounds from Pfizer.

A description of each of our license agreements with Pfizer is set forth below:

### *Nirogacestat license agreement*

In August 2017, we entered into a license agreement, or the Nirogacestat License Agreement, with Pfizer pursuant to which we acquired exclusive (including as to Pfizer) worldwide

sublicensable rights to research, develop and manufacture nirogacestat for the treatment, diagnosis and prevention of all diseases and commercialize nirogacestat for the treatment, diagnosis and prevention of all diseases other than Alzheimer's disease, breast cancer and prostate cancer. Additionally, Pfizer agreed that, for ten years, it would not conduct a clinical trial of a gamma secretase inhibitor for desmoid tumors. Pfizer retained rights to commercialize nirogacestat for the treatment of Alzheimer's disease, breast cancer and prostate cancer.

Pursuant to the Nirogacestat License Agreement, we are obligated to use commercially reasonable efforts to develop and seek regulatory approval for at least one product in the United States and if regulatory approval is obtained, to commercialize such product in the United States. If, following regulatory approval in the United States, we reasonably anticipate that the product will receive a certain level of reimbursement in certain countries, then we are obligated to use commercially reasonable efforts to develop and seek regulatory approval for the product in such country and if regulatory approval is obtained, to commercialize such product in such country.

Until the earlier of (i) an initial public offering, (ii) the sale of all or substantially all of the assets that relate to nirogacestat, (iii) a change of control of our company or (iv) the first filing of an NDA for a product in a major market (as defined in the Nirogacestat License Agreement), Pfizer has an exclusive right of first negotiation if we grant an exclusive license to a third party to commercialize a product containing nirogacestat in certain specified countries.

We are required to pay Pfizer payments of up to an aggregate of \$232.5 million upon achievement of certain commercial milestone events.

We will pay Pfizer tiered royalties on sales of nirogacestat ranging from mid-single digit to low second decile percentages that may be subject to deductions for expiration of valid claims, amounts due under third-party licenses and generic competition.

Unless earlier terminated, the Nirogacestat License Agreement will expire upon the expiration of all royalty obligations. The royalty period will expire on a country-by-country basis upon the later of (i) ten years from the first commercial sale, (ii) the expiration of all regulatory or data exclusivity and (iii) the expiration of the last-to-expire valid patent claim. We have the right to terminate the Nirogacestat License Agreement for convenience following the specified notice period. Pfizer may not terminate the agreement for convenience. Either we or Pfizer may terminate the Nirogacestat License Agreement if the other party is in material breach and such breach is not cured within the specified cure period. In addition, either we or Pfizer may terminate the Nirogacestat License Agreement in the event of specified insolvency events involving the other party. If Pfizer terminates the agreement as a result of our uncured material breach or our insolvency, Pfizer retains its license with respect to targets for which it has exercised an option (unless Pfizer elects otherwise), subject to reduced payment obligations.

#### ***PD-0325901 license agreement***

In August 2017, we entered into a license agreement, or the PD-0325901 License Agreement with Pfizer pursuant to which we acquired exclusive (including as to Pfizer) worldwide sublicensable rights to research, develop, manufacture and commercialize PD-0325901 for the treatment of all diseases. Additionally, Pfizer agreed, that for ten years, it will not conduct a clinical trial with a MEK inhibitor for NF1.

Pursuant to the PD-0325901 License Agreement, we are obligated to use commercially reasonable efforts to develop and seek regulatory approval for at least one product in the United States and if regulatory approval is obtained, to commercialize such product in the United States. If, following regulatory approval in the United States, we reasonably anticipate that the product

will receive a certain level of reimbursement in certain countries, then we will use commercially reasonable efforts to develop and seek regulatory approval for the product in such country and if regulatory approval is obtained, to commercialize such product in such country.

Until the earlier of (i) an initial public offering, (ii) the sale of all or substantially all of the assets that relate to PD-0325901, (iii) a change of control of us or (iv) the first filing of an NDA for a product in a major market, Pfizer has an exclusive right of first negotiation if we wish to grant an exclusive license to a third party to commercialize a product in certain countries.

We are required to pay Pfizer up to an aggregate of \$229.8 million upon achievement of certain commercial milestone events.

We will pay Pfizer tiered royalties on sales of PD-0325901 ranging from mid-single digit to low second decile percentages that may be subject to deductions for expiration of valid claims, amounts due under third party licenses and generic competition.

Unless earlier terminated, the PD-0325901 License Agreement will expire upon the expiration of all royalty obligations. The royalty period will expire on a country-by-country basis upon the later of (i) ten years from the first commercial sale, (ii) the expiration of all regulatory or data exclusivity and (iii) the expiration of the last-to-expire valid patent claim. We have the right to terminate the PD-0325901 License Agreement for convenience following the specified notice period. Pfizer may not terminate the agreement for convenience. Either we or Pfizer may terminate the PD-0325901 License Agreement if the other party is in material breach and such breach is not cured within the specified cure period. In addition, either we or Pfizer may terminate the PD-0325901 License Agreement in the event of specified insolvency events involving the other party. If Pfizer terminates the agreement as a result of our uncured material breach or our insolvency, Pfizer retains its license with respect to targets for which it has exercised an option (unless Pfizer elects otherwise), subject to reduced payment obligations.

#### ***BeiGene clinical collaboration agreement***

In August 2018, we entered into a clinical collaboration agreement with BeiGene, or the BeiGene Collaboration Agreement, to evaluate the safety, tolerability and preliminary efficacy of combining BeiGene's investigational RAF dimer inhibitor, lifirafenib (BGB-283), and PD-0325901, in a Phase 1b clinical trial for patients with advanced or refractory solid tumors.

We and BeiGene are obligated to use commercially reasonable efforts to complete our respective activities for the clinical trial. BeiGene is responsible for administering the clinical trial and we are responsible for performing the fixed dose formulation activities at our cost. Each party will be solely responsible for its costs associated with manufacturing and supply of its compound for the clinical trial. Upon completion of the clinical trial, if the parties agree that certain pre-defined criteria have been satisfied, the parties will negotiate in good faith a definitive agreement to provide for the expansion of the clinical collaboration and a commercial relationship based on specified principles.

We will share with BeiGene equally the costs associated with the clinical trial. The collaboration is managed by a joint steering committee of equal representation by us and BeiGene.

During a specified exclusivity period, neither party will develop or commercialize the other party's compound. Further, for a certain period following the effective date of the agreement, neither party will clinically develop (or prepare to clinically develop) or commercialize the combination of certain inhibitors in any form, or any products containing any such combination, except as permitted by the BeiGene Collaboration Agreement.

Unless earlier terminated, the BeiGene Collaboration Agreement will expire on the one-year anniversary of the date that BeiGene provides the final clinical trial report for the clinical trial to us. Either party may terminate the BeiGene Collaboration Agreement as follows: (i) either party entirely ceases all development of its compound, (ii) either party reasonably concludes that there is a patient safety issue or (iii) if a regulatory authority withdraws approval for either party's compound or the clinical trial. Either party may also terminate the BeiGene Collaboration Agreement if the other party is in material breach and such breach is not cured within the specified cure period.

### **Manufacturing**

We rely on third parties to manufacture nirogacestat and PD-0325901. We have entered into agreements with Asymchem Laboratories Inc and Patheon Inc., or Patheon, to produce drug substance for the nirogacestat and PD-0325901 programs, respectively, and with Patheon to produce drug product for both programs.

We require all of our contract manufacturing organizations, or CMOs, to conduct manufacturing activities in compliance with current good manufacturing practice, or cGMP, requirements. We currently rely solely on these CMOs for scale-up and process development work and to produce sufficient quantities of our product candidates for use in preclinical studies and clinical trials. We anticipate that these CMOs will have the capacity to support both clinical supply and commercial-scale production, but we do not have any formal agreements at this time to cover commercial production. We may also elect to enter into agreements with other CMOs to manufacture supplies of drug substance and finished drug product.

### **Sales and marketing**

If any of our product candidates are approved, we intend to market and commercialize them in the United States and select international markets, either alone or in partnership with others.

Many desmoid tumor and NF1-PN patients are managed by specialist physicians, including oncologists, medical geneticists and neurologists, and therefore we believe can be reached with a targeted sales force.

We actively collaborate with desmoid tumor and NF1-PN constituents through a number of initiatives, including participation in patient meetings and educational initiatives. Examples of such constituents include the Desmoid Tumor Research Foundation, Children's Oncology Group and Children's Tumor Foundation. We undertake these activities in order to better understand the burdens and unmet needs these patients face, so that we can more effectively facilitate their access to our product candidates, if approved. In each of these disease areas we will support disease awareness and diagnosis and subsequent treatment of identified patients, by providing information, increasing physician awareness and creating more efficient referral pathways.

For our product candidates being explored in combination with other agents or in highly prevalent diseases, we intend to establish commercialization strategies for each in collaboration with our partner as we approach potential marketing approval, and will share responsibilities in a manner that takes into account our respective commercial infrastructures, competencies and country-specific expertise.

## Competition

The pharmaceutical industry is characterized by rapid evolution of technologies and intense competition. While we believe that our product candidates, technology, knowledge, experience and scientific resources provide us with competitive advantages, we face competition from major pharmaceutical and biotechnology companies, academic institutions, governmental agencies and public and private research institutions, among others.

Any product candidates that we successfully develop and commercialize will compete with approved treatment options, including off-label therapies, and new therapies that may become available in the future. Key considerations that would impact our ability to effectively compete with other therapies include the efficacy, safety, method of administration, cost, level of promotional activity and intellectual property protection of our products. Many of the companies against which we may compete 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 approved products.

For our program in desmoid tumors, where there are no therapies currently approved by the FDA, we are aware that other companies are, or may be, developing products for this indication, including Ayala Pharmaceuticals, Inc., Bayer Corporation, Cellestia Biotech AG and Iterion Therapeutics, Inc. We are also aware of several therapies, some of which are generic, that are used off-label for the treatment of desmoid tumors. These therapies include chemotherapeutic agents, such as liposomal doxorubicin and vinblastine/methotrexate, non-steroidal anti-inflammatory drugs, anti-hormonal therapies and tyrosine kinase inhibitors, such as sorafenib, imatinib and pazopanib.

For our program in NF1-PN, where there are also no therapies currently approved by the FDA, we are aware that other companies are, or may be, developing products for this indication, including Array BioPharma Inc., AstraZeneca Plc, Daiichi Sankyo Co., Ltd., Exelixis, Inc., F. Hoffmann-La Roche Ltd, Inflixion Bioscience, Inc., NFlection Therapeutics, Inc., Novartis International AG and Teton Therapeutics LLC. We are also aware of several therapies, some of which are generic, that are used off-label for the treatment of NF1-PN. These therapies include radiotherapy and various systemic treatments, such as chemotherapy and immunotherapy.

For our targeted oncology portfolio, we are aware that other oncology focused companies are or may be developing products for the treatment of solid tumors with *RAS* mutations, *RAF* mutations and other MAPK aberrations, including Amgen Inc., Array BioPharma Inc., AstraZeneca PLC, Basilea Pharmaceutica Ltd., Chugai Pharmaceutical Co Ltd, Daiichi Sankyo Co., Ltd., Eli Lilly and Company, F. Hoffmann-La Roche Ltd., Hanmi Pharmaceutical Co., Ltd., Merck & Co., Inc., Mirati Therapeutics, Inc., Moderna Inc., Novartis International AG, Revolution Medicines, Inc., Takeda Pharmaceutical Company Limited, TheRas, Inc. and Wellspring Biosciences, Inc. There may be additional companies with programs suitable for addressing these patient populations that could be competitive with our efforts but that have not yet disclosed specific clinical development plans.

Smaller or early-stage companies, including oncology-focused therapeutics companies, may also prove to be significant competitors, particularly through collaborative arrangements with large and established companies. These companies may also compete with us in recruiting and retaining qualified scientific and management personnel, establishing clinical trial sites, enrolling patients in clinical trials and acquiring technologies complementary to, or necessary for, our programs.

The availability of reimbursement from government and private payors will also significantly impact the pricing and competitiveness of our products. Our competitors may obtain FDA or

other regulatory approvals for their products more rapidly than we may obtain approvals for our product candidates, which could result in our competitors establishing a strong market position before we are able to commercialize our product candidates.

## **Intellectual property**

Our success depends in part on our ability to obtain and maintain proprietary protection for our product candidates, manufacturing and process discoveries and other know-how, to operate without infringing the proprietary rights of others, and to prevent others from infringing our proprietary rights. We plan to protect our proprietary position using a variety of methods, which include pursuit of U.S. and foreign patent applications related to proprietary technology, inventions and improvements, such as compositions of matter and methods-of-use, that we determine are important to the development and implementation of our business. For example, we, our licensors, or our collaborators currently have, or are pursuing, patents covering the composition of matter for our product candidates and we plan to generally pursue patent protection covering methods-of-use for one or more clinical programs. We also rely on trade secrets, trademarks, know-how, continuing technological innovation and potential in-licensing opportunities to develop and maintain our proprietary position.

### **Patents**

At the time we were formed in August 2017, we entered into license agreements with Pfizer for our lead product candidates, pursuant to which we acquired exclusive worldwide rights under Pfizer patents and know-how to develop, manufacture and commercialize our lead product candidates.

We have exclusive licenses under the Nirogacestat License Agreement to granted patents in the United States and granted patents and pending applications in numerous foreign jurisdictions relating to nirogacestat. As of March 31, 2019, the patent rights in-licensed under the Nirogacestat License Agreement include three granted patents in the United States and more than 25 patents granted in foreign jurisdictions including Australia, Canada, China, France, Germany, Spain, United Kingdom and Japan. A U.S. patent covering nirogacestat as a composition of matter has a statutory expiration date in 2025, not including patent term adjustment or any patent term extension, and relevant foreign counterparts are expected to expire in 2025, in each case, not including any patent term extensions. If we are successful in obtaining regulatory approval of nirogacestat for the treatment of desmoid tumors, we expect to rely on orphan drug exclusivity, which generally grants seven years of marketing exclusivity in the United States and 10 years of marketing exclusivity in Europe. See "License and collaboration agreements—Pfizer license agreements" above for additional information on our rights under the Nirogacestat License Agreement. Nirogacestat received Orphan Drug Designation in the United States for the treatment of desmoid tumors.

We have exclusive licenses under the PD-0325901 License Agreement to granted patents in the United States and granted patents and pending applications in numerous foreign jurisdictions relating to PD-0325901. As of March 31, 2019, the patent rights in-licensed under the PD-0325901 License Agreement include two granted patents in the United States and more than 45 patents granted in foreign jurisdictions including Australia, Canada, China, France, Germany, Spain, United Kingdom and Japan. A U.S. patent covering PD-0325901 as a composition of matter has a statutory expiration date in 2021, not including patent term adjustment or patent term extension, and relevant foreign counterparts are expected to expire in 2021, in each case, not including any patent term extensions. With patent term adjustments, the U.S. patent expires in 2022. If we are successful in obtaining regulatory approval of PD-0325901 for the treatment of NF1, we expect to rely on orphan drug exclusivity, which generally grants seven years of



marketing exclusivity in the United States and 10 years of marketing exclusivity in Europe. See “License and collaboration agreements—Pfizer license agreements” above for additional information on our rights under the PD-0325901 License Agreement. PD-0325901 received Orphan Drug Designation in the United States for the treatment of NF1.

For combination therapeutics involving nirogacestat or PD-0325901, there may be opportunities to enhance our patent estate, which we will explore. There can be no assurance that patents will issue from any of these efforts.

#### **Trade secrets**

In addition to patents, we rely on trade secrets and know-how to develop and maintain our competitive position. We typically rely on trade secrets to protect aspects of our business that are not amenable to, or that we do not consider appropriate for, patent protection. We protect trade secrets and know-how by establishing confidentiality agreements and invention assignment agreements with our employees, consultants, scientific advisors, contractors and partners. These agreements generally provide that all confidential information developed or made known during the course of an individual or entity’s relationship with us must be kept confidential during and after the relationship. These agreements also generally provide that all inventions resulting from work performed for us or relating to our business and conceived or completed during the period of employment or assignment, as applicable, shall be our exclusive property. In addition, we take other appropriate precautions, such as physical and technological security measures, to guard against misappropriation of our proprietary information by third parties.

#### **Coverage, pricing and reimbursement**

Successful commercialization of new drug products depends in part on the extent to which reimbursement for those drug products will be available from government health administration authorities, private health insurers and other organizations. Government authorities and third-party payors, such as private health insurers and health maintenance organizations, decide which drug products they will pay for and establish reimbursement levels. The availability and extent of reimbursement by governmental and private payors is essential for most patients to be able to afford a drug product. Sales of drug products depend substantially, both domestically and abroad, on the extent to which the costs of drugs products are paid for by health maintenance, managed care, pharmacy benefit and similar healthcare management organizations, or reimbursed by government health administration authorities, private health coverage insurers and other third-party payors.

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 reimbursement for particular drug products. In many countries, the prices of drug products are subject to varying price control mechanisms as part of national health systems. In general, the prices of drug products under such systems are substantially lower than in the United States. Other countries allow companies to fix their own prices for drug products, but monitor and control company profits. Accordingly, in markets outside the United States, the reimbursement for drug products may be reduced compared with the United States. In the United States, the principal decisions about reimbursement for new drug products are typically made by the Centers for Medicare & Medicaid Services, or CMS, an agency within the Department of Health and Human Services, or HHS. CMS decides whether and to what extent a new drug product will be covered and reimbursed under certain federal governmental healthcare programs, such as Medicare, and private payors tend to follow CMS to a substantial degree. However, no uniform policy of coverage and reimbursement for drug products exists among third-party payors and coverage and reimbursement levels for drug products can differ

significantly from payor to payor. In the United States, the process for determining whether a third-party payor will provide coverage for a biological product typically is separate from the process for setting the price of such product or for establishing the reimbursement rate that the payor will pay for the product once coverage is approved. With respect to biologics, third-party payors may limit coverage to specific products on an approved list, also known as a formulary, which might not include all of the FDA-approved products for a particular indication, or place products at certain formulary levels that result in lower reimbursement levels and higher cost sharing obligation imposed on patients. A decision by a third-party payor not to cover our product candidates could reduce physician utilization of a product. Moreover, a third-party payor's decision to provide coverage for a product does not imply that an adequate reimbursement rate will be approved. Adequate third-party reimbursement may not be available to enable a manufacturer to maintain price levels sufficient to realize an appropriate return on its investment in product development. Additionally, coverage and reimbursement for products can differ significantly from payor to payor. One third-party payor's decision to cover a particular medical product does not ensure that other payors will also provide coverage for the medical product, or will provide coverage at an adequate reimbursement rate. As a result, the coverage determination process usually requires manufacturers to provide scientific and clinical support for the use of their products to each payor separately and is a time-consuming process.

As noted above, the marketability of any products for which we receive regulatory approval for commercial sale may suffer if the government and third-party payors fail to provide coverage and adequate reimbursement. An increasing emphasis on cost containment measures in the United States has increased and we expect will continue to increase the pressure on pharmaceutical pricing. Coverage policies and third-party reimbursement rates may change at any time. Even if favorable coverage and reimbursement status is attained for one or more products for which we receive regulatory approval, less favorable coverage policies and reimbursement rates may be implemented in the future. Third-party payors are increasingly challenging the prices charged for medical products and services, examining the medical necessity and reviewing the cost-effectiveness of pharmaceutical products, in addition to questioning safety and efficacy. If third-party payors do not consider a product to be cost-effective compared to other available therapies, they may not cover that product after FDA approval or, if they do, the level of payment may not be sufficient to allow a manufacturer to sell its product at a profit.

In addition, in many foreign countries, the proposed pricing for a drug must be approved before it may be lawfully marketed. The requirements governing drug pricing and reimbursement vary widely from country to country. In the European Union, governments influence the price of products through their pricing and reimbursement rules and control of national healthcare systems that fund a large part of the cost of those products to consumers. Some jurisdictions operate positive and negative list systems under which products may only be marketed once a reimbursement price has been agreed to by the government. To obtain reimbursement or pricing approval, some of these countries may require the completion of clinical trials that compare the cost effectiveness of a particular product to currently available therapies. Other member states allow companies to fix their own prices for medicines, but monitor and control company profits. There can be no assurance that any country that has price controls or reimbursement limitations for pharmaceutical products will allow favorable reimbursement and pricing arrangements for any of our products. The downward pressure on healthcare costs in general, particularly prescription products, has become very intense. As a result, increasingly high barriers are being erected to the entry of new products. In addition, in some countries, cross border imports from low-priced markets exert a commercial pressure on pricing within a country.

## Government regulation

Government authorities in the United States at the federal, state and local level and in other countries and jurisdictions, including the European Union, extensively regulate, among other things, the research, development, testing, manufacture, quality control, approval, labeling, packaging, storage, record-keeping, promotion, advertising, distribution, post-approval monitoring and reporting, marketing and export and import of drug products, such as nirogacestat, PD-0325901 and our other product candidates. Generally, before a new drug can be marketed, considerable data demonstrating its quality, safety and efficacy must be obtained, organized into a format specific for each regulatory authority and submitted for review and approved by the regulatory authority.

### *Clinical trials*

The clinical stage of development involves the administration of the investigational product to healthy volunteers or patients under the supervision of qualified investigators, generally physicians not employed by, or under control of, the trial sponsor, in accordance with Good Clinical Practices, or GCPs, which include the requirement that all research subjects provide their informed consent for their participation in any clinical trial. Clinical trials are conducted under protocols detailing, among other things, the objectives of the clinical trial, dosing procedures, subject selection and exclusion criteria and the parameters to be used to monitor subject safety and assess efficacy. Each protocol, and any subsequent amendments to the protocol, must be submitted to the FDA as part of the IND. Furthermore, each clinical trial must be reviewed and approved by an Institutional Review Board, or IRB, for each institution at which the clinical trial will be conducted to ensure that the risks to individuals participating in the clinical trials are minimized and are reasonable in relation to anticipated benefits. The IRB also approves the informed consent form that must be provided to each clinical trial subject or his or her legal representative, and must monitor the clinical trial until completed. There also are requirements governing the reporting of ongoing clinical trials and completed clinical trial results to public registries. Information about most clinical trials must be submitted within specific timeframes for publication on the [www.clinicaltrials.gov](http://www.clinicaltrials.gov) website. Information related to the product, patient population, phase of investigation, trial sites and investigators and other aspects of the clinical trial is made public as part of the registration of the clinical trial. Sponsors are also obligated to discuss the results of their clinical trials after completion. Disclosure of the results of these trials can be delayed in some cases for up to two years after the date of completion of the trial. Competitors may use this publicly available information to gain knowledge regarding the progress of development programs. Human clinical trials are typically conducted in three sequential phases, which may overlap or be combined:

- Phase 1 clinical trials generally involve a small number of healthy volunteers or disease-affected patients who are initially exposed to a single dose and then multiple doses of the product candidate. The primary purpose of these clinical trials is to assess the metabolism, pharmacologic action, side effect tolerability and safety of the drug.
- Phase 2 clinical trials involve studies in disease-affected patients to determine the dose required to produce the desired benefits. At the same time, safety and further pharmacokinetic and pharmacodynamic information is collected, possible adverse effects and safety risks are identified and a preliminary evaluation of efficacy is conducted.
- Phase 3 clinical trials generally involve a larger number of patients at multiple sites and are designed to provide the data necessary to demonstrate the effectiveness of the product for its intended use, its safety in use and to establish the overall benefit/risk relationship of the

product and provide an adequate basis for product approval. These trials may include comparisons with placebo and/or other comparator treatments. The duration of treatment is often extended to mimic the actual use of a product during marketing.

Post-approval trials, sometimes referred to as Phase 4 clinical trials, may be conducted after initial marketing approval. These trials are used to gain additional experience from the treatment of patients in the intended therapeutic indication, particularly for long-term safety follow up. In certain instances, the FDA may mandate the performance of Phase 4 clinical trials as a condition of approval of a Biologics License Application, or BLA.

Progress reports detailing the results of the clinical trials must be submitted at least annually to the FDA and more frequently if serious adverse events occur. The FDA or the sponsor may suspend or terminate a clinical trial at any time or the FDA may impose other sanctions on various grounds, including a finding that the research patients are being exposed to an unacceptable health risk. Similarly, an IRB can suspend or terminate approval of a clinical trial at its institution if the clinical trial is not being conducted in accordance with the requirements of the IRB or if the drug has been associated with unexpected serious harm to patients. There are also requirements related to registration and reporting of certain clinical trials and completed clinical trial results to public registries.

### **United States—FDA regulation**

#### *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 NDAs, warning or untitled letters, product recalls, product seizures, total or partial suspension of production or distribution, injunctions, fines, civil penalties and criminal prosecution.

Pharmaceutical product development for a new product or certain changes to an approved product in the United States typically involves preclinical laboratory and animal tests, the submission to the FDA of an IND, which must become effective before clinical testing may commence, and adequate and 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 trials to assess the characteristics and potential safety and efficacy of the product. The conduct of the preclinical tests must comply with 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 preclinical 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; (ii) in compliance with GCP, an international standard meant to protect the rights and health of patients and to define the roles of clinical trial sponsors, administrators, and monitors; as well as (iii) under protocols detailing the objectives of the 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, 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 Trial protocol and informed consent information for patients in clinical trials must also be submitted to an IRB 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 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 increasing doses, and, if possible, early evidence on effectiveness. Phase 2 usually involves 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 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 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 FDA requires two adequate and well-controlled Phase 3 clinical trials to demonstrate the efficacy of the drug. A single Phase 3 trial with other confirmatory evidence may be sufficient in rare instances where the Trial is a large multi-center 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 a potentially serious outcome and confirmation of the result in a second trial would be practically or ethically impossible.

Pursuant to the 21st Century Cures Act, which was enacted on December 13, 2016, the manufacturer of an investigational drug for a serious or life-threatening disease is required to make available, such as by posting on its website, its policy on evaluating and responding to requests for expanded access. This requirement applies on the later of 60 days after the date of enactment or the first initiation of a Phase 2 or Phase 3 trial of the investigational drug. 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 preclinical, 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. The submission of most NDAs is additionally subject to a substantial application user fee, currently \$2,588,478 for Fiscal Year 2019, and the manufacturer and/or sponsor under an approved NDA are also subject to annual program fees for eligible products, which are currently \$309,915 for Fiscal Year 2019.

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 new drug

applications. Most such applications for standard review drug products are reviewed within ten to twelve months; most applications for priority review drugs are reviewed in six to eight months. Priority review can be applied to drugs 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—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. FDA will not approve the product unless compliance with cGMP is satisfactory and the NDA contains data that provide substantial evidence that the drug is safe and effective in the indication studied.

After 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. FDA has committed to reviewing such resubmissions in two or six months depending on the type of information included.

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 healthcare professionals and elements to assure safe 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 standards is not maintained or problems are identified following initial marketing.

Changes to some of the conditions established in an approved application, including changes in indications, labeling or 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.

#### *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 FDA in any other NDA, that drug receives five years of marketing exclusivity during which FDA cannot receive any Abbreviated New Drug Application,

or 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 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 extension for one patent. The allowable patent term extension is calculated as half of the drug's testing phase—the time between IND application 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 from approval.

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 United States Patent and Trademark Office 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.

#### *Orphan drugs*

Under the Orphan Drug Act, the FDA may grant Orphan Drug Designation to drugs intended to treat a rare disease or condition—generally a disease or condition that affects fewer than 200,000 individuals in the U.S. Orphan Drug Designation must be requested before submitting an NDA. After the FDA grants Orphan Drug Designation, the generic identity of the drug and its potential orphan use are disclosed publicly by the FDA. Orphan Drug Designation does not convey any advantage in, or shorten the duration of, the regulatory review and approval process. The first NDA applicant to receive FDA approval for a particular active ingredient to treat a particular disease with FDA Orphan Drug Designation is entitled to a seven-year exclusive marketing period in the U.S. for that product, for that indication. During the seven-year exclusivity period, the FDA may not approve any other applications to market the same drug for the same disease, except in limited circumstances, such as a showing of clinical superiority to the product with orphan drug exclusivity. Orphan drug exclusivity does not prevent FDA from approving a different drug for the same disease or condition, or the same drug for a different disease or condition. Among the other benefits of Orphan Drug Designation are tax credits for certain research and a waiver of the NDA application user fee.

#### *Fast track designation and accelerated approval*

FDA is required to facilitate the development, and expedite the review, of drugs that are intended for the treatment of a serious or life-threatening disease or condition for which there is no effective treatment, and which demonstrate the potential to address unmet medical needs for the condition. Under the fast track program, the sponsor of a new drug candidate may request that FDA designate the drug candidate for a specific indication as a fast track drug concurrent with, or after, the filing of the IND for the drug candidate. FDA must determine if the drug candidate qualifies for Fast Track Designation within 60 days of receipt of the sponsor's request.

Under the fast track program and FDA's accelerated approval regulations, FDA may approve a drug for a serious or life-threatening illness that provides meaningful therapeutic benefit to patients over existing treatments based upon a surrogate endpoint that is reasonably likely to predict clinical benefit, or on a clinical endpoint that can be measured earlier than irreversible morbidity or mortality, that is reasonably likely to predict an effect on irreversible morbidity or mortality or other clinical benefit, taking into account the severity, rarity or prevalence of the condition and the availability or lack of alternative treatments.

In clinical trials, a surrogate endpoint is a measurement of laboratory or clinical signs of a disease or condition that substitutes for a direct measurement of how a patient feels, functions or survives. Surrogate endpoints can often be measured more easily or more rapidly than clinical endpoints. A drug candidate approved on this basis is subject to rigorous post-marketing compliance requirements, including the completion of Phase 4 or post-approval clinical trials to confirm the effect on the clinical endpoint. Failure to conduct required post-approval studies, or confirm a clinical benefit during post-marketing studies, will allow FDA to withdraw the drug from the market on an expedited basis. All promotional materials for product candidates approved under accelerated regulations are subject to prior review by FDA.

In addition to other benefits such as the ability to use surrogate endpoints and engage in more frequent interactions with FDA, FDA may initiate review of sections of a fast track drug's NDA before the application is complete. This rolling review is available if the applicant provides, and FDA approves, a schedule for the submission of the remaining information and the applicant pays applicable user fees. However, FDA's time period goal for reviewing an application does not begin until the last section of the NDA is submitted. Additionally, the Fast Track Designation may be withdrawn by FDA if FDA believes that the designation is no longer supported by data emerging in the clinical trial process.

#### *Breakthrough therapy designation*

Breakthrough Therapy Designation by the FDA provides more extensive development consultation opportunities with FDA senior staff, allows for the rolling review of the drug's application for approval and indicates that the product could be eligible for priority review if supported by clinical data at the time of application submission for drugs that are intended to treat a serious or life-threatening disease or condition where preliminary clinical evidence indicates that the drug may demonstrate substantial improvement over existing therapies on one or more clinically significant endpoints. Under the breakthrough therapy program, the sponsor of a new drug candidate may request that FDA designate the drug candidate for a specific indication as a breakthrough therapy concurrent with, or after, the filing of the IND for the drug candidate. FDA must determine if the drug candidate qualifies for Breakthrough Therapy Designation within 60 days of receipt of the sponsor's request.

#### *Disclosure of clinical trial information*

Sponsors of clinical trials of FDA regulated products, including drugs, are required to register and disclose certain clinical trial information. Information related to the product, patient population, phase of investigation, Trial sites and investigators and other aspects of the clinical trial is then made public as part of the registration. Sponsors are also obligated to discuss the results of their clinical trials after completion. Disclosure of the results of these trials can be delayed in certain circumstances for up to two years after the date of completion of the trial. Competitors may use this publicly available information to gain knowledge regarding the progress of development programs.



### ***European Union regulation***

In the European Union, our product candidates also may be subject to extensive regulatory requirements. As in the United States, medicinal products can be marketed only if a marketing authorization from the competent regulatory agencies has been obtained.

Similar to the United States, the various phases of preclinical and clinical research in the European Union are subject to significant regulatory controls.

The Clinical Trials Directive 2001/20/EC, the Directive 2005/28/EC on GCP, and the related national implementing provisions of the individual EU Member States govern the system for the approval of clinical trials in the European Union. Under this system, an applicant must obtain prior approval from the competent national authority of the EU Member States in which the clinical trial is to be conducted. Furthermore, the applicant may only start a clinical trial at a specific Trial site after the competent ethics committee has issued a favorable opinion. The clinical trial application must be accompanied by, among other documents, an IMPD (the Common Technical Document) with supporting information prescribed by Directive 2001/20/EC, Directive 2005/28/EC, where relevant the implementing national provisions of the individual EU Member States and further detailed in applicable guidance documents. All suspected unexpected serious adverse reactions to the investigated drug that occur during the clinical trial have to be reported to the competent national authority and the Ethics Committee of the Member State where they occurred.

In April 2014, the new Clinical Trials Regulation, (EU) No 536/2014 was adopted. The regulation is anticipated to come into application in 2019. The Clinical Trials Regulation will be directly applicable in all the EU Member States, repealing the current Clinical Trials Directive 2001/20/EC. Conduct of all clinical trials performed in the European Union will continue to be bound by currently applicable provisions until the new Clinical Trials Regulation becomes applicable. The extent to which ongoing clinical trials will be governed by the Clinical Trials Regulation will depend on when the Clinical Trials Regulation becomes applicable and on the duration of the individual clinical trial. If a clinical trial continues for more than three years from the day on which the Clinical Trials Regulation becomes applicable the Clinical Trials Regulation will at that time begin to apply to the clinical trial.

The new Clinical Trials Regulation aims to simplify and streamline the approval of clinical trials in the European Union. The main characteristics of the regulation include: a streamlined application procedure via a single-entry point, the "EU portal"; a single set of documents to be prepared and submitted for the application as well as simplified reporting procedures for clinical trial sponsors; and a harmonized procedure for the assessment of applications for clinical trials, which is divided in two parts. Part I is assessed by the competent authorities of all EU Member States in which an application for authorization of a clinical trial has been submitted (Member States concerned). Part II is assessed separately by each Member State concerned. Strict deadlines have been established for the assessment of clinical trial applications. The role of the relevant ethics committees in the assessment procedure will continue to be governed by the national law of the concerned EU Member State. However, overall related timelines will be defined by the Clinical Trials Regulation.

To obtain a marketing authorization of a drug in the European Union, we may submit Marketing Authorization Applications, or MAA, either under the so-called centralized or national authorization procedures.

#### ***Centralized procedure***

The centralized procedure provides for the grant of a single marketing authorization following a favorable opinion by the European Medicines Agency, or EMA, that is valid in all EU Member

States, as well as Iceland, Liechtenstein and Norway. The centralized procedure is compulsory for medicines produced by specified biotechnological processes, products designated as orphan medicinal products, advanced therapy medicines (such as gene-therapy, somatic cell-therapy or tissue-engineered medicines) and products with a new active substance indicated for the treatment of specified diseases, such as HIV/AIDS, cancer, diabetes, neurodegenerative disorders or autoimmune diseases and other immune dysfunctions and viral diseases. The centralized procedure is optional for products that represent a significant therapeutic, scientific or technical innovation, or whose authorization would be in the interest of public health. Under the centralized procedure the maximum timeframe for the evaluation of an MAA 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 of Medicinal Products for Human Use, or the CHMP. Accelerated assessment might be granted by the CHMP in exceptional cases, when a medicinal product is expected to be of a major public health interest, particularly from the point of view of therapeutic innovation. The timeframe for the evaluation of an MAA under the accelerated assessment procedure is of 150 days, excluding stop-clocks.

#### *National authorization procedures*

There are also two other possible routes to authorize medicinal products in several EU countries, which are available for investigational medicinal products that fall outside the scope of the centralized procedure:

- Decentralized procedure. Using the decentralized procedure, an applicant may apply for simultaneous authorization in more than one EU country of medicinal products that have not yet been authorized in any EU country and that do not fall within the mandatory scope of the centralized procedure.
- Mutual recognition procedure. In the mutual recognition procedure, a medicine is first authorized in one EU Member State, in accordance with the national procedures of that country. Following this, further marketing authorizations can be sought from other EU countries in a procedure whereby the countries concerned agree to recognize the validity of the original, national marketing authorization.

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

#### *European Union regulatory exclusivity*

In the European Union, new products authorized for marketing (i.e., reference products) qualify for eight years of data exclusivity and an additional two years of market exclusivity upon marketing authorization. The data exclusivity period prevents generic applicants from relying on the preclinical and clinical trial data contained in the dossier of the reference product when applying for a generic marketing authorization in the European Union during a period of eight years from the date on which the reference product was first authorized in the European Union. The market exclusivity period prevents a successful generic applicant from commercializing its product in the European Union until ten years have elapsed from the initial authorization of the reference product in the European Union. The ten-year market exclusivity period can be extended to a maximum of eleven years if, during the first eight years of those ten years, the marketing authorization holder obtains an authorization for one or more new therapeutic indications which, during the scientific evaluation prior to their authorization, are held to bring a significant clinical benefit in comparison with existing therapies.

*European Union orphan designation and exclusivity*

The criteria for designating an orphan medicinal product in the European Union, are similar in principle to those in the United States. Under Article 3 of Regulation (EC) 141/2000, a medicinal product may be designated as orphan if (i) it is intended for the diagnosis, prevention or treatment of a life-threatening or chronically debilitating condition; (ii) either (a) such condition affects no more than five in 10,000 persons in the European Union when the application is made, or (b) the product, without the benefits derived from orphan status, would not generate sufficient return in the European Union to justify investment; and (iii) there exists no satisfactory method of diagnosis, prevention or treatment of such condition authorized for marketing in the European Union, or if such a method exists, the product will be of significant benefit to those affected by the condition, as defined in Regulation (EC) 847/2000. Orphan medicinal products are eligible for financial incentives such as reduction of fees or fee waivers and are, upon grant of a marketing authorization, entitled to ten years of market exclusivity for the approved therapeutic indication. The application for orphan designation must be submitted before the application for marketing authorization. The applicant will receive a fee reduction for the marketing authorization application if the orphan designation has been granted, but not if the designation is still pending at the time the marketing authorization is submitted. Orphan designation does not convey any advantage in, or shorten the duration of, the regulatory review and approval process.

The ten-year market exclusivity in the European Union may be reduced to six years if, at the end of the fifth year, it is established that the product no longer meets the criteria for orphan designation, for example, if the product is sufficiently profitable not to justify maintenance of market exclusivity. Additionally, marketing authorization may be granted to a similar product for the same indication at any time if:

- the second applicant can establish that its product, although similar, is safer, more effective or otherwise clinically superior;
- the applicant consents to a second orphan medicinal product application; or
- the applicant cannot supply enough orphan medicinal product.

**Rest of the world regulation**

For other countries outside of the European Union and the United States, 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 jurisdiction to jurisdiction. Additionally, the clinical trials must be conducted in accordance with cGCP requirements and the applicable regulatory requirements and the ethical principles that have their origin in the Declaration of Helsinki.

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

**Other healthcare laws**

Manufacturing, sales, promotion and other activities following product approval are also subject to regulation by numerous regulatory authorities in the United States in addition to the FDA, including CMS, the HHS Office of Inspector General and HHS Office for Civil Rights, other divisions of the HHS and the Department of Justice.

Healthcare providers, physicians, and third-party payors will play a primary role in the recommendation and prescription of any products for which we obtain marketing approval. Our current and future arrangements with third-party payors, healthcare providers and physicians may expose us to broadly applicable fraud and abuse and other healthcare laws and regulations that may constrain the business or financial arrangements and relationships through which we market, sell and distribute any drugs for which we obtain marketing approval. In the United States, these laws include, without limitation, state and federal anti-kickback, false claims, physician transparency, and patient data privacy and security laws and regulations, including but not limited to those described below.

The U.S. federal Anti-Kickback Statute, or AKS, prohibits, among other things, any person or entity from knowingly and willfully offering, paying, soliciting, receiving or providing any remuneration, directly or indirectly, overtly or covertly, to induce or in return for purchasing, leasing, ordering or arranging for or recommending the purchase, lease or order of any good, facility, item or service reimbursable, in whole or in part, under Medicare, Medicaid or other federal healthcare programs. The term "remuneration" has been broadly interpreted to include anything of value. The AKS has been interpreted to apply to arrangements between pharmaceutical and medical device manufacturers on the one hand and prescribers, purchasers, formulary managers and beneficiaries on the other hand. Although there are a number of statutory exceptions and regulatory safe harbors protecting some common activities from prosecution, the exceptions and safe harbors are drawn narrowly. Failure to meet all of the requirements of a particular applicable statutory exception or regulatory safe harbor does not make the conduct per se illegal under the AKS. Instead, the legality of the arrangement will be evaluated on a case-by-case basis based on a cumulative review of all its facts and circumstances. Several courts have interpreted the statute's intent requirement to mean that if any one purpose of an arrangement involving remuneration is to induce referrals of federal healthcare covered business, the statute has been violated. In addition, 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. Moreover, a claim including items or services resulting from a violation of the AKS constitutes a false or fraudulent claim for purposes of the federal civil False Claims Act.

Although we would not submit claims directly to payors, drug manufacturers can be held liable under the federal False Claims Act, which imposes civil penalties, including through civil whistleblower or qui tam actions, against individuals or entities (including manufacturers) for, among other things, knowingly presenting, or causing to be presented to federal programs (including Medicare and Medicaid) claims for items or services, including drugs, that are false or fraudulent, claims for items or services not provided as claimed, or claims for medically unnecessary items or services. The government may deem manufacturers to have "caused" the submission of false or fraudulent claims by, for example, providing inaccurate billing or coding information to customers or promoting a product off-label. Several biopharmaceutical, medical device and other healthcare companies have been prosecuted under federal false claims and civil monetary penalty laws for, among other things, allegedly providing free product to customers with the expectation that the customers would bill federal programs for the product. Other companies have been prosecuted for causing false claims to be submitted because of the companies' marketing of products for unapproved (e.g., or off-label), and thus non-covered, uses. In addition, the civil monetary penalties statute imposes penalties against any person who is determined to have presented or caused to be presented a claim to a federal health program that the person knows or should know is for an item or service that was not provided as claimed or is false or fraudulent. Claims which include items or services resulting from a violation of the federal AKS are false or fraudulent claims for purposes of the False Claims Act.

Our future marketing and activities relating to the reporting of wholesaler or estimated retail prices for our products, if approved, the reporting of prices used to calculate Medicaid rebate information and other information affecting federal, state and third-party reimbursement for our products, and the sale and marketing of our product candidates, are subject to scrutiny under these laws.

The federal Health Insurance Portability and Accountability Act of 1996, or HIPAA, created additional federal criminal statutes that prohibit, among other actions, knowingly and willfully executing, or attempting to execute, a scheme to defraud or to obtain, by means of false or fraudulent pretenses, representations or promises, any money or property owned by, or under the control or custody of, any healthcare benefit program, including private third-party payors, knowingly and willfully embezzling or stealing from a healthcare benefit program, willfully obstructing a criminal investigation of a healthcare offense and knowingly and willfully falsifying, concealing or covering up a material fact or making any materially false, fictitious or fraudulent statement in connection with the delivery of or payment for healthcare benefits, items or services. Similar to the U.S. federal Anti-Kickback Statute, a person or entity does not need to have actual knowledge of the statute or specific intent to violate it in order to have committed a violation.

In addition, there has been a recent trend of increased federal and state regulation of payments made to physicians and certain other healthcare providers. The Affordable Care Act, or the ACA, imposed, among other things, new annual reporting requirements through the Physician Payments Sunshine Act for covered manufacturers for certain payments and "transfers of value" provided to physicians and teaching hospitals, as well as ownership and investment interests held by physicians and their immediate family members. Failure to submit timely, accurately and completely the required information for all payments, transfers of value and ownership or investment interests may result in civil monetary penalties. Covered manufacturers must submit reports by the 90th day of each subsequent calendar year and the reported information is publicly made available on a searchable website. In addition, certain states require implementation of compliance programs and compliance with the pharmaceutical industry's voluntary compliance guidelines and the relevant compliance guidance promulgated by the federal government, impose restrictions on marketing practices and/or require the tracking and reporting of marketing expenditures and pricing information as well as gifts, compensation and other remuneration or items of value provided to physicians and other healthcare professionals and entities.

We may also be subject to data privacy and security regulation by both the federal government and the states in which we conduct our business. HIPAA, as amended by the Health Information Technology for Economic and Clinical Health Act, or HITECH, and their respective implementing regulations, including the Final HIPAA Omnibus Rule published on January 25, 2013, impose specified requirements relating to the privacy, security and transmission of individually identifiable health information held by covered entities and their business associates. Among other things, HITECH made HIPAA's security standards directly applicable to "business associates," defined as independent contractors or agents of covered entities that create, receive, maintain or transmit protected health information in connection with providing a service for or on behalf of a covered entity, although it is unclear that we would be considered a "business associate" in the normal course of our business. HITECH also increased the civil and criminal penalties that may be imposed against covered entities, business associates and possibly other persons, and gave state attorneys general new authority to file civil actions for damages or injunctions in federal courts to enforce the federal HIPAA laws and seek attorney's fees and costs associated with pursuing

federal civil actions. In addition, state laws govern the privacy and security of health information in certain circumstances, many of which differ from each other in significant ways and may not have the same requirements, thus complicating compliance efforts.

Similar federal, state and foreign fraud and abuse 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. Such laws are generally broad and are enforced by various state agencies and private actions. Also, many states have similar fraud and abuse statutes or regulations that may be broader in scope and may apply regardless of payor, in addition to items and services reimbursed under Medicaid and other state programs. Some state laws require pharmaceutical companies to comply with the pharmaceutical industry's voluntary compliance guidelines and the relevant federal government compliance guidance, and require drug manufacturers to report information related to payments and other transfers of value to physicians and other healthcare providers, marketing expenditures or drug pricing.

In order to distribute products commercially, we must comply with state laws that require the registration of manufacturers and wholesale distributors of drug and biological products in a state, including, in certain states, manufacturers and distributors who ship products into the state even if such manufacturers or distributors have no place of business within the state. Some states also impose requirements on manufacturers and distributors to establish the pedigree of product in the chain of distribution, including some states that require manufacturers and others to adopt new technology capable of tracking and tracing product as it moves through the distribution chain. Several states have enacted legislation requiring pharmaceutical and biotechnology companies to establish marketing compliance programs, file periodic reports with the state, make periodic public disclosures on sales, marketing, pricing, clinical trials and other activities, and/or register their sales representatives, as well as to prohibit pharmacies and other healthcare entities from providing certain physician prescribing data to pharmaceutical and biotechnology companies for use in sales and marketing, and to prohibit certain other sales and marketing practices. All of our activities are potentially subject to federal and state consumer protection and unfair competition laws.

The scope and enforcement of each of these laws is uncertain and subject to rapid change in the current environment of healthcare reform, especially in light of the lack of applicable precedent and regulations. Federal and state enforcement bodies have recently increased their scrutiny of interactions between healthcare companies and healthcare providers, which has led to a number of investigations, prosecutions, convictions and settlements in the healthcare industry. 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, disgorgement, contractual damages, reputational harm, diminished profits and future earnings, imprisonment, exclusion of drugs from government funded healthcare programs, such as Medicare and Medicaid, and the curtailment or restructuring of our operations, as well as additional reporting obligations and oversight if we become subject to a corporate integrity agreement or other agreement to resolve allegations of non-compliance with these laws, any of which could adversely affect our ability to operate our business and our financial results. 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 significant criminal, civil or administrative sanctions,

including exclusions from government funded healthcare programs. Ensuring business arrangements comply with applicable healthcare laws, as well as responding to possible investigations by government authorities, can be time- and resource consuming and can divert a company's attention from the business.

#### ***European data collection***

The collection and use of personal health data in the European Union are governed by the provisions of the Data Protection Directive, and, as of May 2018, the General Data Protection Regulation, or GDPR. This directive imposes several requirements relating to the consent of the individuals to whom the personal data relates, the information provided to the individuals, notification of data processing obligations to the competent national data protection authorities and the security and confidentiality of the personal data. The Data Protection Directive and GDPR also impose strict rules on the transfer of personal data out of the European Union, or the European Union, to the United States. Failure to comply with the requirements of the Data Protection Directive, the GDPR and the related national data protection laws of the EU Member States may result in fines and other administrative penalties. The GDPR introduces new data protection requirements in the European Union and substantial fines for breaches of the data protection rules. The GDPR regulations may impose additional responsibility and liability in relation to personal data that we process, including in respect of clinical trials, and we may be required to put in place additional mechanisms ensuring compliance with the new data protection rules. This may be onerous and adversely affect our business, financial condition, results of operations and prospects.

#### ***Current and future legislation***

In the United States and 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. We expect that current laws, as well as other healthcare reform measures that may be adopted in the future, may result in more rigorous coverage criteria and additional downward pressure on the price that we, or any collaborators, may receive for any approved products.

The ACA, for example, contains provisions that subject biological products to potential competition by lower-cost biosimilars and may reduce the profitability of drug products through increased rebates for drugs reimbursed by Medicaid programs, extend Medicaid rebates to Medicaid managed care plans, provide for mandatory discounts for certain Medicare Part D beneficiaries and annual fees based on pharmaceutical companies' share of sales to federal healthcare programs. With the President Trump administration and current Congress, there will likely be additional administrative or legislative changes, including modification, repeal or replacement of all, or certain provisions of the ACA, which may impact reimbursement for drugs and biologics. On January 20, 2017, President Trump signed an Executive Order directing federal agencies with authorities and responsibilities under the ACA to waive, defer, grant exemptions from, or delay the implementation of any provision of the ACA that would impose a fiscal or regulatory burden on states, individuals, healthcare providers, health insurers, or manufacturers of pharmaceuticals or medical devices. On October 13, 2017, President Trump signed an Executive Order terminating the cost-sharing subsidies that reimburse insurers under the ACA. Several state Attorneys General filed suit to stop the administration from terminating the subsidies, but their request for a restraining order was denied by a federal judge in California on October 25, 2017. In addition, CMS has recently proposed regulations that would give states greater flexibility in setting benchmarks for insurers in the individual and small group marketplaces, which may have

the effect of relaxing the essential health benefits required under the ACA for plans sold through such marketplaces. Further, each chamber of Congress has put forth multiple bills, and may do so again this year, designed to repeal or repeal and replace portions of the ACA, or replace it with a Medicare-for-all style federally funded insurance plan.

While Congress has not passed repeal legislation, the Tax Reform Act includes a provision that repealed, effective January 1, 2019, the tax-based shared responsibility payment imposed by the ACA on certain individuals who fail to maintain qualifying health coverage for all or part of a year that is commonly referred to as the “individual mandate.” Further, the Bipartisan Budget Act of 2018, or the BBA, among other things, amended the ACA, effective January 1, 2019, to increase from 50 percent to 70 percent the point-of-sale discount that is owed by pharmaceutical manufacturers who participate in Medicare Part D and to close the coverage gap in most Medicare drug plans, commonly referred to as the “donut hole.” Congress may consider other legislation to repeal and replace elements of the ACA. On December 14, 2018, a U.S. District Court judge in the Northern District of Texas ruled that the individual mandate portion of the ACA is an essential and inseparable feature of the ACA, and therefore because the mandate was repealed as part of the Tax Cuts and Jobs Act, the remaining provisions of the ACA are invalid as well. The Trump administration and CMS have both stated that the ruling will have no immediate effect, and on December 30, 2018 the same judge issued an order staying the judgment pending appeal. Litigation and legislation over the ACA are likely to continue, with unpredictable and uncertain results.

Additionally, other federal health reform measures have been proposed and adopted in the United States since the ACA was enacted:

- The Budget Control Act of 2011, among other things, created measures for spending reductions by Congress. A Joint Select Committee on Deficit Reduction, tasked with recommending a targeted deficit reduction of at least \$1.2 trillion for the years 2013 through 2021, was unable to reach required goals, thereby triggering the legislation’s automatic reduction to several government programs. These changes included aggregate reductions to Medicare payments to providers of up to 2% per fiscal year, which went into effect in April 2013 and, due to subsequent legislative amendments to the statute, including the BBA, will remain in effect through 2027, unless additional Congressional action is taken.
- The American Taxpayer Relief Act of 2012, among other things, reduced Medicare payments to several providers, and increased the statute of limitations period for the government to recover overpayments to providers from three to five years.
- The Middle Class Tax Relief and Job Creation Act of 2012 required that CMS reduce the Medicare clinical laboratory fee schedule by 2% in 2013, which served as a base for 2014 and subsequent years. In addition, effective January 1, 2014, CMS also began bundling the Medicare payments for certain laboratory tests ordered while a patient received services in a hospital outpatient setting.
- On January 31, 2019, the HHS and HHS Office of Inspector General, or OIG, proposed an amendment to one of the existing Anti-Kickback safe harbors (42 C.F.R. 1001.952(h)) which would prohibit certain pharmaceutical manufacturers from offering rebates to pharmacy benefit managers, or PBMs, in the Medicare Part D and Medicaid managed care programs. The proposed amendment would remove protection for “discounts” from Anti-Kickback enforcement action, and would include criminal and civil penalties for knowingly and willfully offering, paying, soliciting, or receiving remuneration to induce or reward the referral of business reimbursable under federal healthcare programs. At the same time, HHS also proposed to create a new safe harbor to protect point-of-sale discounts that drug manufacturers provide



directly to patients, and adds another safe harbor to protect certain administrative fees paid by manufacturers to PBMs. If this proposal is adopted, in whole or in part, it could affect the pricing and reimbursement for any products for which we receive approval in the future.

- On May 10, 2019, CMS announced a new pricing transparency rule, which goes into effect on July 9, 2019. This final rule requires direct-to-consumer television advertisements for prescription drugs and biological products for which reimbursement is available, directly or indirectly, through or under Medicare or Medicaid to include the list price of that product, except for a prescription drug or biological product that has a list price of less than \$35 per month for a 30-day supply or typical course of treatment.

Further, there has been heightened governmental scrutiny over the manner in which manufacturers set prices for their marketed products, which have resulted in several recent Congressional inquiries and proposed and enacted bills designed to, among other things, bring more transparency to product pricing, review the relationship between pricing and manufacturer patient programs, and reform government program reimbursement methodologies for products. In addition, the U.S. government, state legislatures, and foreign governments have shown significant interest in implementing cost containment programs, including price-controls, restrictions on reimbursement and requirements for substitution of generic products for branded prescription drugs to limit the growth of government paid healthcare costs. For example, the U.S. government has passed legislation requiring pharmaceutical manufacturers to provide rebates and discounts to certain entities and governmental payors to participate in federal healthcare programs. Further, Congress and the current administration have each indicated that it will continue to seek new legislative and/or administrative measures to control drug costs, and the current administration recently released a "Blueprint", or plan, to reduce the cost of drugs. The Blueprint contains certain measures that the U.S. Department of Health and Human Services is already working to implement. For example, in September 2018, CMS announced that it will allow Medicare Advantage Plans the option to use step therapy for Part B drugs beginning January 1, 2019. Congress and the Trump administration have each indicated that it will continue to seek new legislative and/or administrative measures to control drug costs. Individual states in the United States have also been increasingly passing legislation and implementing regulations designed to control pharmaceutical and biological product pricing, including price or patient reimbursement constraints, discounts, restrictions on certain product access and marketing cost disclosure and transparency measures, and, in some cases, designed to encourage importation from other countries and bulk purchasing.

## **Employees**

As of June 1, 2019, we had 48 full-time employees. Of these employees, 29 are engaged in product development and clinical activities. None of our employees are represented by a labor union or covered by a collective bargaining agreement. We consider our relationship with our employees to be good.

## **Facilities**

Our headquarters are based in Stamford, Connecticut, where we have leased approximately 24,000 square feet of office space under a lease that expires in November 2022. Our development operations are based in Durham, North Carolina, where we have leased approximately 10,350 square feet of office space under a lease that expires in 2023, with two five-year renewal options. We believe that our office spaces are sufficient for our current needs.

**Legal proceedings**

We are not currently a party to any material legal proceedings.

## Management

The following table sets forth certain information concerning our executive officers who, subject to rights pursuant to any employment agreements, serve at the pleasure of our board of directors:

Name	Age	Position
Saqib Islam, J.D.	49	Chief Executive Officer and Director
Jens Renstrup, M.D., M.B.A.	54	Chief Medical Officer
Badreddin Edris, Ph.D.	32	Chief Business Officer
L. Mary Smith, Ph.D.	52	Senior Vice President, Clinical Research and Development
Michael V. Greco, J.D.	48	General Counsel and Secretary

The following is a biographical summary of the experience of our executive officers.

### Executive officers

**Saqib Islam, J.D.**, has served as our Chief Executive Officer and a member of our board of directors since August 2018. Previously, Mr. Islam served as our Chief Financial Officer and Chief Business Officer since our formation in August 2017. Prior to joining SpringWorks, Mr. Islam served as Chief Business Officer at Moderna Therapeutics, Inc. from February 2016 to August 2017. Prior to Moderna Therapeutics, Inc., Mr. Islam was Executive Vice President, Chief Strategy and Portfolio Officer at Alexion Pharmaceuticals, Inc. from February 2013 to February 2016, where he was responsible for executing the company's corporate growth strategies and contributed to its assessment and management of global operations. Prior to joining Alexion, Mr. Islam worked for more than 25 years in international business management with a focus on business development, strategic decision-making and planning and capital markets, previously holding Managing Director positions at Morgan Stanley and Credit Suisse. Mr. Islam holds a J.D. from Columbia Law School, where he was a Harlan Fiske Scholar, and a Bachelor's degree from McGill University where he was a Faculty and University Scholar. We believe that Mr. Islam is qualified to serve on our board of directors based on his experience and expertise in operations management and executive leadership at various biopharmaceutical companies.

**Jens Renstrup, M.D., M.B.A.**, has served as our Chief Medical Officer since July 2018. From June 2015 to April 2018, Dr. Renstrup was Senior Vice President and Head of Global Medical Affairs at Alexion Pharmaceuticals, Inc. Prior to Alexion, Dr. Renstrup served as Head of Global Medical Affairs at GlaxoSmithKline from May 2010 to June 2015 and held various medical director positions at Merck & Co. from 2002 to 2010. Dr. Renstrup holds an M.D. from the University of Copenhagen and a graduate diploma in marketing from Copenhagen Business School.

**Badreddin Edris, Ph.D.**, has served as our Chief Business Officer since September 2018. Prior to joining us, Dr. Edris was an investment and operating professional on the private equity team at OrbiMed Advisors LLC, a healthcare investment firm, from June 2014 to November 2018. During his tenure at OrbiMed, Dr. Edris focused on investing in private and public biopharmaceutical companies, and also co-founded and held operating roles at two OrbiMed portfolio companies, Silverback Therapeutics, Inc., where he was Chief Business Officer from April 2016 to September 2018, and Edgewise Therapeutics, Inc. where he was Chief Operating Officer from May 2017 until March 2018. Before OrbiMed, Dr. Edris was a management consultant in the healthcare practice at Bain & Co Inc. Dr. Edris holds a Ph.D. in Genetics from Stanford University School of Medicine, where he was a National Science Foundation Graduate Research Fellow, an M.S. in Biology from Stanford University and a Bachelor's degree in Microbiology from Weber State University.

**L. Mary Smith, Ph.D.**, has served as our Senior Vice President, Clinical Research and Development since August 2017. Prior to joining us, Dr. Smith was the Executive Vice President of Clinical Development at Bamboo Therapeutics, Inc., a wholly owned subsidiary of Pfizer, from June 2016 to August 2017. Prior to joining Bamboo, Dr. Smith held positions of increasing responsibility in the research and development department at United Therapeutics Corporation from 2005 to 2016, most recently as Vice President of Product Development from December 2014 to June 2016. She earned a B.S. in biochemistry and a Ph.D. in microbiology from the University of New Hampshire, and she received her postdoctoral training at Emory University.

**Michael V. Greco, J.D.**, has served as our General Counsel and Secretary since June 2018. Prior to joining us, Mr. Greco held positions of increasing responsibility in the legal department at Alexion Pharmaceuticals, Inc. from February 2007 until June 2018, most recently as Senior Vice President of Law and Corporate Secretary from August 2015 to June 2018. Prior to Alexion, he was a corporate and transactional attorney at Wiggin and Dana LLP from May 2005 to February 2007 and Bingham McCutchen LLP (now Morgan, Lewis & Bockius LLP) from September 1999 to May 2005. Prior to attending law school, Mr. Greco served in the U.S. Army Corps of Engineers. He received a J.D. from Suffolk University Law School and a B.S. from the United States Military Academy, West Point.

### Non-employee directors

The following table sets forth certain information concerning our non-employees who serve on our board of directors:

Name	Age	Position
Daniel S. Lynch, M.B.A.	60	Executive Chairman of the Board
Carl L. Gordon, Ph.D., CFA	54	Director
Peter Keen	61	Director
Freda Lewis-Hall, M.D., DFAPA	63	Director
Deval L. Patrick, J.D.	62	Director
Jeffrey Schwartz, M.B.A.	40	Director
Stephen Squinto, Ph.D.	62	Director and Acting Head of Research and Development

(1) Member of audit committee.

(2) Member of compensation committee.

(3) Member of nominating and corporate governance committee.

The following is a biographical summary of the experience of our non-employee directors.

**Daniel S. Lynch, M.B.A.**, has served as our Executive Chairman since August 2017, and from February 2018 to July 2018, Mr. Lynch served as our interim Chief Executive Officer. Mr. Lynch has served as chairman of the board of directors of Blueprint Medicines Corporation since September 2012. Mr. Lynch served as a venture partner at Third Rock from May 2013 to December 2016 and served as an entrepreneur-in-residence at Third Rock from May 2011 to May 2013 and interim Chief Executive Officer of Surface Oncology, Inc., from September 2017 to January 2018. From April 2001 to November 2005, Mr. Lynch served as the Chief Financial Officer and then the Chief Executive Officer of ImClone Systems, Inc. Mr. Lynch has served as chairman of the board of directors and chairman of the compensation committee of Surface Oncology, Inc. since December 2016, chairman of the boards of directors of bluebird bio, Inc. since May 2011 and Blueprint Medicines Corp. since September 2012 and as a member of the board of directors of Translate Bio, Inc. (formerly RaNa Therapeutics, Inc.) since June 2012 (including as chairman of

the board of directors since March 2015). Mr. Lynch served as a member of the board of directors of DNIB Unwind, Inc. (formerly BIND Therapeutics, Inc.) from October 2012 to July 2016. Mr. Lynch received a B.A. in mathematics from Wesleyan University and an M.B.A. from the Darden Graduate School of Business Administration at the University of Virginia. We believe that Mr. Lynch is qualified to serve on our board of directors based on his experience as the Chief Executive Officer and Chief Financial Officer of a public pharmaceutical company and as executive chairman and director for many other life science companies.

**Carl Gordon, Ph.D., CFA**, has served as a member of our board of directors since August 2017. In addition, Dr. Gordon is a member at OrbiMed Advisors, LLC, which he co-founded in January 1998. Dr. Gordon currently serves on the boards of directors of several private companies and has served as a member of the board of directors of Turning Point Therapeutics, Inc. since May 2017, Alector, Inc. since 2013 and Prevail Therapeutics, Inc. since August 2017. Previously, he also served on the boards of directors of various publicly traded companies including Acceleron Pharma Inc. from 2006 to 2013, ARMO BioSciences, Inc. from December 2012 to May 2018, Intellia Therapeutics, Inc. from August 2015 to July 2017, Selecta BioSciences Inc. from 2010 to June 2017 and X4 Pharmaceuticals, Inc. (formerly Arsanis Inc.) from September 2010 to March 2019. Prior to OrbiMed, he was a senior biotechnology analyst at Mehta and Isaly Assets Management, Inc. from 1995 to 1997. He was a Fellow at The Rockefeller University from 1993 to 1995. Dr. Gordon received a Ph.D. in Molecular Biology from the Massachusetts Institute of Technology and a B.A. in Chemistry from Harvard College. We believe Dr. Gordon is qualified to serve on our board of directors because of his expertise and experience in the biotechnology industry through his role as founding Partner and Co-Head of Global Private Equity at OrbiMed over a 20-year period, in which he has been involved in the evaluation, investment and oversight of several biotechnology companies, his experience as a director of other life sciences companies, as well as his scientific educational background.

**Peter Keen** has served as a member of our board of directors since August 2017. Mr. Keen is a UK chartered accountant by training and has 35 years' experience in the development and commercial exploitation of technology, primarily in healthcare, both as an executive and a venture capital investor. Since March 2013 he has been a director and chairman of the investment committee of LifeArc, an independent life science medical research charity, and since February 2017, a director of Endomagnetics Limited. He was the founder Chief Executive of Cambridge Innovation Capital plc an investment fund focused on technology arising from the University of Cambridge from August 2013 to March 2016, a member of the board of directors of Biotechnology Growth Trust PLC, a UK listed investment trust investing in global biotechnology from June 1997 to July 2017, and from October 2005 to November 2014 the senior independent director at Abcam plc, a life science tools supplier. He has held senior roles in several biotechnology companies as well as having nine years of experience in venture capital and has sat on numerous public and private company boards in the United Kingdom. We believe that Mr. Keen is qualified to serve on our board of directors due to his experience as a director of companies and investment funds focused within healthcare.

**Freda Lewis-Hall, M.D., DFAPA** has served as a member of our board of directors since August 2017. Since January 2019, Dr. Lewis-Hall has served as Chief Patient Officer and Executive Vice President of Pfizer Inc., a pharmaceutical company, where she is responsible for Pfizer's office of patient affairs, centers of excellence on pediatric care, clinical trial diversity and healthy aging, its enterprise benefit-risk communications and its worldwide compassionate access program. Prior to January 2019, Dr. Lewis-Hall served as Pfizer's Chief Medical Officer from 2009 to January 2019. Prior to joining Pfizer in 2009, Dr. Lewis-Hall held various senior leadership positions including Chief Medical Officer and Executive Vice President, Medicines Development at Vertex Pharmaceuticals Incorporated from June 2008 to May 2009, Senior Vice President, U.S.

Pharmaceuticals, Medical Affairs for Bristol-Myers Squibb Company from 2003 until May 2008, and Product Team Leader at Pharmacia and Eli Lilly and Company from 1998 to 2002. Dr. Lewis-Hall holds an M.D. from Howard University Hospital and College of Medicine and a B.A. in natural sciences from Johns Hopkins University. We believe Dr. Lewis-Hall is qualified to serve on our board of directors based on her expertise and experience in the biopharmaceutical industry and her leadership experience as a senior executive at various biopharmaceutical companies.

**Deval L. Patrick, J.D.**, has served as a member of our board of directors since August 2017. In April 2015, Mr. Patrick joined Bain Capital Double Impact, LP where he serves as managing director. From January 2007 to January 2015, Mr. Patrick served as the governor of Massachusetts. Prior to his tenure in government, from 2000 to 2004, Mr. Patrick served as the Executive Vice President and General Counsel at The Coca-Cola Company. Prior to that, he served as Vice President and General Counsel at Texaco Inc., from 1998 to 1999. Mr. Patrick has served on the board of directors of Global Blood Therapeutics, Inc. since April 2015 and currently serves on the boards of directors of a number of private companies. He was a partner in two Boston law firms and, from 1994 to 1997, served as the Assistant Attorney General of the United States for Civil Rights in the Department of Justice. Mr. Patrick received an A.B. in English and American Literature from Harvard College and a J.D. from Harvard Law School. We believe that Mr. Patrick is qualified to serve on our board of directors based on his significant experience as a business and government leader with a record of success in solving complex problems, making strategic investments, managing crises and building teams locally, nationally and internationally.

**Jeffrey Schwartz, M.B.A.**, has served as a member of board of directors since August 2017. Mr. Schwartz currently serves as a managing director of Bain Capital Life Sciences, LP, where he is a founding member. Prior to founding Bain Capital Life Sciences, LP in 2016, he was a leader within the healthcare vertical of Bain Capital Private Equity, LP. Mr. Schwartz has served on the boards of directors of several private companies. Mr. Schwartz holds an M.B.A. from the Wharton School at the University of Pennsylvania, where he was a Palmer Scholar, and holds a B.A. in economics from Yale University. We believe Mr. Schwartz is qualified to serve on our board of directors based on his significant experience investing in and advising healthcare companies.

**Stephen Squinto, Ph.D.**, has served as a member of our board of directors since August 2017 and is currently our acting Head of Research and Development. Dr. Squinto has been a Venture Partner at OrbiMed since January 2015. Previously, Dr. Squinto co-founded Alexion Pharmaceuticals, Inc. and served as its Executive Vice President and Chief Global Operations Officer from 2012 to January 2015 and as its Global Head of Research and Development from 2007 to 2012. Dr. Squinto also previously served as a member of the board of directors of Arvinas, Inc. from October 2015 to September 2018 and Audentes Therapeutics, Inc. from April 2015 to January 2018. Dr. Squinto holds a Ph.D. in biochemistry and biophysics and a B.A. in chemistry from Loyola University of Chicago. We believe Dr. Squinto is qualified to serve on our board of directors based on his experience in the biopharmaceutical industry, including his operational experience in drug discovery and development.

## Our board of directors

As of \_\_\_\_\_, 2019, our board of directors consisted of eight members, each of whom is a member pursuant to the board composition provisions of our existing certificate of incorporation and agreements with our stockholders. 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. Our nominating and

corporate governance committee's and our board of directors' priority in selecting board members is the identification of persons who will further the interests of our stockholders through their 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 resignation or removal. Our amended and restated certificate of incorporation and amended and restated bylaws that will become effective immediately prior to 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 two-thirds 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 the board of directors, except Mr. Lynch and Mr. Islam, are independent directors, including for purposes of the rules of [redacted] and the Securities and Exchange Commission, or SEC. In making such independence determination, our board of directors considered the relationships that each non-employee director has with us and all other facts and circumstances that our board of directors deemed relevant in determining their independence, including the beneficial ownership of our capital stock by each non-employee director. In considering the independence of the directors listed above, our board of directors considered the association of our directors with the holders of more than 5% of our common stock. Upon the completion of this offering, we expect that the composition and functioning of our board of directors and each of our committees will comply with all applicable requirements of [redacted] and the rules and regulations of the SEC. There are no family relationships among any of our directors or executive officers. Mr. Lynch and Mr. Islam are not independent directors because each has served as one of our executive officers within the last three years.

#### ***Staggered board***

In accordance with the terms of our amended and restated certificate of incorporation and amended and restated bylaws that will become effective immediately prior to the completion of this offering, our board of directors will be divided into three staggered classes of directors and each director 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 2020 for Class I directors, 2021 for Class II directors and 2022 for Class III directors.

- Our Class I directors will be [redacted] ;
- Our Class II directors will be [redacted] ; and
- Our Class III directors will be [redacted] .

Our amended and restated certificate of incorporation and amended and restated bylaws that will become effective immediately prior to the completion of this offering will provide that the number of directors shall be fixed from time to time by a resolution of the majority of our 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.

### **Board leadership structure and board's role in risk oversight**

Daniel S. Lynch is the current Executive Chairman of our board of directors and Saqib Islam, J.D. is our current Chief Executive Officer, hence the roles of Executive Chairman of our board of directors and Chief Executive Officer are separated. We believe that separating these positions allows our Chief Executive Officer to focus on our day-to-day business, while allowing our Executive Chairman to lead the board of directors in its fundamental role of providing advice to and independent oversight of management. Our board of directors recognizes the time, effort and energy that the Chief Executive Officer is required to devote to his position in the current business environment, as well as the commitment required to serve as our Executive Chairman, particularly as the board of directors' oversight responsibilities continue to grow. While our amended and restated bylaws and corporate governance guidelines do not require that our Executive Chairman and Chief Executive Officer positions be separate, our board of directors believes that having separate positions is the appropriate leadership structure for us at this time and demonstrates our commitment to good corporate governance.

Risk is inherent with every business, and how well a business manages risk can ultimately determine its success. We face a number of risks, including risks relating to our financial condition, development and commercialization activities, operations, strategic direction and intellectual property as more fully discussed in the section entitled "Risk factors" appearing elsewhere in this prospectus. Management is responsible for the day-to-day management of risks we face, while our board of directors, as a whole and through its committees, has responsibility for the oversight of risk management. In its risk oversight role, our board of directors has the responsibility to satisfy itself that the risk management processes designed and implemented by management are adequate and functioning as designed.

The role of the board of directors in overseeing the management of our risks is conducted primarily through committees of the board of directors, as disclosed in the descriptions of each of the committees below and in the charters of each of the committees. The full board of directors (or the appropriate board committee in the case of risks that are under the purview of a particular committee) discusses with management our major risk exposures, their potential impact on us, and the steps we take to manage them. When a board committee is responsible for evaluating and overseeing the management of a particular risk or risks, the chairman of the relevant committee reports on the discussion to the full board of directors during the committee reports portion of the next board meeting. This enables the board of directors and its committees to coordinate the risk oversight role, particularly with respect to risk interrelationships.

### **Committees of our board of directors**

Our board of directors has established an audit committee, a compensation committee and a nominating and corporate governance committee, each of which will operate pursuant to a charter adopted by our board of directors and will be effective upon the effectiveness of the registration statement of which this prospectus is a part. At such time, the composition and functioning of all of our committees will comply with all applicable requirements of the Sarbanes-Oxley Act of 2002, and SEC rules and regulations.

#### ***Audit committee***

Effective upon the effectiveness of the registration statement of which this prospectus is a part, will serve on the audit committee, which will be chaired by . Our board of directors has



determined each member of the audit committee is "independent" for audit committee purposes as that term is defined in the rules of the SEC and the applicable rules, and each has sufficient knowledge in financial and auditing matters to serve on the audit committee. Our board of directors has designated as an "audit committee financial expert," as defined under the applicable rules of the SEC. The audit committee's responsibilities include:

- appointing, approving the compensation of and assessing the independence of our independent registered public accounting firm;
- pre-approving auditing and permissible non-audit services, and the terms of such services, to be provided by our independent registered public accounting firm;
- reviewing the overall audit plan with our independent registered public accounting firm and members of management responsible for preparing our financial statements;
- reviewing and discussing with management and our independent registered public accounting firm our annual and quarterly financial statements and related disclosures as well as critical accounting policies and practices used by us;
- coordinating the oversight and reviewing the adequacy of our internal control over financial reporting;
- establishing policies and procedures for the receipt and retention of accounting-related complaints and concerns;
- recommending based upon the audit committee's review and discussions with management and our independent registered public accounting firm whether our audited financial statements shall be included in our Annual Report on Form 10-K;
- monitoring the integrity of our financial statements and our compliance with legal and regulatory requirements as they relate to our financial statements and accounting matters;
- preparing the audit committee report required by SEC rules to be included in our annual proxy statement;
- reviewing all related person transactions for potential conflict of interest situations and approving all such transactions; and
- reviewing quarterly earnings releases.

#### **Compensation committee**

Effective upon the effectiveness of the registration statement of which this prospectus is a part, will serve on the compensation committee, which will be chaired by . Our board of directors has determined that each member of the compensation committee is "independent" as defined in the applicable rules. The compensation committee's responsibilities include:

- annually reviewing and recommending to the board of directors the corporate goals and objectives relevant to the compensation of our Chief Executive Officer;
- evaluating the performance of our Chief Executive Officer in light of such corporate goals and objectives and based on such evaluation: (i) recommending to the board of directors the cash compensation of our Chief Executive Officer and (ii) recommending grants and awards to our Chief Executive Officer under equity-based plans;
- reviewing and approving or recommending to the board of directors the cash compensation of our other executive officers;
- reviewing and establishing our overall management compensation, philosophy and policy;
- overseeing and administering our compensation and similar plans;
- evaluating and assessing potential and current compensation advisors in accordance with the independence standards identified in the applicable rules;
- reviewing and approving our policies and procedures for the grant of equity-based awards;

- reviewing and recommending to the board of directors the compensation of our directors;
- preparing the compensation committee report required by SEC rules, if and when required, to be included in our annual proxy statement; and
- reviewing and approving the retention, termination or compensation of any consulting firm or outside advisor to assist in the evaluation of compensation matters.

#### ***Nominating and corporate governance committee***

Effective upon the effectiveness of the registration statement of which this prospectus is a part, \_\_\_\_\_ will serve on the nominating and corporate governance committee, which will be chaired by \_\_\_\_\_. Our board of directors has determined that each member of the nominating and corporate governance committee is “independent” as defined in the applicable \_\_\_\_\_ rules. The nominating and corporate governance committee’s responsibilities include:

- developing and recommending to the board of directors criteria for board and committee membership;
- establishing procedures for identifying and evaluating board of director candidates, including nominees recommended by stockholders;
- reviewing the composition of the board of directors to ensure that it is composed of members containing the appropriate skills and expertise to advise us;
- identifying individuals qualified to become members of the board of directors;
- recommending to the board of directors the persons to be nominated for election as directors and to each of the board’s committees;
- developing and recommending to the board of directors a code of business conduct and ethics and a set of corporate governance guidelines; and
- overseeing the evaluation of our board of directors and management.

Our board of directors may from time to time establish other committees.

#### **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.

#### **Corporate governance**

We will adopt a written code of business conduct and ethics, which will become effective upon the effectiveness of the registration statement of which this prospectus is a part, that applies to our directors, officers and employees, including our principal executive officer, principal financial officer, principal accounting officer or controller, or persons performing similar functions. Following the effectiveness of the registration statement of which this prospectus is a part, a current copy of the code will be posted on the investor relations section of our website, which is located at <http://www.springworkstx.com>. If we make any substantive amendments to, or grant any waivers from, the code of business conduct and ethics for any officer or director, we will disclose the nature of such amendment or waiver on our website or in a current report on Form 8-K.

## Executive compensation

### Executive compensation overview

Historically, our executive compensation program has reflected our continued growth and development-oriented focus. To date, the compensation of our executive officers identified in the 2018 Summary Compensation Table below, who we refer to as our named executive officers, has consisted of a combination of base salary, incentive bonuses and long-term incentive compensation. Our named executive officers who are full-time employees, like all other full-time employees, are eligible to participate in our retirement, health and welfare benefit plans. As we transition from a private company to a publicly traded company, the compensation committee of our board of directors will evaluate our compensation values and philosophy and compensation plans and arrangements as circumstances require. At a minimum, the compensation committee expects to review executive compensation annually with input from a compensation consultant. As part of this review process, we expect the compensation committee to apply our values and philosophy, while considering the compensation levels needed to ensure our executive compensation program remains competitive. We will also review whether we are meeting our retention objectives and the potential cost of replacing a key employee.

### 2018 summary compensation table

The following table presents information regarding the total compensation awarded to, earned by, and paid to our named executive officers for services rendered to us in all capacities in 2018.

Name and principal position	Year	Salary (\$)	Non-equity incentive plan compensation (\$) <sup>(6)</sup>	Stock awards (\$) <sup>(7)</sup>	All other compensation (\$)	Total (\$)
Saqib Islam, J.D. Chief Executive Officer <sup>(1)</sup>	2018	406,510	180,000	1,181,322	—	1,767,832
Daniel S. Lynch Executive Chairman and Former Interim Chief Executive Officer <sup>(2)</sup>	2018	150,000	—	309,000	—	459,000
Jens Renstrup, M.D. Chief Medical Officer <sup>(3)</sup>	2018	170,625	51,288	353,882	—	575,795
Badreddin Edris, Ph.D. Chief Business Officer <sup>(4)</sup>	2018	112,500	33,140	339,900	37,735 <sup>(6)</sup>	523,275
Lara S. Sullivan, M.D. Former President <sup>(5)</sup>	2018	176,458	60,914	703,671	324,809 <sup>(9)</sup>	1,265,852

(1) Mr. Islam served as Chief Business Officer and Chief Financial Officer from September 1, 2017 until July 30, 2018 and was appointed Chief Executive Officer on July 31, 2018. His base salary increased from \$375,000 to \$450,000 in 2018.

(2) Mr. Lynch has served as Executive Chairman since September 2017, and served as interim Chief Executive Officer from February 1, 2018 until July 30, 2018.

(3) Dr. Renstrup commenced employment on July 24, 2018. His annualized base salary for 2018 was \$390,000, and the 2018 salary reported reflects the pro rata portion of Dr. Renstrup's annual salary earned from commencement of his employment through December 31, 2018.

(4) Dr. Edris commenced employment on September 10, 2018. His annualized base salary for 2018 was \$360,000, and the 2018 salary reported reflects the pro rata portion of Dr. Edris' annual salary earned from commencement of his employment through December 31, 2018.

(5) Dr. Sullivan's employment terminated in June 2018. The 2018 salary reflects Dr. Sullivan's base salary earned as our President through that date. In connection with the termination of her employment, we entered into a separation agreement with Dr. Sullivan pursuant to which we agreed to provide Dr. Sullivan with the following payments and benefits: (i) nine months of base salary continuation, (ii) the same portion of premiums that we pay for active employees

for the same level of group medical coverage as in effect for her prior to her termination of employment for up to nine months following termination, (iii) attorney's fees of up to \$7,500 relating to the completion of her separation agreement, (iv) up to \$21,000 for executive coaching services and (v) accelerated vesting of 1,091,686 incentive units held by Dr. Sullivan as of the date of termination, which such amounts are reflected in the "All other compensation" column.

(6) The amounts reported represent bonuses awarded based upon 100% achievement of corporate performance objectives for the year ended December 31, 2018, which were paid in March 2019. Bonus payments were pro-rated to reflect each named executive officer's start date.

(7) The amounts reported represent the aggregate grant-date fair value of incentive unit awards of our predecessor granted in 2018, calculated in accordance with Financial Accounting Standards Board, or FASB, Accounting Standards Codification, or ASC, Topic 718. Such grant-date fair value does not take into account any estimated forfeitures related to service-vesting conditions. In addition, the amount reported for Dr. Sullivan includes the incremental fair value of \$240,171 associated with the acceleration of vesting of 1,091,686 incentive units, calculated in accordance with FASB ASC Topic 718. The assumptions used in calculating the grant-date fair value are set forth in Note 3 of our notes to consolidated financial statements included elsewhere in this prospectus. In March 2019, in connection with the Reorganization, incentive unit awards were exchanged for an equal number of shares of restricted stock or vested common stock, as applicable, under the Company's 2019 Stock Option and Incentive Plan, or the 2019 Stock Plan.

(8) The amount reported represents commuting expense reimbursements.

(9) The amount reported represents (i) the following amounts payable to Dr. Sullivan pursuant to the terms of her separation agreement with us: (A) \$288,750 in cash severance payments, (B) \$6,934 for nine months of premiums of medical coverage, (C) \$7,500 in attorney's fees related to the completion of her separation agreement and (D) \$12,000 for executive coaching services, and (ii) \$9,625 in accrued but unused vacation paid upon the termination of her employment.

## Employment arrangements with our named executive officers

We have entered into offer letters and severance agreements with each of our named executive officers who are our current employees, which are described below. In connection with this offering, we intend to enter into employment agreements with these named executive officers that will become effective upon the closing of this offering and will supersede the existing offer letters and severance agreements.

### **Saqib Islam**

Under the offer letter with Mr. Islam, he serves as our Chief Executive Officer on an at-will basis. Mr. Islam currently receives a base salary of \$465,750 per year, which is subject to periodic review and adjustment. Mr. Islam is also eligible for an annual performance bonus targeted at 40% of his base salary and is eligible to participate in the employee benefit plans generally available to our employees, subject to the terms of those plans.

The severance agreement with Mr. Islam, or the Islam Severance Agreement, provides that if his employment is terminated by us without Cause (as defined in the Islam Severance Agreement) or Mr. Islam resigns for Good Reason (as defined in the Islam Severance Agreement), subject to Mr. Islam signing a separation agreement, containing, among other things, a general release of claims in favor of the Company, he will be entitled to receive: (i) base salary continuation for 12 months following termination, (ii) a pro-rata payment of his target annual bonus and, (iii) if Mr. Islam is enrolled in our group health plan immediately prior to the date of termination and properly elects and remains eligible to receive the Consolidated Omnibus Budget Reconciliation Act, or COBRA, benefits, a monthly cash payment for 12 months or Mr. Islam's COBRA health continuation period, whichever ends earlier, in an amount equal to our normal rate of contribution for employees for coverage at the level in effect immediately prior to the date of termination. Payment of the base salary continuation and pro-rated bonus described in clauses (i) and (ii) of the preceding sentence shall immediately cease if Mr. Islam breaches the terms of the restrictive covenants agreement between him and us. In addition, if such termination occurs within seven to 18 months following July 31, 2018, the equity award granted to Mr. Islam in July 2018 will accelerate and become vested as to the portion that would have been vested if Mr. Islam had remained employed through January 31, 2020.

In lieu of the severance payments and benefits set forth above, in the event Mr. Islam's employment is terminated by us without Cause or he resigns for Good Reason, in either case within 18 months following a Change in Control (as defined in the Islam Severance Agreement), and subject to the signing of a separation agreement, containing, among other thing, a general release of claims in favor of the Company, he will be entitled to receive: (i) an amount equal to 12 months of his base salary, (ii) a pro-rata payment of his target annual bonus, (iii) if Mr. Islam is enrolled in our group health plan immediately prior to the date of termination and properly elects to receive COBRA benefits, a monthly cash payment for 12 months or Mr. Islam's COBRA health continuation period, whichever ends earlier, in an amount equal to our normal rate of contribution for employees for coverage at the level in effect immediately prior to the date of termination, and (iv) 12 months of accelerated vesting of his time-based equity awards.

#### **Jens Renstrup**

Under the offer letter with Dr. Renstrup, he serves as our Chief Medical Officer on an at-will basis. Dr. Renstrup currently receives a base salary of \$403,650 per year, which is subject to periodic review and adjustment. Dr. Renstrup is also eligible for an annual performance bonus targeted at 30% of his base salary and is eligible to participate in both the employee benefit plans generally available to our employees, subject to the terms of those plans.

The severance agreement with Dr. Renstrup, or the Renstrup Severance Agreement, provides that if his employment is terminated by us without Cause (as defined in the Renstrup Severance Agreement) or Dr. Renstrup resigns for Good Reason (as defined in the Renstrup Severance Agreement), subject to the signing of a separation agreement, containing, among other things, a general release of claims in favor of the Company, he will be entitled to receive: (i) base salary continuation for nine months following termination, (ii) a pro-rata payment of his target annual bonus, and (iii) if Dr. Renstrup is enrolled in our group health plan immediately prior to the date of termination and properly elects and remains eligible to receive COBRA benefits, a monthly cash payment for nine months or Dr. Renstrup's COBRA health continuation period, whichever ends earlier, in an amount equal to our normal rate of contribution for employees for coverage at the level in effect immediately prior to the date of termination. Payment of the base salary continuation and pro-rated bonus described in clauses (i) and (ii) of the preceding sentence shall immediately cease if Dr. Renstrup breaches the terms of the restrictive covenants set forth in the Renstrup Severance Agreement. In addition, if such termination occurs within seven to 18 months following July 16, 2018, the equity award granted to Dr. Renstrup will accelerate and become vested as to the portion that would have been vested if Dr. Renstrup had remained employed through January 16, 2020.

In lieu of the severance payments and benefits set forth above, in the event that Dr. Renstrup's employment is terminated by us without Cause or he resigns for Good Reason, in either case within 18 months following a Change in Control (as defined in the Renstrup Severance Agreement), and subject to the signing of a separation agreement, containing, among other things, a general release of claims in favor of the Company, he will be entitled to receive: (i) an amount equal to nine months of his base salary, (ii) a pro-rata payment of his target annual bonus, (iii) except as otherwise provided in the applicable option or stock-based award agreement, accelerated vesting of 100% of all unvested stock options and other stock-based awards held by Dr. Renstrup, and (iv) if Dr. Renstrup is enrolled in our group health plan immediately prior to the date of termination and properly elects to receive COBRA benefits, a monthly cash payment for nine months or Dr. Renstrup's COBRA health continuation period, whichever ends earlier, in an amount equal to our normal rate of contribution for employees for coverage at the level in effect immediately prior to the date of termination.

**Badreddin Edris**

Under the offer letter with Dr. Edris, he serves as our Chief Business Officer on an at-will basis. Dr. Edris currently receives a base salary of \$372,600 per year, which is subject to periodic review and adjustment. Dr. Edris is also eligible for an annual performance bonus targeted at 30% of his base salary and is eligible to participate in both the employee benefit plans generally available to our employees, subject to the terms of those plans.

The severance agreement with Dr. Edris, or the Edris Severance Agreement, provides that if his employment is terminated by us without Cause (as defined in the Edris Severance Agreement) or Dr. Edris resigns for Good Reason (as defined in the Edris Severance Agreement), subject to the signing of a separation agreement, containing, among other things, a general release of claims in favor of the Company, he will be entitled to receive: (i) base salary continuation for nine months following termination, (ii) a pro-rata payment of his target annual bonus, and (iii) if Dr. Edris is enrolled in our group health plan immediately prior to the date of termination and properly elects and remains eligible to receive COBRA benefits, a monthly cash payment for nine months or Dr. Edris' COBRA health continuation period, whichever ends earlier, in an amount equal to our normal rate of contribution for employees for coverage at the level in effect immediately prior to the date of termination. Payment of the base salary continuation and pro-rated bonus described in clauses (i) and (ii) of the preceding sentence shall immediately cease if Dr. Edris breaches the terms of the restrictive covenants set forth in the Edris Severance Agreement. In addition, if such termination occurs within seven to 18 months following September 10, 2018, the equity award granted to Dr. Edris will accelerate and become vested as to the portion that would have been vested if Dr. Edris had remained employed through March 10, 2020.

In lieu of the severance payments and benefits set forth above, in the event that Dr. Edris' employment is terminated by us without Cause or he resigns for Good Reason, in either case within 18 months following a Change in Control (as defined in the Edris Severance Agreement), and subject to the signing of a separation agreement, containing, among other things, a general release of claims in favor of the Company, he will be entitled to receive: (i) an amount equal to nine months of his base salary, (ii) a pro-rata payment of his target annual bonus, (iii) except as otherwise provided in the applicable option or stock-based award agreement, accelerated vesting of 100% of all unvested stock options and other stock-based awards held by Dr. Edris, and (iv) if Dr. Edris is enrolled in our group health plan immediately prior to the date of termination and properly elects to receive COBRA benefits, a monthly cash payment for nine months or Dr. Edris' COBRA health continuation period, whichever ends earlier, in an amount equal to our normal rate of contribution for employees for coverage at the level in effect immediately prior to the date of termination.

**Outstanding equity awards at 2018 fiscal year-end**

The following table sets forth information concerning outstanding equity awards held by each of our named executive officers as of December 31, 2018.

Name	Stock Awards <sup>(1)</sup>	
	Number of shares or units of stock that have not vested (#)	Market value of shares or units of stock that have not vested (\$) <sup>(2)</sup>
Saqib Islam, J.D.	1,818,359 <sup>(3)</sup>	400,039
	4,140,666 <sup>(4)</sup>	910,947
Daniel S. Lynch	2,045,000 <sup>(5)</sup>	449,900

Name	Stock Awards <sup>(1)</sup>	
	Number of shares or units of stock that have not vested (#)	Market value of shares or units of stock that have not vested (\$) <sup>(2)</sup>
Jens Renstrup	1,608,556 <sup>(5)</sup>	353,882
Badreddin Edris	1,545,000 <sup>(7)</sup>	339,900
Lara S. Sullivan	—	—

(1) The awards set forth in the table represent incentive units granted under our predecessor's 2018 Equity Incentive Plan. In connection with the Reorganization, these incentive units were exchanged for an equivalent number of shares of our restricted stock under the 2019 Stock Plan. The vesting terms applicable to the incentive unit awards apply to the restricted stock awards for which the incentive unit awards were substituted.

(2) Represents the market value of the restricted stock award as of December 31, 2018, based on an assumed fair market value of our common units of \$0.22 per unit on December 31, 2018.

(3) These incentive units were (and the substituted restricted stock award is) subject to the following vesting schedule: 25% on September 1, 2018, and the remainder in equal monthly installments through the fourth anniversary thereafter, subject to continued service through the applicable vesting date.

(4) These incentive units were (and the substituted restricted stock award is) subject to the following vesting schedule: 25% on July 31, 2019, then in equal monthly installments through the fourth anniversary thereafter, subject to continued service through the applicable vesting date.

(5) These incentive units were (and the substituted restricted stock award is) subject to the following vesting schedule: 25% on August 18, 2018, then in equal monthly installments through the fourth anniversary thereafter, subject to continued service through the applicable vesting date.

(6) These incentive units were (and the substituted restricted stock award is) subject to the following vesting schedule: 25% on July 16, 2019, then in equal monthly installments through the fourth anniversary thereafter, subject to continued service through the applicable vesting date.

(7) These incentive units were (and the substituted restricted stock award is) subject to the following vesting schedule: 25% on September 10, 2019, then in equal monthly installments through the fourth anniversary thereafter, subject to continued service through the applicable vesting date.

### Compensation risk assessment

We believe that although a portion of the compensation provided to our executive officers and other employees is performance-based, our executive compensation program does not encourage excessive or unnecessary risk taking. This is primarily due to the fact that our compensation programs are designed to encourage our executive officers and other employees to remain focused on both short-term and long-term strategic goals, in particular in connection with our pay-for-performance compensation philosophy. As a result, we do not believe that our compensation programs are reasonably likely to have a material adverse effect on us.

### Employee benefit and equity compensation plans

#### 2019 Stock Option and Incentive Plan

Our 2019 Stock Plan was approved by our board of directors and our stockholders on March 29, 2019. Under our 2019 Stock Plan, we have reserved for issuance an aggregate of 35,424,393 shares of our common stock, which number is subject to adjustment in the event of a reorganization, recapitalization, stock dividend, stock split or other similar change in our capital stock.

The shares we issue under our 2019 Stock Plan are authorized but unissued shares or shares we reacquire. The shares of common stock underlying any awards that are forfeited, cancelled, reacquired by us prior to vesting, satisfied without the issuance of common stock or otherwise

terminated (other than by exercise) under our 2019 Stock Plan are currently added to the shares of common stock available for issuance under our 2019 Stock Plan. Following this offering, such shares will be added to the shares available under our 2019 Equity Plan.

Our compensation committee has acted as administrator of our 2019 Stock Plan. The administrator has full power to select, from among the individuals eligible for awards, the individuals to whom awards will be granted, and to determine the specific terms and conditions of each award, subject to the provisions of our 2019 Stock Plan. Persons eligible to participate in our 2019 Stock Plan are our full or part time officers, employees, directors, consultants and other key persons as selected from time to time by the administrator in its discretion.

Our 2019 Stock Plan permits the granting of (1) options to purchase common stock intended to qualify as incentive stock options under Section 422 of the Code and (2) options that do not so qualify. The option exercise price of each option is determined by the administrator but may not be less than 100% of the fair market value of the common stock on the date of grant. The term of each option is fixed by the administrator and may not exceed ten years from the date of grant. The administrator determines at what time or times each option may be exercised. In addition, our 2019 Stock Plan permits the granting of restricted shares of common stock, restricted stock units and unrestricted stock.

Our 2019 Stock Plan provides that upon the occurrence of a "sale event," as defined in our 2019 Stock Plan, all outstanding stock options will terminate at the effective time of such sale event, unless the parties to the sale event agree that such awards will be assumed or continued by the successor entity. In the event of a termination of our 2019 Stock Plan and all options issued thereunder in connection with a sale event, optionees will be provided an opportunity to exercise options that are then exercisable or will become exercisable as of the effective time of the sale event prior to the consummation of the sale event. In addition, we have the right to provide for cash payment to holders of options, in exchange for the cancellation thereof, in an amount per share equal to the difference between the value of the consideration payable per share of common stock in the sale event and the per share exercise price of such options. In the event of and subject to the consummation of a sale event, restricted stock and restricted stock units (other than those becoming vested as a result of the sale event) will be forfeited immediately prior to the effective time of a sale event unless such awards are assumed or continued by the successor entity. In the event that shares of restricted stock are forfeited in connection with a sale event, such shares of restricted stock shall be repurchased at a price per share equal to the lower of the original per share purchase price and the fair market value of such shares. We have the right to provide for cash payment to holders of restricted stock or restricted stock units, in exchange for the cancellation thereof, in an amount per share equal to the value of the consideration payable per share of common stock in the sale event.

Our board of directors may amend the 2019 Stock Plan but no such action may adversely affect the rights of an award holder without such holder's consent. Approval by our stockholders of amendments to the 2019 Plan must be obtained if required by law.

No awards may be granted under our 2019 Stock Plan after the date that is ten years from the date our 2019 Stock Plan was adopted by the board of directors. Our board of directors has determined not to make any further awards under our 2019 Equity Plan following the closing of this offering.

#### **2019 Equity Incentive Plan**

Our 2019 Equity Incentive Plan, or our 2019 Equity Plan, was adopted by our board of directors in 2019, approved by our stockholders in 2019 and will become effective upon the effectiveness of the registration statement of which this prospectus forms a part



declared effective by the SEC. Our 2019 Equity Plan will replace our 2019 Stock Plan as our board of directors has determined not to make additional awards under that plan following the consummation of our initial public offering. Our 2019 Equity Plan allows us to make equity-based incentive awards to our officers, employees, directors and consultants.

We have initially reserved \_\_\_\_\_ shares of our common stock, or the Initial Limit, for the issuance of awards under our 2019 Equity Plan. This limit is subject to adjustment in the event of a stock split, stock dividend or other change in our capitalization. Our 2019 Equity Plan provides that the number of shares reserved and available for issuance thereunder will automatically increase on January 1, 2020 and each January 1 thereafter by \_\_\_\_\_ % of the number of shares of common stock outstanding on the immediately preceding December 31 or such lesser number of shares determined by the compensation committee, or the Annual Increase.

The shares we issue under our 2019 Equity Plan will be authorized but unissued shares or shares that we reacquire. The shares of common stock underlying any awards that are forfeited, cancelled, held back upon exercise or settlement of an award to satisfy the exercise price or tax withholding, reacquired by us prior to vesting, satisfied without the issuance of stock, expire or are otherwise terminated (other than by exercise) under our 2019 Equity Plan and our 2019 Stock Plan will be added back to the shares of common stock available for issuance under our 2019 Equity Plan.

The maximum number of shares that may be issued as incentive stock options may not exceed \_\_\_\_\_, cumulatively increased on January 1, 2020 and on each January 1 thereafter by the lesser of the Annual Increase, or \_\_\_\_\_ shares. The grant date fair value of all awards made under our 2019 Equity Plan and all other cash compensation paid by us to any non-employee director in any calendar year shall not exceed \$1,000,000.

Our 2019 Equity Plan will be administered by our compensation committee. Our compensation committee has full power to select, from among the individuals eligible for awards, the individuals to whom awards will be granted, to make any combination of awards to participants, and to determine the specific terms and conditions of each award, subject to the provisions of our 2019 Equity Plan. Persons eligible to participate in our 2019 Equity Plan will be those full or part-time officers, employees, non-employee directors, and consultants as selected from time to time by our compensation committee in its discretion.

Our 2019 Equity Plan permits the granting of both options to purchase common stock intended to qualify as incentive stock options under Section 422 of the Code and options that do not so qualify. The exercise price of each option will be determined by our compensation committee but may not be less than 100% of the fair market value of our common stock on the date of grant. The term of each option will be fixed by our compensation committee and may not exceed ten years from the date of grant. Our compensation committee will determine at what time or times each option may be exercised.

Our compensation committee may award stock appreciation rights subject to such conditions and restrictions as it may determine. Stock appreciation rights entitle the recipient to cash or shares of common stock equal to the value of the appreciation in our stock price over the exercise price. The exercise price may not be less than 100% of the fair market value of our common stock on the date of grant. The term of each stock appreciation right will be fixed by our compensation committee and may not exceed ten years from the date of grant. Our compensation committee will determine at what time or times each stock appreciation right may be exercised.

Our compensation committee may award restricted shares of common stock and restricted stock units to participants subject to such conditions and restrictions as it may determine. These conditions and restrictions may include the achievement of certain performance goals and/or

continued employment with us through a specified vesting period. Our compensation committee may also grant shares of common stock that are free from any restrictions under our 2019 Equity Plan. Unrestricted stock may be granted to participants in recognition of past services or for other valid consideration and may be issued in lieu of cash compensation due to such participant.

Our compensation committee may grant cash bonuses under our 2019 Equity Plan to participants, subject to the achievement of certain performance goals.

Our 2019 Equity Plan provides that upon the effectiveness of a "sale event," as defined in our 2019 Equity Plan, an acquirer or successor entity may assume, continue or substitute outstanding awards under our 2019 Equity Plan. To the extent that awards granted under our 2019 Equity Plan are not assumed or continued or substituted by the successor entity, except as may be otherwise provided in the relevant award certificate, all awards with time-based vesting, conditions or restrictions shall become fully vested and nonforfeitable as of the effective time of the sale event, and all awards with conditions and restrictions relating to the attainment of performance goals may become vested and nonforfeitable in connection with a sale event in the compensation committee's discretion or to the extent specified in the relevant award certificate. Upon the effective time of the sale event, all outstanding awards granted under our 2019 Equity Plan shall terminate. In the event of such termination, individuals holding options and stock appreciation rights will be permitted to exercise such options and stock appreciation rights (to the extent exercisable) within a specified period of time prior to the sale event. In addition, in connection with the termination of our 2019 Equity Plan upon a sale event, we may make or provide for a payment, in cash or in kind, to participants holding vested and exercisable options and stock appreciation rights equal to the difference between the per share cash consideration payable to stockholders in the sale event and the exercise price of the options or stock appreciation rights and we may make or provide for a payment, in cash or in kind, to participants holding other vested awards.

Our board of directors may amend or discontinue our 2019 Equity Plan and our compensation committee may amend or cancel outstanding awards for purposes of satisfying changes in law or any other lawful purpose, but no such action may adversely affect rights under an award without the holder's consent. Certain amendments to our 2019 Equity Plan require the approval of our stockholders.

No awards may be granted under our 2019 Equity Plan after the date that is ten years from the effective date of our 2019 Equity Plan. No awards under our 2019 Equity Plan have been made prior to the date hereof.

#### **2019 Employee Stock Purchase Plan**

Our 2019 Employee Stock Purchase Plan, or our ESPP, was adopted by our board in 2019, approved by our stockholders in 2019 and will become effective upon the effectiveness of registration statement of which this prospectus forms a part. Our ESPP initially reserves and authorizes the issuance of up to a total of \_\_\_\_\_ shares of common stock to participating employees. Our ESPP provides that the number of shares reserved and available for issuance will automatically increase on each January 1, beginning on January 1, 2020 and ending on January 1, 2029, by the least of (i) \_\_\_\_\_ shares of common stock, (ii) \_\_\_\_\_ % of the outstanding shares of common stock on the immediately preceding December 31 or (iii) such lesser number of shares as determined by the administrator of our ESPP. This number is subject to adjustment in the event of a stock split, stock dividend or other change in our capitalization.

All employees are eligible to participate in our ESPP. Any employee who owns five percent or more of the voting power or value of our shares of common stock is not eligible to purchase shares under our ESPP.

We may make one or more offerings each year to our employees to purchase shares under our ESPP. Offerings will usually begin on each      and      and will continue for six-month periods, referred to as offering periods. Each eligible employee may elect to participate in any offering by submitting an enrollment form at least 15 days before the relevant offering date.

Each employee who is a participant in our ESPP may purchase shares by authorizing payroll deductions of up to      % of his or her eligible compensation during an offering period. Unless the participating employee has previously withdrawn from the offering, his or her accumulated payroll deductions will be used to purchase shares of common stock on the last business day of the offering period at a price equal to      % of the fair market value of the shares on the first business day or the last business day of the offering period, whichever is lower, provided that no more than      shares of common stock may be purchased by any one employee during each offering period. Under applicable tax rules, an employee may purchase no more than \$25,000 worth of shares of common stock, valued at the start of the purchase period, under our ESPP in any calendar year.

The accumulated payroll deductions of any employee who is not a participant on the last day of an offering period will be refunded. An employee's rights under our ESPP terminate upon voluntary withdrawal from the plan or when the employee ceases employment with us for any reason.

Our ESPP may be terminated or amended by our board at any time. An amendment that increases the number of shares of common stock authorized under our ESPP and certain other amendments require the approval of our stockholders.

#### ***Executive Incentive Bonus Plan***

In      , 2019, our board adopted the Senior Executive Cash Incentive Bonus Plan, or the Bonus Plan and will become effective upon the effectiveness of the registration statement of which this prospectus forms a part. Our Bonus Plan provides for bonus payments based upon the attainment of performance targets established by our compensation committee. The payment targets will be related to financial and operational measures or objectives with respect to our company, or the Corporate Performance Goals, as well as individual performance objectives.

Our compensation committee may select corporate performance goals (as defined in the Bonus Plan) including, but not limited to the following: cash flow (including, but not limited to, operating cash flow and free cash flow); revenue; corporate revenue; earnings before interest, taxes, depreciation and amortization; net income (loss) (either before or after interest, taxes, depreciation and/or amortization); changes in the market price of our common stock; economic value-added; development, clinical, regulatory or commercial milestones; acquisitions or strategic transactions; operating income (loss); return on capital, assets, equity, or investment; stockholder returns; return on sales; gross or net profit levels; productivity; expense efficiency; margins; operating efficiency; customer satisfaction; working capital; earnings (loss) per share of our common stock; bookings, new bookings or renewals; sales or market shares; number of customers; number of new customers or customer references; operating income and/or net annual recurring revenue, any of which may be measured in absolute terms, as compared to any incremental increase, in terms of growth, as compared to results of a peer group, against the market as a whole, compared to applicable market indices and/or measured on a pre-tax or post-tax basis.

Each executive officer who is selected to participate in our Bonus Plan will have a target bonus opportunity set for each performance period. The bonus formulas will be adopted in each performance period by the compensation committee and communicated to each executive officer. The Corporate Performance Goals will be measured at the end of each performance period after our financial reports have been published. If the Corporate Performance Goals and individual performance objectives are met, payments will be made as soon as practicable following the end of each performance period. Subject to the rights contained in any agreement between the executive officer and us, an executive officer must be employed by us on the bonus payment date to be eligible to receive a bonus payment. Our Bonus Plan also permits the compensation committee to approve additional bonuses to executive officers in its sole discretion.

**401(k) Plan**

We maintain a tax-qualified retirement plan, or the 401(k) Plan, that provides eligible U.S. employees with an opportunity to save for retirement on a tax advantaged basis. Eligible employees are able to defer eligible compensation subject to applicable annual Code limits. Employees' pre-tax or Roth contributions are allocated to each participant's individual account and are then invested in selected investment alternatives according to the participants' directions. Employees are immediately and fully vested in their contributions. Our 401(k) Plan is intended to be qualified under Section 401(a) of the Code with our 401(k) Plan's related trust intended to be tax exempt under Section 501(a) of the Code. As a tax-qualified retirement plan, contributions to our 401(k) Plan and earnings on those contributions are not taxable to the employees until distributed from our 401(k) Plan.

## Director compensation

The following table presents the total compensation for each person who served as a non-employee member of our board of directors during the year ended December 31, 2018. Other than as set forth in the table and described more fully below, we did not pay any compensation, make any equity awards or non-equity awards to, or pay any other compensation to any of the non-employee members of our board of directors in 2018. The compensation received by Mr. Islam, our Chief Executive Officer, and Mr. Lynch, our Executive Chairman and former interim Chief Executive Officer, for their service in their respective roles during 2018 is presented above in the "2018 summary compensation table" above.

Name <sup>(1)</sup>	Fees paid or earned in cash (\$)	All other compensation (\$)	Total (\$)
Carl L. Gordon, Ph.D., CFA	—	—	—
Peter Keen	—	—	—
Freda Lewis-Hall, M.D., DFAPA	—	—	—
Deval Patrick	—	—	—
Jeffrey Schwartz	—	—	—
Stephen Squinto, Ph.D. <sup>(2)</sup>	20,000	80,000	100,000

(1) As of December 31, 2018, Dr. Squinto held 643,750 unvested incentive units. None of the other non-employee directors held outstanding equity awards as of December 31, 2018.

(2) Dr. Squinto receives \$20,000 per year for his services as a member of the board of directors and \$80,000 per year for his services as acting head of research and development.

### Non-employee director compensation policy

In connection with this offering, we intend to adopt a non-employee director compensation policy that will become effective as of the completion of this offering that will be designed to enable us to attract and retain, on a long-term basis, highly qualified non-employee directors. Under the policy, each director who is not an employee or officer will be paid cash and equity compensation from and after the completion of this offering.

## Certain relationships and related party transactions

Other than the compensation agreements and other arrangements described under “Executive compensation” and “Director compensation” in this prospectus and the transactions described below, since our inception on August 18, 2017, there has not been and there is not currently proposed, any transaction or series of similar transactions to which:

- we were, or will be, a participant;
- the amount involved exceeded, or will exceed, \$120,000; and
- in which 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 the foregoing persons, had, or will have, a direct or indirect material interest.

### License agreements with Pfizer

On August 18, 2017, we entered into license agreements with Pfizer, a holder of 5% of our capital stock, for our lead product candidates, pursuant to which we acquired exclusive worldwide rights under Pfizer patents and know-how to develop, manufacture and commercialize nirogacestat and PD-0325901. See “Business—License and collaboration agreements—Pfizer license agreements” for additional details on our license agreements with Pfizer. As of December 31, 2018, we had not made any milestone or royalty payments under the Pfizer license agreements.

In connection with entry into the Pfizer license agreements, we issued Pfizer the Junior Series A convertible preferred units described below.

### Junior Series A convertible preferred units

On August 18, 2017, concurrently with entering into the license agreements described above, we issued an aggregate of 6,437,500 Junior Series A convertible preferred units to Pfizer, in connection with our entering into certain License Agreements therewith. Freda Lewis-Hall, M.D., DFAPA, one of our directors, is the Chief Patient Officer and Executive Vice President of Pfizer.

### Series A convertible preferred unit financing

At closings held from August 18, 2017 through March 4, 2019, we sold an aggregate of 103,000,000 Series A convertible preferred units at a purchase price of \$1.00 per unit, pursuant to a unit purchase agreement entered into with certain of our investors. Each Series A convertible preferred unit was exchanged for one share of Series A convertible preferred stock in the Reorganization, and each share of Series A convertible preferred stock will automatically convert into \_\_\_\_\_ share of common stock upon completion of this offering. The following table summarizes purchases of our Series A convertible preferred units by related persons:

5% stockholder	Series A convertible preferred units (#)	Total purchase price (\$)
Entities affiliated with Pfizer <sup>(1)</sup>	20,000,000	20,000,000
BC SW, LP <sup>(2)</sup>	40,000,000	40,000,000
OrbiMed Private Investments VI, LP <sup>(3)</sup>	40,000,000	40,000,000

(1) Pfizer Ventures (US) LLC is an affiliate fund of Pfizer Inc. Together these affiliated entities are a holder of 5% or more of our capital stock. Dr. Freda Lewis-Hall, Executive Vice President and Chief Patient Officer at Pfizer Inc., is a member of our board of directors.

(2) BC SW, LP is a holder of 5% or more of our capital stock. Jeffrey Schwartz and Deval Patrick are managing directors of Bain Capital Life Sciences, LP and Bain Capital, L.P., affiliate funds of BC SW, LP and are members of our board of directors.

(3) OrbiMed Private Investments VI, LP is a holder of 5% or more of our capital stock. Dr. Carl L. Gordon is the Founding Partner and Co-Head of Global Private Equity at OrbiMed Advisors LLC and Dr. Stephen Squinto is a Venture Partner at OrbiMed Advisors LLC, affiliate funds of OrbiMed Private Investments VI, LP. Both Dr. Gordon and Dr. Squinto are members of our board of directors.

### Series B convertible preferred stock financing

On March 29, 2019, immediately following the Reorganization, we sold an aggregate of 86,639,279 shares of our Series B convertible preferred stock at a purchase price of \$1.4428 per share, pursuant to a stock purchase agreement entered into with certain of our investors. Each share of Series B convertible preferred stock will automatically convert into share of common stock upon completion of this offering. The following table summarizes purchases of our Series B convertible preferred stock by related persons:

5% stockholder	Series B preferred stock (#)	Total purchase price (\$)
Entities affiliated with Pfizer <sup>(1)</sup>	3,465,571	5,000,125
BC SW, LP <sup>(2)</sup>	6,931,142	10,000,251
OrbiMed Private Investments VI, LP <sup>(3)</sup>	6,931,142	10,000,251
Perceptive Life Sciences Master Fund Ltd <sup>(4)</sup>	13,862,285	20,000,504

(1) Pfizer Ventures (US) LLC is an affiliate fund of Pfizer Inc. Together these affiliated entities are a holder of 5% or more of our capital stock. Dr. Freda Lewis-Hall, Executive Vice President and Chief Patient Officer at Pfizer Inc., is a member of our board of directors.

(2) BC SW, LP is a holder of 5% or more of our capital stock. Jeffrey Schwartz and Deval Patrick are managing directors of Bain Capital Life Sciences, LP and Bain Capital, L.P., affiliate funds of BC SW, LP and are members of our board of directors.

(3) OrbiMed Private Investments VI, LP is a holder of 5% or more of our capital stock. Dr. Carl L. Gordon is the Founding Partner and Co-Head of Global Private Equity at OrbiMed Advisors LLC and Dr. Stephen Squinto is a Venture Partner at OrbiMed Advisors LLC, affiliate funds of OrbiMed Private Investments VI, LP. Both Dr. Gordon and Dr. Squinto are members of our board of directors.

(4) Perceptive Life Sciences Master Fund Ltd is a holder of 5% or more of our capital stock.

### Consulting arrangement with Stephen Squinto

We entered into a consulting arrangement in November 2017 with Stephen Squinto, Ph.D., a member of our board of directors, to serve as our acting Head of Research and Development. Dr. Squinto receives an annual consulting fee equal to \$80,000 for his service as our acting Head of Research and Development, payable twice monthly, along with \$20,000 for his service as a member of our board of directors. In addition, Dr. Squinto received incentive units and options to purchase common units prior to the Reorganization (which have since been exchanged for restricted stock awards and options to purchase common stock). See the section titled "Director compensation—Outstanding equity awards at fiscal year end" for a description of these awards. During the period from August 18, 2017 (inception) through December 31, 2017 and the year ended December 31, 2018, we have paid \$31,016 and \$100,000, respectively, for Dr. Squinto's services.

### Employment agreement with Daniel Lynch

On February 1, 2018, we entered into an Employment Agreement with Mr. Lynch, or the Lynch Employment Agreement, pursuant to which (i) Mr. Lynch serves as the Executive Chairman of our board of directors and (ii) from February 1, 2018 until July 31, 2018, he served as our interim

Chief Executive Officer, in each case on an at-will basis. Mr. Lynch currently receives a base salary of \$150,000 per year. While Mr. Lynch served as our interim Chief Executive Officer, he was eligible to receive an annual performance bonus targeted at 50% of his base salary, pro-rated for any partial year. Mr. Lynch is also eligible to participate in the employee benefit plans generally available to our employees, subject to the terms of those plans.

Pursuant to the Lynch Employment Agreement, Mr. Lynch received an initial incentive unit grant, or Initial Grant, equal to 2.0% of our fully-diluted common units, which vest in monthly increments of a period of 48 months, beginning on August 18, 2017. Mr. Lynch was also eligible to receive additional grants of incentive units, or Additional Grants, such that he maintained an ownership position in our company equal to 2.0% of our fully-diluted common units through our having raised \$200 million from the sale of our convertible preferred units. Such Additional Grants vest in monthly increments of a period of 48 months, beginning on August 18, 2017. Upon a Sale of the Company (as defined in the Lynch Employment Agreement), the Initial Grant and the Additional Grants shall be accelerated in full.

If Mr. Lynch's employment is terminated by us without Cause (as defined in the Lynch Employment Agreement) or Mr. Lynch resigns for Good Reason (as defined in the Lynch Employment Agreement), subject to Mr. Lynch signing of a separation agreement, containing, among other things, a general release of claims in favor of us, he will be entitled to receive: (i) base salary continuation for 12 months following termination plus up to two additional months for each full year of employment with us, up to an aggregate maximum of 18 months, such period, the Post Termination Period, and (ii) any portion of the Initial Grant or Additional Grants that would have vested during the Post Termination Period, if the Lynch Employment Agreement had not been terminated, shall immediately vest as of the effective date of the separation agreement.

### **Indemnification agreements**

In connection with this offering, we intend to enter into agreements to indemnify our directors and executive officers. These agreements will, among other things, require us to indemnify these individuals for certain expenses (including attorneys' fees), judgments, fines and settlement amounts reasonably incurred by such person in any action or proceeding, including any action by or in our right, on account of any services undertaken by such person on behalf of our company or that person's status as a member of our board of directors to the maximum extent allowed under Delaware law.

### **Investors' rights agreement**

In connection with our Series B convertible preferred stock financing, we entered into an investors' rights agreement with certain of our significant stockholders, including entities related to Pfizer, Bain, OrbiMed and Perceptive. The investors' rights agreement, among other things:

- grants such stockholders certain registration rights with respect to shares of our common stock, including shares of common stock issued or issuable upon conversion of our convertible preferred stock;
- obligates us to deliver periodic financial statements to any stockholder who holds at least 2,500,000 shares of our convertible preferred stock, which we refer to as "majority investors;"
- grants a right of first offer with respect to sales of our shares by us, subject to specified exclusions (which exclusions include the sale of the shares in connection with this offering), to qualified holders; and
- requires us to reimburse certain legal expenses of the investors in connection with future financings or a liquidation event.



For more information regarding the registration rights provided in this agreement, please refer to the section of this prospectus titled “Description of capital stock—Registration rights.”

Certain provisions of this agreement, including the covenants described above, but not the registration rights, will terminate automatically upon completion of this offering. This is not a complete description of the investors’ rights agreement and is qualified by the full text of the investors’ rights agreement filed as an exhibit to the registration statement of which this prospectus is a part.

### **Voting agreement**

In connection with our Series B convertible preferred stock financing, we entered into a voting agreement with certain of our significant stockholders, including entities related to Pfizer, Bain, OrbiMed and Perceptive Life Sciences Master Fund Ltd. The voting agreement among other things provides the terms for the voting of shares with respect to the constituency of our directors. Pursuant to the terms of the voting agreement, the following directors were elected to serve as members on our board of directors and, as of the date of this prospectus, continue to so serve: Daniel S. Lynch, Saqib Islam, Carl L. Gordon, Peter Keen, Freda Lewis-Hall, Deval L. Patrick, Jeffrey Schwartz and Stephen Squinto. Mr. Lynch was selected to serve on our board of directors as our Executive Chairman, Mr. Islam was selected to serve on our board of directors as our Chief Executive Officer, Dr. Gordon was selected to serve on our board of directors as designated by OrbiMed, Mr. Keen was selected to serve on our board of directors by LifeArc. Dr. Lewis-Hall was selected to serve on our board of directors by Pfizer, Mr. Schwartz was selected to serve on our board of directors by Bain. Mr. Patrick and Dr. Squinto were selected to serve on our board of directors as directors who are not affiliated with any investor, possess relevant industry experience and were selected by the unanimous consent of the other members of our board of directors. Perceptive received the right to designate a director pursuant to the voting agreement but has not elected a director to date.

This voting agreement will terminate automatically upon the completion of this offering and members previously elected to our board of directors pursuant to this agreement will continue to serve as directors until they resign, are removed or their successors are duly elected by the holders of our common stock.

### **Right of first refusal and co-sale agreement**

In connection with our Series B convertible preferred stock financing, we entered into a right of first refusal and co-sale agreement with certain of our significant stockholders, including entities related to Pfizer, Bain, OrbiMed and Perceptive. The right of first refusal and co-sale agreement, among other things:

- grants our investors certain rights of first refusal and co-sale with respect to proposed transfers of our securities by certain stockholders; and
- grants us certain rights of first refusal with respect to proposed transfers of our securities by certain stockholders.

The right of first refusal and co-sale agreement will terminate automatically upon the completion of this offering.

### **Policies for approval of related party transactions**

Our board of directors reviews and approves transactions with directors, officers and holders of five percent or more of our voting securities and their affiliates, each a related party. Prior to this offering, the material facts as to the related party’s relationship or interest in the transaction are

disclosed to our board of directors prior to their consideration of such transaction, and the transaction is not considered approved by our board of directors unless a majority of the directors who are not interested in the transaction approve the transaction. Further, when stockholders are entitled to vote on a transaction with a related party, the material facts of the related party's relationship or interest in the transaction are disclosed to the stockholders, who must approve the transaction in good faith.

In connection with this offering, we expect to adopt a written related party transactions policy that such transactions must be approved by our audit committee. This policy will become effective on the date on which the registration statement of which this prospectus is part is declared effective by the SEC. Pursuant to this policy, the audit committee has the primary responsibility for reviewing and approving or disapproving "related party transactions," which are transactions between us and related persons in which the aggregate amount involved exceeds or may be expected to exceed \$120,000 and in which a related person has or will have a direct or indirect material interest. For purposes of this policy, a related person will be defined as a director, executive officer, nominee for director, or greater than 5% beneficial owner of our common stock, in each case since the beginning of the most recently completed year, and their immediate family members.

## Principal stockholders

The following table sets forth certain information known to us regarding beneficial ownership of our capital stock as of \_\_\_\_\_, 2019 as adjusted to reflect the sale of common stock offered by us in this offering, for:

- each person or group of affiliated persons known by us to be the beneficial owner of more than 5% of our capital stock;
- each of our named executive officers;
- each of our directors; and
- all of our executive officers and directors as a group.

Beneficial ownership is determined in accordance with the rules of the SEC and generally includes voting or investment power with respect to securities. Under those rules, beneficial ownership includes any shares as to which the individual or entity has sole or shared voting power or investment power, and includes securities that the individual or entity has the right to acquire, such as through the exercise of stock options, within 60 days of \_\_\_\_\_, 2019. Except as noted by footnote, and subject to community property laws where applicable, we believe, based on the information provided to us, that the persons and entities named in the table below have sole voting and investment power with respect to all common stock shown as beneficially owned by them.

The percentage of beneficial ownership prior to this offering in the table below is based on shares of common stock deemed to be outstanding as of \_\_\_\_\_, 2019, assuming the conversion of all outstanding shares of our convertible preferred stock immediately prior to the completion of this offering into an aggregate of \_\_\_\_\_ shares of common stock upon the completion of this offering, and the percentage of beneficial ownership at this offering in the table below is based on shares of common stock assumed to be outstanding after the completion of the offering. The table below assumes that the underwriters do not exercise their option to purchase additional shares. Shares of common stock subject to options that are currently exercisable or exercisable within 60 days of \_\_\_\_\_, 2019 are considered outstanding and beneficially owned by the person holding the options for the purpose of computing the percentage ownership of that person but are not treated as outstanding for the purpose of computing the percentage ownership of any other person. Unless otherwise indicated below, the address of each individual listed below is c/o SpringWorks Therapeutics, Inc., 100 Washington Blvd, Stamford, CT 06902.

Name and address of beneficial owner	Number of shares beneficially owned prior to offering	Percentage of shares beneficially owned	
		Before offering	After offering
<b>5% Stockholders:</b>			
Entities affiliated with Pfizer		%	%
Entities affiliated with Bain		%	%
OrbiMed Private Investments VI, LP		%	%
Perceptive Life Sciences Master Fund Ltd.		%	%
<b>Named Executive Officers and Directors:</b>			
Saqib Islam, J.D.		%	%
Jens Renstrup, M.D., M.B.A.		%	%
Badreddin Edris, Ph.D.		%	%
Daniel S. Lynch, M.B.A.		%	%

Name and address of beneficial owner	Number of shares beneficially owned prior to offering	Percentage of shares beneficially owned	
		Before offering	After offering
Carl L. Gordon, Ph.D., CFA		%	%
Peter Keen		%	%
Freda Lewis-Hall, M.D., DFAPA		%	%
Deval L. Patrick, J.D.		%	%
Jeffrey Schwartz, M.B.A.		%	%
Stephen Squinto, Ph.D.		%	%
Lara S. Sullivan, M.D.		%	%
<b>All executive officers and directors as a group (13 persons)</b>		%	%

\* Represents beneficial ownership of less than 1%.

## Description of capital stock

*The following descriptions are summaries of the material terms of our amended and restated certificate of incorporation, and amended and restated bylaws, which will be effective immediately prior to the completion of this offering. The descriptions of the common stock and convertible preferred stock give effect to changes to our capital structure that will occur immediately prior to the completion of this offering.*

### General

Upon completion of this offering, our authorized capital stock will consist of \_\_\_\_\_ shares of common stock, par value \$0.0001 per share, and \_\_\_\_\_ shares of convertible preferred stock, par value \$0.0001 per share, all of which shares of convertible preferred stock will be undesignated.

As of \_\_\_\_\_ 2019, \_\_\_\_\_ shares of our common stock (which includes \_\_\_\_\_ shares of unvested restricted stock) and \_\_\_\_\_ shares of convertible preferred stock were outstanding and held by stockholders of record. This amount does not take into account the conversion of all outstanding shares of our convertible preferred stock into common stock immediately prior to the completion of this offering.

### Common stock

The holders of our common stock are entitled to one vote for each share held on all matters submitted to a vote of the stockholders. The holders of our common stock do not have any cumulative voting rights. Holders of our common stock are entitled to receive ratably any dividends declared by our board of directors out of funds legally available for that purpose, subject to any preferential dividend rights of any outstanding convertible preferred stock. Our common stock has no preemptive rights, conversion rights or other subscription rights or redemption or sinking fund provisions.

In the event of our liquidation, dissolution or winding up, holders of our common stock will be entitled to share ratably in all assets remaining after payment of all debts and other liabilities and any liquidation preference of any outstanding convertible preferred stock. The shares to be issued by us in this offering will be, when issued and paid for, validly issued, fully paid and non-assessable.

### Convertible preferred stock

Upon the completion of this offering, all outstanding shares of our convertible preferred stock will be converted into shares of our common stock. Upon the consummation of this offering, our board of directors will have the authority, without further action by our stockholders, to issue up to \_\_\_\_\_ shares of convertible preferred stock in one or more series and to fix the rights, preferences, privileges and restrictions thereof. These rights, preferences and privileges could include dividend rights, conversion rights, voting rights, terms of redemption, liquidation preferences, sinking fund terms and the number of shares constituting, or the designation of, such series, any or all of which may be greater than the rights of common stock. The issuance of our convertible preferred stock could adversely affect the voting power of holders of common stock and the likelihood that such holders will receive dividend payments and payments upon our liquidation. In addition, the issuance of convertible preferred stock could have the effect of delaying, deferring or preventing a change in control of our company or other corporate action. Immediately after consummation of this offering, no shares of convertible preferred stock will be outstanding, and we have no present plan to issue any shares of convertible preferred stock.

**Stock options**

As of \_\_\_\_\_, 2019, options to purchase \_\_\_\_\_ shares of our common stock were outstanding under our 2019 Plan, of which were exercisable as of that date.

**Registration rights**

Upon the completion of this offering, the holders of \_\_\_\_\_ shares of our common stock, including those issuable upon the conversion of convertible preferred stock, which shares we refer to as "registrable securities," will be entitled to rights with respect to the registration of these registrable securities under the Securities Act. These rights are provided under the terms of an investors' rights agreement between us and holders of our convertible preferred stock. The investors' rights agreement includes demand registration rights, short-form registration rights and piggyback registration rights. All fees, costs and expenses of underwritten registrations under this agreement will be borne by us and all selling expenses, including underwriting discounts and selling commissions, will be borne by the holders of the shares being registered.

***Demand registration rights***

Beginning 180 days after the effective date of this registration statement, the holders of registrable securities are entitled to demand registration rights under certain conditions. Under the terms of the investors' rights agreement, we will be required, upon the written request of holders of at least 20% of these registrable securities that would result in an aggregate offering price of that would exceed \$5,000,000, to file a registration statement and use best efforts to effect the registration of all or a portion of these registrable securities for public resale. We are required to effect only two registrations pursuant to this provision of the investors' rights agreement.

***Short-form registration rights***

Pursuant to the investors' rights agreement, if we are eligible to file a registration statement on Form S-3, upon the written request of holders of at least 20% of these registrable securities that would result in an aggregate offering price of at least \$2,000,000, we will be required to effect a registration of such registrable securities. We are required to effect only two registrations in any twelve-month period pursuant to this provision of the investors' rights agreement. The right to have such shares registered on Form S-3 is further subject to other specified conditions and limitations.

***Piggyback registration rights***

Pursuant to the investors' rights agreement, if we register any of our securities either for our own account or for the account of other security holders, subject to certain exceptions, the holders of these shares are entitled to include their shares in the registration. Subject to certain exceptions contained in the investors' rights agreement, we and the underwriters may limit the number of shares included in the underwritten offering to the number of shares which we and the underwriters determine in our sole discretion will not jeopardize the success of the offering. The holders of a majority of the Preferred Stock have waived all registration rights with respect to the registrable securities they hold in connection with this offering.

***Indemnification***

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

***Expiration of registration rights***

The demand registration rights and short form registration rights granted to any holder of registrable securities under the investors' rights agreement will terminate upon the earliest to occur of (i) immediately prior to the closing of a deemed liquidation event (as defined in our certificate of incorporation) or (ii) the fourth anniversary of the completion of this offering.

**Anti-takeover effects of our amended and restated certificate of incorporation and amended and restated bylaws and Delaware law**

Our amended and restated certificate of incorporation and amended and restated bylaws which will become effective immediately prior to the completion of this offering include a number of provisions that may have the effect of delaying, deferring or preventing another party from acquiring control of us and 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***

Our amended and restated certificate of incorporation which will become effective immediately prior to the completion of this offering provides for the division of our board of directors into three classes serving staggered 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 two-thirds 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, may only be filled by the affirmative vote of a majority of our directors then in office even if less than a quorum. The classification of directors, together with the limitations on removal of directors and treatment of vacancies, has the effect of making it more difficult for stockholders to change the composition of our board of directors.

***No written consent of stockholders***

Our amended and restated certificate of incorporation which will become effective immediately prior to the completion of this offering 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. This limit may lengthen the amount of time required to take stockholder actions and would prevent the amendment of our amended and restated bylaws or removal of directors by our stockholders without holding a meeting of stockholders.

***Meetings of stockholders***

Our amended and restated certificate of incorporation and amended and restated bylaws which will become effective immediately prior to the completion of this offering 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 bylaws 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 bylaws 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 nor more than 120 days prior to the first anniversary date of the annual meeting for the preceding year. Our bylaws specify the requirements as to form and content of all stockholders' notices. These requirements may preclude stockholders from bringing matters before the stockholders at an annual or special meeting.

***Amendment to amended and restated certificate of incorporation and amended and restated bylaws***

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, must 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, board composition, limitation of liability and the amendment of our bylaws and certificate of incorporation must be approved by not less than two-thirds of the outstanding shares entitled to vote on the amendment, and not less than two-thirds of the outstanding shares of each class entitled to vote thereon as a class. Our amended and restated bylaws 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 bylaws, and may also be amended by the affirmative vote of at least two-thirds of the outstanding shares entitled to vote on the amendment, or, if our 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.

***Undesignated preferred stock***

Our amended and restated certificate of incorporation, which will become effective immediately prior to the completion of this offering provides for \_\_\_\_\_ authorized shares of preferred stock. The existence of authorized but unissued shares of convertible preferred stock may enable our board of directors 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 our stockholders, our board of directors could cause shares of convertible 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 and unissued shares of convertible preferred stock. The issuance of shares of convertible 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.

**Choice of forum**

Our amended and restated bylaws, which will become effective immediately prior to the closing of this offering, will provide 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 state law claim for: (i) any derivative action or proceeding brought on our behalf; (ii) any



action asserting a claim of breach of a fiduciary duty or other wrongdoing by any of our directors, officers, employees or agents to us or our stockholders; (iii) any action asserting a claim against us arising pursuant to any provision of the Delaware General Corporation Law or our certificate of incorporation or bylaws; (iv) any action to interpret, apply, enforce or determine the validity of our certificate of incorporation or bylaws or (v) any action asserting a claim governed by the internal affairs doctrine. The choice of forum provision does not apply to any actions arising under the Securities Act or the Exchange Act.

### 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. 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, our board of directors approved either the business combination or the transaction which resulted in the stockholder becoming an interested stockholder;
- upon consummation of the transaction which 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, but not the outstanding voting stock owned by the interested stockholder; or
- at or after the time the stockholder became interested, the business combination was approved by our board of directors 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 which is not owned by the interested stockholder.

Section 203 defines a business combination to include:

- any merger or consolidation involving the corporation and the interested stockholder;
- any sale, transfer, lease, pledge or other disposition involving the interested stockholder of 10% or more of the assets of the corporation;
- subject to exceptions, any transaction that results in the issuance or transfer by the corporation of any stock of the corporation to the interested stockholder;
- subject to exceptions, any transaction involving the corporation that has the effect of increasing the proportionate share of the stock of any class or series of the corporation beneficially owned by the interested stockholder; and
- the receipt by the interested stockholder of the benefit of any loans, advances, guarantees, pledges or other financial benefits provided by or through the corporation.

In general, Section 203 defines an interested stockholder as any entity or person beneficially owning 15% or more of the outstanding voting stock of the corporation and any entity or person affiliated with or controlling or controlled by the entity or person.

### listing

We intend to apply to list our common stock on \_\_\_\_\_ under the trading symbol " \_\_\_\_\_."

**Transfer agent and registrar**

The transfer agent and registrar for our common stock will be . The transfer agent and registrar's address is , and its telephone number is .

## Shares eligible for future sale

Prior to this offering, there has been no public market for our shares. Future sales of our common stock in the public market, or the availability of such shares for sale in the public market, could adversely affect market prices prevailing from time to time. As described below, only a limited number of shares will be available for sale shortly after this offering due to contractual and legal restrictions on resale. Nevertheless, sales of our common stock in the public market after such restrictions lapse, or the perception that those sales may occur, could adversely affect the prevailing market price at such time and our ability to raise equity capital in the future.

Based on the number of shares outstanding as of \_\_\_\_\_, 2019, upon the completion of this offering, \_\_\_\_\_ shares of our common stock will be outstanding. Of the outstanding shares, all of the shares sold in this offering will be freely tradable, except that any shares held by our affiliates, as that term is defined in Rule 144 under the Securities Act, may only be sold in compliance with the limitations described below. 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, summarized below.

### Rule 144

In general, a person who has beneficially owned restricted stock for at least six months would be entitled to sell their securities provided that (i) such person is not deemed to have been one of our affiliates at the time of, or at any time during the 90 days preceding, a sale and (ii) we are subject to the Securities Exchange Act of 1934, as amended, or the Exchange Act, periodic reporting requirements for at least 90 days before the sale. Persons who have beneficially owned restricted shares for at least six months but who are our affiliates at the time of, or any time during the 90 days preceding, a sale, would be subject to additional restrictions, by which such person would be entitled to sell within any three-month period only a number of securities that does not exceed the greater of either of the following:

- 1% of the number of shares then outstanding, which will equal approximately \_\_\_\_\_ shares immediately after this offering, assuming no exercise of the underwriters' option to purchase additional shares, based on the number of shares outstanding as of \_\_\_\_\_, 2019; or
- the average weekly trading volume of our common stock on \_\_\_\_\_ during the four calendar weeks preceding the filing of a notice on Form 144 with respect to the sale; provided, in each case, that we are subject to the Exchange Act periodic reporting requirements for at least 90 days before the sale. Such sales both by affiliates and by non-affiliates must also comply with the manner of sale, current public information and notice provisions of Rule 144.

### Rule 701

Rule 701 under the Securities Act, as in effect on the date of this prospectus, permits resales of shares in reliance upon Rule 144 but without compliance with certain restrictions of Rule 144, including the holding period requirement. Most of our employees, executive officers or directors who purchased shares under a written compensatory plan or contract may be entitled to rely on the resale provisions of Rule 701, but all holders of Rule 701 shares are required to wait until 90 days after the date of this prospectus before selling their shares.

However, substantially all Rule 701 shares are subject to lock-up agreements as described below and under "Underwriting" included elsewhere in this prospectus and will become eligible for sale upon the expiration of the restrictions set forth in those agreements.

### **Lock-up agreements**

We, our directors and executive officers and holders of substantially all of our common stock have signed a lock-up agreement that prevent us and them from selling any of our common stock or any securities convertible into or exercisable or exchangeable for common stock for a period of not less than 180 days from the date of this prospectus without the prior written consent of the Underwriters, subject to certain exceptions. See the section entitled "Underwriters" appearing elsewhere in this prospectus for more information.

### **Registration rights**

Upon completion of this offering, certain holders of our securities will be entitled to various rights with respect to registration of their shares under the Securities Act. Registration of these shares under the Securities Act would result in these shares becoming fully tradable without restriction under the Securities Act immediately upon the effectiveness of the registration. See the section entitled "Description of capital stock—Registration rights" appearing elsewhere in this prospectus for more information.

### **Equity incentive plans**

We intend to file one or more registration statements on Form S-8 under the Securities Act to register our shares issued or reserved for issuance under our equity incentive plans. The first such registration statement is expected to be filed soon after the date of this prospectus and will automatically become effective upon filing with the SEC. Accordingly, shares registered under such registration statement will be available for sale in the open market, unless such shares are subject to vesting restrictions with us or the lock-up restrictions described above. As of \_\_\_\_\_, 2019, we estimate that such registration statement on Form S-8 will cover approximately shares.

## Certain material U.S. federal income and estate tax consequences for non-U.S. holders

The following discussion is a summary of the material U.S. federal income tax consequences applicable to non-U.S. holders (as defined below) with respect to their ownership and disposition of shares of our common stock issued pursuant to this offering. For purposes of this discussion, a non-U.S. holder means a beneficial owner of our common stock that is not a "U.S. person" or a partnership (including any entity or arrangement treated as a partnership and the equity holders therein) for U.S. federal income tax purposes. A U.S. person is any of the following:

- an individual citizen or resident of the United States;
- a corporation (or other entity treated 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 (i) whose administration is subject to the primary supervision of a U.S. court and which has one or more U.S. persons who have the authority to control all substantial decisions of the trust, or (ii) that has a valid election in effect under applicable Treasury Regulations to be treated as a U.S. person.

This discussion does not address the tax treatment of partnerships or other entities or arrangements that are classified as partnerships or other pass-through entities for U.S. federal income tax purposes or persons that hold their common stock through partnerships or other pass-through entities for U.S. federal income tax purposes. A partner in a partnership or other pass-through entity that will hold our common stock should consult his, her or its tax advisor regarding the tax consequences of holding and disposing of our common stock through a partnership or other pass-through entity, as applicable.

This discussion is based on current provisions of the Internal Revenue Code of 1986, as amended, or the Code, existing and proposed U.S. Treasury Regulations promulgated thereunder, current administrative rulings and judicial decisions, all as in effect as of the date of this prospectus and, all of which are subject to change or to differing interpretation, possibly with retroactive effect. Any such change or differing interpretation could alter the tax consequences to non-U.S. holders described in this prospectus. There can be no assurance that the Internal Revenue Service, which we refer to as the IRS, will not challenge one or more of the tax consequences described herein. We assume in this discussion that a non-U.S. holder holds shares of our common stock as a capital asset within the meaning of Section 1221 of the Code, generally property held for investment.

This discussion does not address all aspects of U.S. federal income taxation that may be relevant to a particular non-U.S. holder in light of that non-U.S. holder's individual circumstances including the alternative minimum tax, or the Medicare tax on net investment income, the timing of income accruals required under Section 451(b) of the Code, the rules regarding qualified small business stock within the meaning of Section 1202 of the Code and any election to apply Section 1400Z-2 of the Code to gains recognized with respect to shares of our common stock. This discussion also does not address any U.S. state, local or non-U.S. taxes, any estate tax or any other aspect of any U.S. federal tax other than the income tax. This discussion also does not consider any specific facts or circumstances that may apply to a non-U.S. holder and does not address the special tax rules applicable to particular non-U.S. holders, such as:

- insurance companies;
- tax-exempt or governmental organizations;
- financial institutions;

- brokers or dealers in securities;
- regulated investment companies;
- pension plans;
- “controlled foreign corporations,” “passive foreign investment companies,” and corporations that accumulate earnings to avoid U.S. federal income tax;
- “qualified foreign pension funds,” or entities wholly owned by a “qualified foreign pension fund”;
- partnerships or other entities or arrangements treated as partnerships for U.S. federal income tax purposes (and partners and investors therein);
- persons deemed to sell our common stock under the constructive sale provisions of the Code;
- persons that hold our common stock as part of a straddle, hedge, conversion transaction, synthetic security or other integrated investment;
- persons who have elected to mark securities to market;
- persons who have a functional currency other than the U.S. dollar;
- persons that own, or have owned, actually or constructively, more than 5% of our common stock;
- persons who hold or receive our common stock pursuant to the exercise of any employee stock option or otherwise as compensation; and
- certain U.S. expatriates.

This discussion is for general information only and is not tax advice. Accordingly, all prospective non-U.S. holders of our common stock should consult their tax advisors with respect to the U.S. federal, state, local and non-U.S. tax consequences of the purchase, ownership and disposition of our common stock.

### **Distributions on our common stock**

Distributions, if any, on our common stock will constitute dividends for U.S. federal income tax purposes to the extent paid from our current or accumulated earnings and profits, as determined under U.S. federal income tax principles. If a distribution exceeds our current and accumulated earnings and profits, the excess will be treated as a tax-free return of the non-U.S. holder’s investment, up to such holder’s tax basis in the common stock. Any remaining excess will be treated as capital gain, subject to the tax treatment described below in “Gain on sale or other taxable disposition of our common stock.” Any such distributions will also be subject to the discussions below under the sections titled “Backup withholding and information reporting” and “Withholding and information reporting requirements—FATCA.”

Subject to the discussion in the following two paragraphs in this section, dividends paid to a non-U.S. holder generally will be subject to withholding of U.S. federal income tax at a 30% rate or such lower rate as may be specified by an applicable income tax treaty between the United States and such holder’s country of residence. If we or another withholding agent apply over-withholding or if a non-U.S. holder does not timely provide us with the required certification, the non-U.S. holder may be entitled to a refund or credit of any excess tax withheld by timely filing an appropriate claim with the IRS.

Dividends that are treated as effectively connected with a trade or business conducted by a non-U.S. holder within the United States and, if an applicable income tax treaty so provides, that are attributable to a permanent establishment or a fixed base maintained by the non-U.S. holder within the United States, are generally exempt from the 30% withholding tax if the non-U.S. holder satisfies applicable certification and disclosure requirements. To claim the exemption, the

non-U.S. holder must generally furnish to the applicable withholding agent a properly executed IRS Form W-8ECI (or applicable successor form). However, such U.S. effectively connected income, net of specified deductions and credits, is taxed at the same graduated U.S. federal income tax rates applicable to U.S. persons (as defined in the Code). Any U.S. effectively connected income received by a non-U.S. holder that is a corporation may also, under certain circumstances, be subject to an additional "branch profits tax" at a 30% rate or such lower rate as may be specified by an applicable income tax treaty between the United States and such holder's country of residence.

A non-U.S. holder who claims the benefit of an applicable income tax treaty between the United States and such holder's country of residence generally will be required to provide a properly executed IRS Form W-8BEN or W-8BEN-E (or successor form) to the applicable withholding agent and satisfy applicable certification and other requirements. This certification must be provided to the withholding agent prior to the payment of dividends and must be updated periodically. If the non-U.S. holder holds the stock through a financial institution or other agent acting on the non-U.S. holder's behalf, the non-U.S. holder will be required to provide appropriate documentation to the agent, which then will be required to provide certification to us or our paying agent, either directly or through other intermediaries. Non-U.S. holders are urged to consult their tax advisors regarding their entitlement to benefits under a relevant income tax treaty. Non-U.S. holders that do not timely provide the required certification, but that qualify for a reduced treaty rate, may obtain a refund of any excess amounts withheld by timely filing an appropriate claim for refund with the IRS.

### **Gain on sale or other taxable disposition of our common stock**

Subject to the discussions below under "Backup withholding and information reporting" and "Withholding and information reporting requirements—FATCA," a non-U.S. holder generally will not be subject to any U.S. federal income tax on any gain realized upon such holder's sale or other taxable disposition of shares of our common stock unless:

- the gain is effectively connected with the non-U.S. holder's conduct of a U.S. trade or business and, if an applicable income tax treaty so provides, is attributable to a permanent establishment or a fixed-base maintained by such non-U.S. holder in the United States, in which case the non-U.S. holder generally will be taxed on a net income basis at the U.S. federal income tax rates applicable to United States persons (as defined in the Code) and, if the non-U.S. holder is a foreign corporation, the branch profits tax described above in "Distributions on our common stock" also may apply;
- the non-U.S. holder is a nonresident alien individual who is present in the United States for 183 days or more in the taxable year of the disposition and certain other conditions are met, in which case the non-U.S. holder will be subject to a 30% tax (or such lower rate as may be specified by an applicable income tax treaty between the United States and such holder's country of residence) on the gain derived from the disposition, which may be offset by certain U.S. source capital losses of the non-U.S. holder, if any (even though the individual is not considered a resident of the United States), provided that the non-U.S. holder has timely filed U.S. federal income tax returns with respect to such losses; or
- we are, or have been, at any time during the five-year period preceding such sale or other taxable disposition (or the non-U.S. holder's holding period, if shorter) a "U.S. real property holding corporation," unless our common stock is regularly traded on an established securities market and the non-U.S. holder holds no more than 5% of our outstanding common stock, directly or indirectly, during the shorter of the 5-year period ending on the date of the disposition or the period that the non-U.S. holder held our common stock. Generally, a corporation is a U.S. real property holding corporation only if the fair market value of its U.S.

real property interests equals or exceeds 50% of the sum of the fair market value of its worldwide real property interests plus its other assets used or held for use in a trade or business. Although there can be no assurance, we do not believe that we are, or have been, a U.S. real property holding corporation, or that we are likely to become one in the future. No assurance can be provided that our common stock will be regularly traded on an established securities market for purposes of the rules described above. If we are a U.S. real property holding corporation and either our common stock is not regularly traded on an established securities market or a non-U.S. holder holds, or is treated as holding, more than 5% of our outstanding common stock, directly or indirectly, during the applicable testing period, such non-U.S. holder will generally be taxed on any gain in the same manner as gain that is effectively connected with the conduct of a U.S. trade or business, except that the branch profits tax generally will not apply. If we are a U.S. real property holding corporation and our common stock is not regularly traded on an established securities market, a non-U.S. holder's proceeds received on the disposition of shares will also generally be subject to withholding at a rate of 15%. Prospective investors are encouraged to consult their own tax advisors regarding the possible consequences to them if we are, or were to become, a U.S. real property holding corporation.

### **Backup withholding and information reporting**

We must report annually to the IRS and to each non-U.S. holder the gross amount of the distributions on our common stock paid to such holder and the tax withheld, if any, with respect to such distributions. Non-U.S. holders may have to comply with specific certification procedures to establish that the holder is not a U.S. person (as defined in the Code) in order to avoid backup withholding at the applicable rate with respect to dividends on our common stock. Dividends paid to non-U.S. holders subject to withholding of U.S. federal income tax, as described above in "Distributions on our common stock," generally will be exempt from U.S. backup withholding.

Information reporting and backup withholding will generally apply to the proceeds of a disposition of our common stock by a non-U.S. holder effected by or through the U.S. office of any broker, U.S. or foreign, unless the holder certifies its status as a non-U.S. holder and satisfies certain other requirements, or otherwise establishes an exemption. Generally, information reporting and backup withholding will not apply to a payment of disposition proceeds to a non-U.S. holder where the transaction is effected outside the United States through a non-U.S. office of a broker. However, for information reporting purposes, dispositions effected through a non-U.S. office of a broker with substantial U.S. ownership or operations generally will be treated in a manner similar to dispositions effected through a U.S. office of a broker. Non-U.S. holders should consult their tax advisors regarding the application of the information reporting and backup withholding rules to them. Copies of information returns may be made available to the tax authorities of the country in which the non-U.S. holder resides or is incorporated under the provisions of a specific treaty or agreement. Backup withholding is not an additional tax. Any amounts withheld under the backup withholding rules from a payment to a non-U.S. holder can be refunded or credited against the non-U.S. holder's U.S. federal income tax liability, if any, provided that an appropriate claim is filed with the IRS in a timely manner.



**Withholding and information reporting requirements—FATCA**

Provisions of the Code commonly referred to as the Foreign Account Tax Compliance Act, or FATCA, generally imposes a U.S. federal withholding tax at a rate of 30% on payments of dividends on our common stock paid to a foreign entity unless (i) if the foreign entity is a “foreign financial institution,” such foreign entity undertakes certain due diligence, reporting, withholding, and certification obligations, (ii) if the foreign entity is not a “foreign financial institution,” such foreign entity identifies certain of its U.S. investors, if any, or (iii) the foreign entity is otherwise exempt under FATCA. Under applicable U.S. Treasury regulations, withholding under FATCA currently applies to payments of dividends on our common stock. Proposed U.S. Treasury Regulations provide that FATCA withholding does not apply to gross proceeds from the disposition of property of a type that can produce U.S. source dividends or interest; however, the current version of the rules subjects gross proceeds to FATCA withholding. In its preamble to such proposed U.S. Treasury Regulations, the U.S. Treasury stated that taxpayers (including withholding agents) can currently rely on the proposed Treasury Regulations. Under certain circumstances, a non-U.S. holder may be eligible for refunds or credits of this withholding tax. An intergovernmental agreement between the United States and an applicable foreign country may modify the requirements described in this paragraph. Non-U.S. holders should consult their tax advisors regarding the possible implications of this legislation on their investment in our common stock and 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 the 30% withholding tax under FATCA.

## Underwriting

We are offering the shares of common stock described in this prospectus through a number of underwriters. J.P. Morgan Securities LLC, Goldman Sachs & Co. LLC and Cowen and Company, LLC are acting as joint book-running managers of the offering and as representatives of the underwriters. We have entered into an underwriting agreement with the underwriters. Subject to the terms and conditions of the underwriting agreement, we have agreed to sell to the underwriters, and each underwriter has severally agreed to purchase, at the public offering price less the underwriting discounts and commissions set forth on the cover page of this prospectus, the number of shares of common stock listed next to its name in the following table:

Name	Number of shares
J.P. Morgan Securities LLC	
Goldman Sachs & Co. LLC	
Cowen and Company, LLC	
Wedbush Securities Inc.	
<b>Total</b>	

The underwriters are committed to purchase all the common shares offered by us if they purchase any shares. The underwriting agreement also provides that if an underwriter defaults, the purchase commitments of non-defaulting underwriters may also be increased or the offering may be terminated.

The underwriters propose to offer the common stock directly to the public at the initial public offering price set forth on the cover page of this prospectus and to certain dealers at that price less a concession not in excess of \$        per share. Any such dealers may resell shares to certain other brokers or dealers at a discount of up to \$        per share from the initial public offering price. After the initial offering of the shares to the public, if all of the shares of common stock are not sold at the initial public offering price, the underwriters may change the offering price and the other selling terms.

The underwriters have an option to buy up to        additional shares of common stock from us to cover sales of shares by the underwriters which exceed the number of shares specified in the table above. The underwriters have 30 days from the date of this prospectus to exercise this option to purchase additional shares. If any shares are purchased with this option to purchase additional shares, the underwriters will purchase shares in approximately the same proportion as shown in the table above. If any additional shares of common stock are purchased, the underwriters will offer the additional shares on the same terms as those on which the shares are being offered.

The underwriting discount is equal to the public offering price per share of common stock less the amount paid by the underwriters to us per share of common stock. The underwriting discount is \$        per share. The following table shows the per share and total underwriting discounts and commissions to be paid to the underwriters assuming both no exercise and full exercise of the underwriters' option to purchase additional shares.

	Without exercise of option to purchase additional shares	With full exercise of option to purchase additional shares
Per share	\$	\$
Total	\$	\$

We estimate that the total expenses of this offering, including registration, filing and listing fees, printing fees and legal and accounting expenses, but excluding the underwriting discounts and commissions, will be approximately \$ . We have also agreed to reimburse the underwriters for certain of their expenses in an amount up to \$ .

A prospectus in electronic format may be made available on the websites maintained by one or more underwriters, or selling group members, if any, participating in the offering. The underwriters 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 representatives to underwriters and selling group members that may make Internet distributions on the same basis as other allocations.

We have agreed that, subject to certain limited exceptions, we will not (1) offer, pledge, announce the intention to sell, sell, contract to sell, sell any option or contract to purchase, purchase any option or contract to sell, grant any option, right or warrant to purchase or otherwise dispose of, directly or indirectly, or file with, or submit to, the Securities and Exchange Commission a registration statement under the Securities Act relating to, any shares of our common stock or securities convertible into or exchangeable or exercisable for any shares of our common stock, or publicly disclose the intention to make any offer, sale, pledge, disposition, submission or filing, or (2) enter into any swap or other arrangement that transfers all or a portion of the economic consequences associated with the ownership of any shares of common stock or any such other securities (regardless of whether any of these transactions are to be settled by the delivery of shares of common stock or such other securities, in cash or otherwise), in each case without the prior written consent of J.P. Morgan Securities LLC and Goldman Sachs & Co. LLC for a period of 180 days after the date of this prospectus.

Our directors and executive officers, and substantially all of our securityholders have entered into lock-up agreements with the underwriters prior to the commencement of this offering pursuant to which each of these persons or entities, with limited exceptions, for a period of 180 days after the date of this prospectus, may not, without the prior written consent of the representatives, (1) offer, pledge, announce the intention to sell, sell, contract to sell, sell any option or contract to purchase, purchase any option or contract to sell, grant any option, right or warrant to purchase, or otherwise transfer or dispose of, directly or indirectly, any shares of our common stock or any securities convertible into or exercisable or exchangeable for our common stock (including, without limitation, common stock or such other securities which may be deemed to be beneficially owned by such directors, executive officers, managers and members in accordance with the rules and regulations of the SEC and securities which may be issued upon exercise of a stock option or warrant); or (2) enter into any swap or other agreement that transfers, in whole or in part, any of the economic consequences of ownership of the common stock or such other securities, whether any such transaction described in clause (1) or (2) above is to be settled by delivery of common stock or such other securities, in cash or otherwise; or (3) make any demand for or exercise any right with respect to the registration of any shares of our common stock or any security convertible into or exercisable or exchangeable for our common stock.

The restrictions described in the immediately preceding paragraph do not apply to, subject to certain limitations:

- transfers of shares of common stock or any security convertible into common stock as a bona fide gift or gifts, or to a charitable organization or educational institution in a transaction not involving a disposition for value;
- transfers, distributions or dispositions of shares of common stock to members or stockholders of the transferor, any member of the immediate family of the transferor or any trust for the direct or indirect benefit of the transferor or the immediate family of the transferor in a transaction not involving a disposition for value;
- transactions relating to shares of common stock or other securities acquired in the public offering of the securities offered by this prospectus (other than any issuer-directed shares of common stock purchased in the public offering of the securities offered by this prospectus by an officer or director of the company) or in open market transactions after the pricing of the public offering of the securities offered by this prospectus;
- transfers or dispositions of shares of common stock or other securities to any corporation, partnership, limited liability company or other entity, in each case, all of the beneficial ownership interests of which are held by the transferor or the immediate family of the transferor in a transaction not involving a disposition for value;
- transfers or dispositions of shares of common stock or other securities (x) by will, other testamentary document or intestate succession to the legal representative, heir, beneficiary or a member of the immediate family of the transferor upon the death of the transferor, or (y) by operation of law pursuant to a domestic order or negotiated divorce settlement;
- transfers or dispositions of common stock or any security convertible into or exercisable or exchangeable for common stock to us pursuant to any contractual arrangement in effect on the date of such lock-up agreement that provides for the repurchase of the transferor's common stock or other securities by us or in connection with the termination of the transferor's employment with or service to us;
- transfers or dispositions of shares of common stock or other securities to us in connection with the conversion of any convertible preferred stock into, or the exercise of any option or warrant for, shares of common stock;
- transfers or dispositions of shares of common stock or other securities to a nominee or custodian of a person or entity to whom a disposition or transfer would be permissible under the seven preceding paragraphs;
- the establishment of a trading plan pursuant to Rule 10b5-1 under the Exchange Act for the transfer of shares of common stock; or
- transfers or dispositions of shares of common stock or such other securities pursuant to a bona fide tender offer for shares of our capital stock, merger, consolidation or other similar transaction made to all holders of our securities involving a change of control (as defined in the lock-up agreement) of us (including, without limitation, the entering into of any lock-up, voting or similar agreement pursuant to which the transferor may agree to transfer, sell, tender or otherwise dispose of shares of common stock or other securities in connection with such transaction) that has been approved by our board of directors.

We have agreed to indemnify the underwriters against certain liabilities, including liabilities under the Securities Act.

We intend to apply to list our common stock on \_\_\_\_\_ under the symbol " \_\_\_\_\_."

In connection with this offering, the underwriters may engage in stabilizing transactions, which involves making bids for, purchasing and selling shares of common stock in the open market for the purpose of preventing or retarding a decline in the market price of the common stock while this offering is in progress. These stabilizing transactions may include making short sales of the

common stock, which involves the sale by the underwriters of a greater number of shares of common stock than they are required to purchase in this offering, and purchasing shares of common stock on the open market to cover positions created by short sales. Short sales may be "covered" shorts, which are short positions in an amount not greater than the underwriters' option to purchase additional shares referred to above, or may be "naked" shorts, which are short positions in excess of that amount. The underwriters may close out any covered short position either by exercising their option to purchase additional shares, in whole or in part, or by purchasing shares in the open market. In making this determination, the underwriters will consider, among other things, the price of shares available for purchase in the open market compared to the price at which the underwriters may purchase shares through the option to purchase additional shares. A naked short position is more likely to be created if the underwriters are concerned that there may be downward pressure on the price of the common stock in the open market that could adversely affect investors who purchase in this offering. To the extent that the underwriters create a naked short position, they will purchase shares in the open market to cover the position.

The underwriters have advised us that, pursuant to Regulation M of the Securities Act, they may also engage in other activities that stabilize, maintain or otherwise affect the price of the common stock, including the imposition of penalty bids. This means that if the representatives of the underwriters purchase common stock in the open market in stabilizing transactions or to cover short sales, the representatives can require the underwriters that sold those shares as part of this offering to repay the underwriting discount received by them.

These activities may have the effect of raising or maintaining the market price of the common stock or preventing or retarding a decline in the market price of the common stock, and, as a result, the price of the common stock may be higher than the price that otherwise might exist in the open market. If the underwriters commence these activities, they may discontinue them at any time. The underwriters may carry out these transactions on \_\_\_\_\_, in the over-the-counter market or otherwise.

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 determining the initial public offering price, we and the representatives of the underwriters expect to consider a number of factors including:

- the information set forth in this prospectus and otherwise available to the representatives;
- our prospects and the history and prospects for the industry in which we compete;
- an assessment of our management;
- our prospects for future earnings;
- the general condition of the securities markets at the time of this offering;
- the recent market prices of, and demand for, publicly traded common stock of generally comparable companies; and
- other factors deemed relevant by the underwriters and us.

Neither we nor the underwriters can assure investors that an active trading market will develop for our common stock, or that the shares will trade in the public market at or above the initial public offering price.

## Other relationships

The underwriters and their respective affiliates are full service financial institutions engaged in various activities, which may include sales and trading, commercial and investment banking, advisory, investment management, investment research, principal investment, hedging, market making, brokerage and other financial and non-financial activities and services. Certain of the underwriters and their respective affiliates have provided, and may in the future provide, a variety of these services to the issuer and to persons and entities with relationships with the issuer, for which they received or will receive customary fees and expenses.

In the ordinary course of their various business activities, the underwriters and their respective affiliates, officers, directors and employees may purchase, sell or hold a broad array of investments and actively traded securities, derivatives, loans, commodities, currencies, credit default swaps and other financial instruments for their own account and for the accounts of their customers, and such investment and trading activities may involve or relate to assets, securities and/or instruments of the issuer (directly, as collateral securing other obligations or otherwise) and/or persons and entities with relationships with the issuer. The underwriters and their respective affiliates may also communicate independent investment recommendations, market color or trading ideas and/or publish or express independent research views in respect of such assets, securities or instruments and may at any time hold, or recommend to clients that they should acquire, long and/or short positions in such assets, securities and instruments.

## Selling restrictions

Other than in the United States, no action has been taken by us or the underwriters that would permit a public offering of the securities offered by this prospectus in any jurisdiction where action for that purpose is required. The securities offered by this prospectus may not be offered or sold, directly or indirectly, nor may this prospectus or any other offering material or advertisements in connection with the offer and sale of any such securities be distributed or published in any jurisdiction, except under circumstances that will result in compliance with the applicable rules and regulations of that jurisdiction. Persons into whose possession this prospectus comes are advised to inform themselves about and to observe any restrictions relating to the offering and the distribution of this prospectus. This prospectus does not constitute an offer to sell or a solicitation of an offer to buy any securities offered by this prospectus in any jurisdiction in which such an offer or a solicitation is unlawful.

### ***Notice to prospective investors in the European Economic Area***

In relation to each Member State of the European Economic Area (each, a "Relevant Member State"), no offer of shares may be made to the public in that Relevant Member State other than:

- A. to any legal entity which is a qualified investor as defined in the Prospectus Directive;
- B. to fewer than 150, natural or legal persons (other than qualified investors as defined in the Prospectus Directive), subject to obtaining the prior consent of the representatives; or
- C. in any other circumstances falling within Article 3(2) of the Prospectus Directive, provided that no such offer of shares shall require the company or the representatives to publish a prospectus pursuant to Article 3 of the Prospectus Directive or supplement a prospectus pursuant to Article 16 of the Prospectus Directive and each person who initially acquires any shares or to whom any offer is made will be deemed to have represented, acknowledged and agreed to and with each of the underwriters and the Company 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.

In the case of any shares being offered to a financial intermediary as that term is used in Article 3(2) of the Prospectus Directive, each such financial intermediary will be deemed to have represented, acknowledged and agreed that the shares acquired by it in the offer have not been acquired on a non-discretionary basis on behalf of, nor have they been acquired with a view to their offer or resale to, persons in circumstances which may give rise to an offer of any shares to the public other than their offer or resale in a Relevant Member State to qualified investors as so defined or in circumstances in which the prior consent of the representatives has been obtained to each such proposed offer or resale.

For the purpose of the above provisions, the expression "an offer to the public" in relation to any shares 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 shares to be offered so as to enable an investor to decide to purchase or subscribe the shares, as the same may be varied in the Relevant Member State by any measure implementing the Prospectus Directive in the Relevant Member State and the expression "Prospectus Directive" means Directive 2003/71/EC (including the 2010 PD Amending Directive, to the extent implemented in the Relevant Member States) and includes any relevant implementing measure in the Relevant Member State and the expression "2010 PD Amending Directive" means Directive 2010/73/EU.

***Notice to prospective investors in the United Kingdom***

In addition, in the United Kingdom, this document is being distributed only to, and is directed only at, and any offer subsequently made may only be directed at persons who are "qualified investors" (as defined in the Prospectus Directive) (1) who have professional experience in matters relating to investments falling within Article 19 (5) of the Financial Services and Markets Act 2000 (Financial Promotion) Order 2005, as amended (the "Order") and/or (2) who are high net worth companies (or persons to whom it may otherwise be lawfully communicated) falling within Article 49(2)(a) to (d) of the Order (all such persons together being referred to as "relevant persons") or otherwise in circumstances which have not resulted and will not result in an offer to the public of the shares in the United Kingdom within the meaning of the Financial Services and Markets Act 2000.

Any person in the United Kingdom that is not a relevant person should not act or rely on the information included in this document or use it as basis for taking any action. In the United Kingdom, any investment or investment activity that this document relates to may be made or taken exclusively by relevant persons. Any person in the United Kingdom that is not a relevant person should not act or rely on this document or any of its contents.

***Notice to prospective investors in Canada***

The shares 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 shares must be made in accordance with an exemption from, or in a transaction not subject to, the prospectus requirements of applicable securities laws.

Securities legislation in certain provinces or territories of Canada may provide a purchaser with remedies for rescission or damages if this prospectus (including any amendment thereto) contains a misrepresentation, provided that the remedies for rescission or damages are exercised by the purchaser within the time limit prescribed by the securities legislation of the purchaser's province or territory. The purchaser should refer to any applicable provisions of the securities legislation of the purchaser's province or territory for particulars of these rights or consult with a legal advisor.

Pursuant to section 3A.3 of National Instrument 33-105 Underwriting Conflicts, or 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.

***Notice to prospective investors in Switzerland***

The shares may not be publicly offered in Switzerland and will not be listed on the SIX Swiss Exchange, or the SIX, or on any other stock exchange or regulated trading facility in Switzerland. This document has been prepared without regard to the disclosure standards for issuance prospectuses under art. 652a or art. 1156 of the Swiss Code of Obligations or the disclosure standards for listing prospectuses under art. 27 ff. of the SIX Listing Rules or the listing rules of any other stock exchange or regulated trading facility in Switzerland. Neither this document nor any other offering or marketing material relating to the shares or the offering may be publicly distributed or otherwise made publicly available in Switzerland.

Neither this document nor any other offering or marketing material relating to this offering, our Company, or the shares have been or will be filed with or approved by any Swiss regulatory authority. In particular, this document will not be filed with, and the offer of shares will not be supervised by, the Swiss Financial Market Supervisory Authority, and the offer of shares has not been and will not be authorized under the Swiss Federal Act on Collective Investment Schemes, or CISA. The investor protection afforded to acquirers of interests in collective investment schemes under the CISA does not extend to acquirers of shares.

***Notice to prospective investors in the Dubai International Financial Centre***

This prospectus relates to an Exempt Offer in accordance with the Offered Securities Rules of the Dubai Financial Services Authority, or DFSA. This prospectus is intended for distribution only to persons of a type specified in the Offered Securities Rules of the DFSA. It must not be delivered to, or relied on by, any other person. The DFSA has no responsibility for reviewing or verifying any documents in connection with Exempt Offers. The DFSA has not approved this prospectus nor taken steps to verify the information set forth herein and has no responsibility for this prospectus. The shares to which this prospectus relates may be illiquid and/or subject to restrictions on their resale. Prospective purchasers of the shares offered should conduct their own due diligence on the shares. If you do not understand the contents of this prospectus you should consult an authorized financial advisor.

***Notice to prospective investors in the United Arab Emirates***

The shares have not been, and are not being, publicly offered, sold, promoted or advertised in the United Arab Emirates (including the Dubai International Financial Centre) other than in compliance with the laws of the United Arab Emirates (and the Dubai International Financial Centre) governing the issue, offering and sale of securities. Further, this prospectus does not constitute a public offer of securities in the United Arab Emirates (including the Dubai International Financial Centre) and is not intended to be a public offer. This prospectus has not been approved by or filed with the Central Bank of the United Arab Emirates, the Securities and Commodities Authority or the Dubai Financial Services Authority.

***Notice to prospective investors in Australia***

This prospectus:

- does not constitute a product disclosure document or a prospectus under Chapter 6D.2 of the Corporations Act 2001 (Cth), or the Corporations Act;



- has not been, and will not be, lodged with the Australian Securities and Investments Commission, or ASIC, as a disclosure document for the purposes of the Corporations Act and does not purport to include the information required of a disclosure document under Chapter 6D.2 of the Corporations Act;
- does not constitute or involve a recommendation to acquire, an offer or invitation for issue or sale, an offer or invitation to arrange the issue or sale, or an issue or sale, of interests to a “retail client” (as defined in section 761G of the Corporations Act and applicable regulations) in Australia; and
- may only be provided in Australia to select investors who are able to demonstrate that they fall within one or more of the categories of investors, or Exempt Investors, available under section 708 of the Corporations Act.

The shares may not be directly or indirectly offered for subscription or purchased or sold, and no invitations to subscribe for or buy the shares may be issued, and no draft or definitive offering memorandum, advertisement or other offering material relating to any shares may be distributed in Australia, except where disclosure to investors is not required under Chapter 6D of the Corporations Act or is otherwise in compliance with all applicable Australian laws and regulations. By submitting an application for the shares, you represent and warrant to us that you are an Exempt Investor.

As any offer of shares under this document will be made without disclosure in Australia under Chapter 6D.2 of the Corporations Act, the offer of those securities for resale in Australia within 12 months may, under section 707 of the Corporations Act, require disclosure to investors under Chapter 6D.2 if none of the exemptions in section 708 applies to that resale. By applying for the shares you undertake to us that you will not, for a period of 12 months from the date of issue of the shares, offer, transfer, assign or otherwise alienate those securities to investors in Australia except in circumstances where disclosure to investors is not required under Chapter 6D.2 of the Corporations Act or where a compliant disclosure document is prepared and lodged with ASIC.

***Notice to prospective investors in Japan***

The shares have not been and will not be registered pursuant to Article 4, Paragraph 1 of the Financial Instruments and Exchange Act. Accordingly, none of the shares nor any interest therein may be offered or sold, directly or indirectly, in Japan or to, or for the benefit of, any “resident” of Japan (which term as used herein means any person resident in Japan, including any corporation or other entity organized under the laws of Japan), or to others for re-offering or resale, directly or indirectly, in Japan or to or for the benefit of a resident of Japan, except pursuant to an exemption from the registration requirements of, and otherwise in compliance with, the Financial Instruments and Exchange Act and any other applicable laws, regulations and ministerial guidelines of Japan in effect at the relevant time.

***Notice to prospective investors in Hong Kong***

The shares have not been offered or sold, and will not be offered or sold, in Hong Kong, by means of any document, other than (a) to “professional investors” as defined in the SFO (Cap. 571) of Hong Kong and any rules made under that Ordinance; or (b) in other circumstances which do not result in the document being a “prospectus” as defined in the Companies Ordinance (Cap. 32) of Hong Kong or which do not constitute an offer to the public within the meaning of that Ordinance. No advertisement, invitation or document relating to the shares has been or may be issued or has been or may be in the possession of any person for the purposes of issue, whether in Hong Kong or elsewhere, which is directed at, or the contents of which are likely to be accessed or read by, the public of Hong Kong (except if permitted to do so under the

securities laws of Hong Kong) other than with respect to shares which are or are intended to be disposed of only to persons outside Hong Kong or only to "professional investors" as defined in the SFO and any rules made under that Ordinance.

**Notice to prospective investors in Singapore**

This prospectus has not been registered as a prospectus with the MAS. Accordingly, this prospectus and any other document or material in connection with the offer or sale, or invitation for subscription or purchase, of shares may not be circulated or distributed, nor may the shares be offered or sold, or be made the subject of an invitation for subscription or purchase, whether directly or indirectly, to persons in Singapore other than (i) to an institutional investor under Section 274 of the SFA, Chapter 289 of Singapore, or the SFA, (ii) to a relevant person pursuant to Section 275(1), or any person pursuant to Section 275(1A), and in accordance with the conditions specified in Section 275, of the SFA, or (iii) otherwise pursuant to, and in accordance with the conditions of, any other applicable provision of the SFA.

Where the shares are subscribed or purchased under Section 275 of the SFA by a relevant person which is:

- (a) a corporation (which is not an accredited investor (as defined in Section 4A of the SFA)) the sole business of which is to hold investments and the entire share capital of which is owned by one or more individuals, each of whom is an accredited investor; or
- (b) a trust (where the trustee is not an accredited investor) whose sole purpose is to hold investments and each beneficiary of the trust is an individual who is an accredited investor, securities (as defined in Section 239(1) of the SFA) of that corporation or the beneficiaries' rights and interest (howsoever described) in that trust shall not be transferred within six months after that corporation or that trust has acquired the shares pursuant to an offer made under Section 275 of the SFA except:
  - (a) to an institutional investor or to a relevant person defined in Section 275(2) of the SFA, or to any person arising from an offer referred to in Section 275(1A) or Section 276(4)(i)(B) of the SFA;
  - (b) where no consideration is or will be given for the transfer;
  - (c) where the transfer is by operation of law;
  - (d) as specified in Section 276(7) of the SFA; or
  - (e) as specified in Regulation 32 of the Securities and Futures (Offers of Investments) (Shares and Debentures) Regulations 2005 of Singapore.

**Notice to prospective investors in Bermuda**

Shares may be offered or sold in Bermuda only in compliance with the provisions of the Investment Business Act of 2003 of Bermuda which regulates the sale of securities in Bermuda. Additionally, non-Bermudian persons (including companies) may not carry on or engage in any trade or business in Bermuda unless such persons are permitted to do so under applicable Bermuda legislation.

**Notice to prospective investors in Saudi Arabia**

This document may not be distributed in the Kingdom of Saudi Arabia except to such persons as are permitted under the Offers of Securities Regulations as issued by the board of the Saudi Arabian Capital Market Authority, or the CMA, pursuant to resolution number 2-11-2004 dated

4 October 2004 as amended by resolution number 1-28-2008, as amended, or the CMA Regulations. The CMA does not make any representation as to the accuracy or completeness of this document and expressly disclaims any liability whatsoever for any loss arising from, or incurred in reliance upon, any part of this document. Prospective purchasers of the securities offered hereby should conduct their own due diligence on the accuracy of the information relating to the securities. If you do not understand the contents of this document, you should consult an authorised financial adviser.

***Notice to prospective investors in the British Virgin Islands***

The shares are not being, and may not be offered to the public or to any person in the British Virgin Islands for purchase or subscription by or on behalf of the Company. The Company may be offered to companies incorporated under the BVI Business Companies Act, 2004 (British Virgin Islands), but only where the offer will be made to, and received by, the relevant BVI Company entirely outside of the British Virgin Islands. This prospectus has not been, and will not be, registered with the Financial Services Commission of the British Virgin Islands. No registered prospectus has been or will be prepared in respect of the shares for the purposes of the Securities and Investment Business Act, 2010 or the Public Issuers Code of the British Virgin Islands.

***Notice to prospective investors in China***

This prospectus does not constitute a public offer of shares, whether by sale or subscription, in the People's Republic of China, or the PRC. The shares are not being offered or sold directly or indirectly in the PRC to or for the benefit of, legal or natural persons of the PRC.

Further, no legal or natural persons of the PRC may directly or indirectly purchase any of the shares or any beneficial interest therein without obtaining all prior PRC's governmental approvals that are required, whether statutorily or otherwise. Persons who come into possession of this document are required by the issuer and its representatives to observe these restrictions.

***Notice to prospective investors in Korea***

The shares have not been and will not be registered under the Financial Investments Services and Capital Markets Act of Korea and the decrees and regulations thereunder, or the FSCMA, and the shares have been and will be offered in Korea as a private placement under the FSCMA. None of the shares may be offered, sold or delivered directly or indirectly, or offered or sold to any person for re-offering or resale, directly or indirectly, in Korea or to any resident of Korea except pursuant to the applicable laws and regulations of Korea, including the FSCMA and the Foreign Exchange Transaction Law of Korea and the decrees and regulations thereunder, or the FETL. Furthermore, the purchaser of the shares shall comply with all applicable regulatory requirements (including but not limited to requirements under the FETL) in connection with the purchase of the shares. By the purchase of the shares, the relevant holder thereof will be deemed to represent and warrant that if it is in Korea or is a resident of Korea, it purchased the shares pursuant to the applicable laws and regulations of Korea.

***Notice to prospective investors in Malaysia***

No prospectus or other offering material or document in connection with the offer and sale of the shares has been or will be registered with the Securities Commission of Malaysia, or the Commission, for the Commission's approval pursuant to the Capital Markets and Services Act 2007. Accordingly, this prospectus and any other document or material in connection with the offer or sale, or invitation for subscription or purchase, of the shares may not be circulated or distributed, nor may the shares be offered or sold, or be made the subject of an invitation for subscription or purchase, whether directly or indirectly, to persons in Malaysia other than

(1) a closed end fund approved by the Commission, (2) a holder of a Capital Markets Services Licence, (3) a person who acquires the shares, as principal, if the offer is on terms that the shares may only be acquired at a consideration of not less than RM250,000 (or its equivalent in foreign currencies) for each transaction, (4) an individual whose total net personal assets or total net joint assets with his or her spouse exceeds RM3 million (or its equivalent in foreign currencies), excluding the value of the primary residence of the individual, (5) an individual who has a gross annual income exceeding RM300,000 (or its equivalent in foreign currencies) per annum in the preceding 12 months, (6) an individual who, jointly with his or her spouse, has a gross annual income of RM400,000 (or its equivalent in foreign currencies), per annum in the preceding 12 months, (7) a corporation with total net assets exceeding RM10 million (or its equivalent in a foreign currencies) based on the last audited accounts, (8) a partnership with total net assets exceeding RM10 million (or its equivalent in foreign currencies), (9) a bank licensee or insurance licensee as defined in the Labuan Financial Services and Securities Act 2010, (10) an Islamic bank licensee or takaful licensee as defined in the Labuan Financial Services and Securities Act 2010, and (11) any other person as may be specified by the Commission; provided that, in the each of the preceding categories (1) to (11), the distribution of the shares is made by a holder of a Capital Markets Services Licence who carries on the business of dealing in securities. The distribution in Malaysia of this prospectus is subject to Malaysian laws. This prospectus does not constitute and may not be used for the purpose of public offering or an issue, offer for subscription or purchase, invitation to subscribe for or purchase any securities requiring the registration of a prospectus with the Commission under the Capital Markets and Services Act 2007.

**Notice to prospective investors in Taiwan**

The shares have not been and will not be registered with the Financial Supervisory Commission of Taiwan pursuant to relevant securities laws and regulations and may not be sold, issued or offered within Taiwan through a public offering or in circumstances which constitutes an offer within the meaning of the Securities and Exchange Act of Taiwan that requires a registration or approval of the Financial Supervisory Commission of Taiwan. No person or entity in Taiwan has been authorised to offer, sell, give advice regarding or otherwise intermediate the offering and sale of the shares in Taiwan.

**Notice to prospective investors in South Africa**

Due to restrictions under the securities laws of South Africa, the shares are not offered, and the offer shall not be transferred, sold, renounced or delivered, in South Africa or to a person with an address in South Africa, unless one or other of the following exemptions applies:

- (1) the offer, transfer, sale, renunciation or delivery is to:
  - (a) persons whose ordinary business is to deal in securities, as principal or agent;
  - (b) the South African Public Investment Corporation;
  - (c) persons or entities regulated by the Reserve Bank of South Africa;
  - (d) authorised financial service providers under South African law;
  - (e) financial institutions recognised as such under South African law;

- (f) a wholly owned subsidiary of any person or entity contemplated in (c), (d) or (e), acting as agent in the capacity of an authorised portfolio manager for a pension fund or collective investment scheme (in each case duly registered as such under South African law); or
  - (g) any combination of the person in (a) to (f); or
- (2) the total contemplated acquisition cost of the securities, for any single addressee acting as principal is equal to or greater than ZAR1,000,000.

No "offer to the public" (as such term is defined in the South African Companies Act, No. 71 of 2008 (as amended or re-enacted), or the South African Companies Act, in South Africa is being made in connection with the issue of the shares. Accordingly, this document does not, nor is it intended to, constitute a "registered prospectus" (as that term is defined in the South African Companies Act) prepared and registered under the South African Companies Act and has not been approved by, and/or filed with, the South African Companies and Intellectual Property Commission or any other regulatory authority in South Africa. Any issue or offering of the shares in South Africa constitutes an offer of the shares in South Africa for subscription or sale in South Africa only to persons who fall within the exemption from "offers to the public" set out in section 96(1)(a) of the South African Companies Act. Accordingly, this document must not be acted on or relied on by persons in South Africa who do not fall within section 96(1)(a) of the South African Companies Act (such persons being referred to as "SA Relevant Persons"). Any investment or investment activity to which this document relates is available in South Africa only to SA Relevant Persons and will be engaged in South Africa only with SA relevant persons.

## Legal matters

The validity of the shares of common stock offered by this prospectus will be passed upon for us by Goodwin Procter LLP, Boston, Massachusetts. Cooley LLP, New York, New York, is acting as counsel to the underwriters in connection with this offering.

## Experts

The consolidated financial statements of SpringWorks Therapeutics, LLC at December 31, 2017 and 2018, and for the years then ended, appearing in this prospectus and registration statement have been audited by Ernst & Young LLP, independent registered accounting firm, as set forth in their report thereon appearing elsewhere herein and are included in reliance upon such report given on the authority of such firm as experts in accounting and auditing.

## Where you can find more information

We have filed with the SEC a registration statement on Form S-1 (File Number 333- ) under the Securities Act with respect to the common stock we are offering by this prospectus. This prospectus does not contain all of the information included in the registration statement. For further information pertaining to us and our common stock, you should refer to the registration statement and to its exhibits. Whenever we make reference in this prospectus to any of our contracts, agreements or other documents, the references are not necessarily complete, and you should refer to the exhibits attached to the registration statement for copies of the actual contract, agreement or other document.

Upon the completion of the offering, we will be subject to the informational requirements of the Exchange Act and will file annual, quarterly and current reports, proxy statements and other information with the SEC. You can read our SEC filings, including the registration statement, at the SEC's website at [www.sec.gov](http://www.sec.gov). We also maintain a website at <http://www.springworkstx.com>. Upon completion of the offering, you may access, free of charge, our annual reports on Form 10-K, quarterly reports on Form 10-Q, current reports on Form 8-K and amendment to those reports filed or furnished pursuant to Section 13(a) or 15(d) of the Exchange Act as soon as reasonably practicable after such material is electronically filed with, or furnished to, the SEC.

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## Report of independent registered public accounting firm

To the Shareholders and the Board of Directors of SpringWorks Therapeutics, Inc.

### Opinion on the financial statements

We have audited the accompanying consolidated balance sheets of SpringWorks Therapeutics, LLC and Subsidiaries (“the Company”) as of December 31, 2018 and 2017, the related consolidated statements of operations and comprehensive loss, convertible preferred units and members’ deficit and cash flows for the years ended December 31, 2018 and for the period from August 18, 2017 (inception) through December 31, 2017, and the related notes (collectively referred to as the “consolidated financial statements”). In our opinion, the consolidated financial statements present fairly, in all material respects, the financial position of the Company at December 31, 2018 and 2017, and the results of its operations and its cash flows for the year ended December 31, 2018 and for the period from August 18, 2017 (inception) through December 31, 2017 in conformity with U.S. generally accepted accounting principles.

### Basis for opinion

These financial statements are the responsibility of the Company’s management. Our responsibility is to express an opinion on the Company’s financial statements based on our audits. We are a public accounting firm registered with the Public Company Accounting Oversight Board (United States) (PCAOB) and are required to be independent with respect to the Company in accordance with the U.S. federal securities laws and the applicable rules and regulations of the Securities and Exchange Commission and the PCAOB.

We conducted our audits in accordance with the standards of the PCAOB and in accordance with auditing standards generally accepted in the United States of America. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements are free of material misstatement, whether due to error or fraud. The Company is not required to have, nor were we engaged to perform, an audit of its internal control over financial reporting. As part of our audits we are required to obtain an understanding of internal control over financial reporting but not for the purpose of expressing an opinion on the effectiveness of the Company’s internal control over financial reporting. Accordingly, we express no such opinion.

Our audits included performing procedures to assess the risk of material misstatement of the financial statements, whether due to error or fraud, and performing procedures that respond to those risks. Such procedures included examining, on a test basis, evidence regarding the amounts and disclosures in the financial statements. Our audits also included evaluating the accounting principles used and significant estimates made by management, as well as evaluating the overall presentation of the financial statements. We believe that our audits provide a reasonable basis for our opinion.

/s/ Ernst & Young LLP

We have served as the Company’s auditor since 2018.

New York, New York  
June 7, 2019



## SpringWorks Therapeutics, LLC and Subsidiaries Consolidated Balance Sheets

(in thousands, except share, unit, per-share and per unit data)	December 31,		Pro Forma
	2017	2018	December 31, 2018 (unaudited)
<b>Assets</b>			
Current assets:			
Cash and cash equivalents	\$10,271	\$ 45,648	\$ 45,648
Prepaid expenses and other current assets	270	1,382	1,382
Total current assets	10,541	47,030	47,030
Property and equipment, net	41	317	317
Other assets	—	1,043	1,043
Total assets	\$10,582	\$ 48,390	\$ 48,390
<b>Liabilities, Convertible Preferred Units and Members' Equity</b>			
Current liabilities:			
Accounts payable	\$ 283	\$ 774	\$ 774
Accrued expenses	370	2,568	2,568
Deferred rent	—	335	335
Total current liabilities	653	3,677	3,677
Long-term portion of deferred rent	—	1,152	1,152
Non-current liabilities	—	1,152	1,152
Total liabilities	653	4,829	4,829
Commitments and contingencies (Note 8)			
Convertible Preferred Units:			
Series A convertible preferred units, no par value, net of issuance costs; Authorized 103,000,000 units at December 31, 2018 and December 31, 2017; issued and outstanding 63,600,000 and 13,200,001 units at December 31, 2018 and December 31, 2017, respectively	12,554	62,930	—
Members' (deficit) equity:			
Junior convertible preferred units, no par value; Authorized 6,437,500 units at December 31, 2018 and December 31, 2017; issued and outstanding 6,437,500 units at December 31, 2018 and December 31, 2017	2,014	2,014	—
Common units, no par value; Authorized 1,287,501 units at December 31, 2018 and December 31, 2017; issued and outstanding 1,287,500 and 0 units at December 31, 2018 and December 31, 2017, respectively	—	—	—
Common stock, \$0.0001 par value no shares authorized, issued or outstanding as of December 31, 2018 and December 31, 2017; _____ shares authorized, _____ issued and outstanding, pro forma as of December 31, 2018 (unaudited)	—	—	—
Additional paid-in capital	—	1,069	66,013
Accumulated deficit	(4,639)	(22,452)	(22,452)
Total members' (deficit) equity	(2,625)	(19,369)	43,561
Total liabilities, convertible preferred units and members' (deficit) equity	\$10,582	\$ 48,390	\$ 48,390

See accompanying notes to consolidated financial statements.

## SpringWorks Therapeutics, LLC and Subsidiaries Consolidated Statements of Operations and Comprehensive Loss

(in thousands, except unit and per unit data)	Period from August 18, 2017 (Inception) to December 31, 2017	Year Ended December 31, 2018
Operating expenses:		
Research and development	\$ 2,799	\$ 9,898
General and administrative	1,861	8,593
Total operating expenses	4,660	18,491
Loss from operations	(4,660)	(18,491)
Other income:		
Interest income	21	678
Total other Income	21	678
Net loss	\$(4,639)	\$ (17,813)
Net loss per common unit, basic and diluted	\$ —	\$ (7.94)
Weighted average common units outstanding, basic and diluted	—	2,244,215
Pro forma net loss per share, basic and diluted (unaudited)		\$ (0.30)
Pro forma weighted average common shares outstanding, basic and diluted (unaudited)		58,749,660

See accompanying notes to consolidated financial statements.

## SpringWorks Therapeutics, LLC and Subsidiaries

### Consolidated Statement of Convertible Preferred Units and Members' Deficit

(in thousands, except unit and per unit data)	Series A Preferred		Series A Junior Convertible Preferred		Common/ Incentive		Additional Paid-In Capital	Accumulated Deficit	Total
	Convertible Units	Amount	Units	Amount	Units	Amount			
Balance at August 18, 2017 (inception)	—	\$ —	—	\$ —	—	\$ —	\$ —	\$ —	\$ —
Issuance of Series A convertible preferred units, net of issuance costs	13,200,001	12,554	—	—	—	—	—	—	—
Issuance of Junior convertible preferred units	—	—	6,437,500	2,014	—	—	—	—	2,014
Net loss	—	—	—	—	—	—	—	(4,639)	(4,639)
Balance at December 31, 2017	13,200,001	12,554	6,437,500	2,014	—	—	—	(4,639)	(2,625)
Issuance of Series A convertible preferred units, net	50,399,999	50,376	—	—	—	—	—	—	—
Issuance of common units to founders	—	—	—	—	1,287,500	—	154	—	154
Issuance of incentive units	—	—	—	—	19,121,653	—	915	—	915
Net loss	—	—	—	—	—	—	—	(17,813)	(17,813)
Balance at December 31, 2018	63,600,000	\$62,930	6,437,500	\$2,014	20,409,153	\$—	\$1,069	\$ (22,452)	\$ (19,369)

See accompanying notes to consolidated financial statements.

## SpringWorks Therapeutics, LLC and Subsidiaries Consolidated Statements of Cash Flows

(in thousands, except unit and per unit data)	Period from August 18, 2017 (Inception) to December 31, 2017	Year Ended December 31, 2018
<b>Operating activities</b>		
Net loss	\$ (4,639)	\$(17,813)
Adjustments to reconcile net loss to net cash used in operating activities:		
Depreciation expense	3	17
Stock Compensation expense	—	1,069
Non-cash license expense	2,014	—
Changes in operating assets and liabilities:		
Prepaid expenses and other current assets	(270)	(1,112)
Other assets	—	(1,043)
Accounts payable	283	491
Accrued expenses	370	2,198
Deferred rent	—	1,487
Net cash used in operating activities	(2,239)	(14,706)
<b>Investing activities</b>		
Purchases of property and equipment	(44)	(293)
Net cash used in investing activities	(44)	(293)
<b>Financing activities</b>		
Proceeds from issuance of Series A convertible preferred units, net of issuance costs	12,554	50,376
Net cash provided by financing activities	12,554	50,376
Net increase in cash and cash equivalents	10,271	35,377
Cash and cash equivalents, beginning of period	—	10,271
Cash and cash equivalents, end of period	\$10,271	\$ 45,648

See accompanying notes to consolidated financial statements.

# SpringWorks Therapeutics, LLC and Subsidiaries

## Notes to Consolidated Financial Statements

### 1. Nature of Operations

SpringWorks Therapeutics, LLC (the "Company") is a clinical-stage biopharmaceutical company focused on identifying, developing and commercializing therapies for underserved patient populations suffering from severe rare diseases and oncology. The Company has a pipeline of product candidates across various stages of development, currently focused on rare disease and oncology conditions. Two of the medicines are late stage clinical product candidates: nirogacestat and PD-0325901. The Company was formed in Delaware on August 18, 2017 ("Inception").

### 2. Risks and Liquidity

The Company has incurred losses and negative operating cash flows since inception and had an accumulated deficit of \$22.5 million and working capital of \$43.3 million at December 31, 2018. The Company is subject to those risks associated with any biopharmaceutical company that has substantial expenditures for development. There can be no assurance that the Company's development projects will be successful, that products developed will obtain necessary regulatory approval, or that any approved product will be commercially viable. In addition, the Company operates in an environment of rapid technological change and is largely dependent on the services of its employees, advisors, and consultants.

Management estimates that its cash and cash equivalents of \$45.6 million as of December 31, 2018, along with the gross proceeds of \$39.4 million (less issuance costs that totaled \$32,694) from the issuance of Series A convertible preferred units in March 2019, plus the gross proceeds of \$125.0 million (less issuance costs that totaled \$413,169) from the issuance of Series B convertible preferred stock of SpringWorks Therapeutics, Inc., the successor and parent of the Company as a result of a corporate reorganization ("Series B Convertible Preferred") in March 2019 (see Note 6), will enable it to meet operational expenses through at least twelve months after the date that the financial statements were available to be issued.

### 3. Summary of Significant Accounting Policies

#### Basis of Presentation

These consolidated financial statements have been prepared in accordance with accounting principles generally accepted in the United States (U.S. GAAP). The consolidated financial statements include the accounts of the Company and all subsidiaries. All intercompany accounts and transactions have been eliminated.

#### Principles of Consolidation

In conjunction with the formation of the Company, five public benefit corporation ("PBC") subsidiaries were also formed; SpringWorks Therapeutics Operating Company, PBC ("Operating Subsidiary"), SpringWorks Subsidiary 1, PBC, SpringWorks Subsidiary 2, PBC, SpringWorks Subsidiary 3, PBC, and SpringWorks Subsidiary 4, PBC, all wholly owned Delaware public benefit corporations (collectively, including the Operating Subsidiary, the "Subsidiaries"). The purpose of the Operating Subsidiary is to manage, account for and report on the operations of the Company and the Subsidiaries. The purpose for each of the other Subsidiaries is to account for the expenditures related to the development of a specific compound licensed from Pfizer Inc. ("Pfizer"), (see Note 7). The Company's consolidated financial statements include the accounts of the Company and the Subsidiaries.

## SpringWorks Therapeutics, LLC and Subsidiaries Notes to Consolidated Financial Statements

The Company does not have any components of other comprehensive income recorded within its consolidated financial statements, and, therefore, does not separately present a statement of comprehensive income in its consolidated financial statements.

### Use of Estimates

The preparation of financial statements in conformity with U.S. GAAP requires management to make estimates and assumptions that affect the reported amounts in the financial statements and accompanying notes. Significant estimates and assumptions reflected in these consolidated financial statements include, but are not limited to, accrued expenses and the valuation of unit-based awards, which includes both common and incentive units. The Company bases its estimates on historical experience, known trends and other market-specific or other relevant factors that it believes to be reasonable under the circumstances. On an ongoing basis, management evaluates its estimates as there are changes in circumstances, facts and experience. Actual results may differ from those estimates or assumptions.

The Company utilizes significant estimates and assumptions in determining the fair value of its common and incentive units. The Company has utilized various valuation methodologies in accordance with the framework of the American Institute of Certified Public Accountants Technical Practice Aid, Valuation of Privately Held Company Equity Securities Issued as Compensation (the "Practice Aid") to estimate the fair value of its common units. Each valuation methodology includes estimates and assumptions that require the Company's judgment. These estimates and assumptions include a number of objective and subjective factors, including external market conditions, the prices at which the Company sold preferred units, the rights and preferences of securities senior to the Company's common and incentive units at the time of, and the likelihood of, achieving a liquidity event, such as an initial public offering or sale. Significant changes to the key assumptions used in the valuations could result in different fair values of the common and incentive units at each valuation date.

### Unaudited Pro Forma Information

The accompanying unaudited pro forma consolidated balance sheet as of December 31, 2018 gives effect to the automatic conversion of all outstanding units into shares of common stock in contemplation of the Company's planned Initial Public Offering ("IPO"). The shares of common stock issuable and the proceeds expected to be received in the proposed IPO are excluded from such pro forma financial information.

The unaudited pro forma basic and diluted net loss per unit in the accompanying consolidated statement of operations and comprehensive loss for the year ended December 31, 2018 gives effect to the automatic conversion of all outstanding convertible preferred units into common shares, and was computed using the weighted average number of shares of common stock outstanding, including the pro forma effect of the conversion of all outstanding units into shares of common stock, as if the Company's proposed IPO had occurred on the later of January 1, 2018 or the original issuance dates of the convertible preferred units. The unaudited pro forma net loss per share does not include the shares expected to be sold or related proceeds to be received in the proposed IPO.

### Segment Information

Operating segments are defined as components of an entity about which separate discrete information is available for evaluation by the chief operating decision maker, or decision-making

## SpringWorks Therapeutics, LLC and Subsidiaries Notes to Consolidated Financial Statements

group, in deciding how to allocate resources and in assessing performance. The Company views its operations and manages its business in one operating segment operating exclusively in the United States.

### Fair Value of Financial Instruments

Management believes that the carrying amounts of the Company's financial instruments, including accounts payable and accrued expenses, approximate fair value due to the short-term nature of those instruments. The Company follows the provisions of Financial Accounting Standards Board ("FASB") ASC Topic 820, "Fair Value Measurements and Disclosures" (ASC 820), for financial assets and liabilities measured on a recurring basis. This pronouncement defines fair value, establishes a framework for measuring fair value under GAAP and requires expanded disclosures about fair value measurements. The guidance requires that fair value measurements be classified in one of the following three categories:

Level 1 — Unadjusted quoted prices in active markets that are accessible at the measurement date for identical, unrestricted assets, or liabilities.

Level 2 — Quoted prices for similar assets and liabilities in active markets, quoted prices in markets that are not active, or inputs which are observable, either directly or indirectly, for substantially the full term of the instrument.

Level 3 — Prices or valuation techniques that require inputs that are both significant to the fair value measurement and unobservable (i.e., supported by little or no market activity).

Cash equivalents of \$45.6 million as of December 31, 2018 consist of money market funds and are measured at fair value at the reporting date using quoted prices in active markets for identical assets (Level 1). The Company has no other financial assets or liabilities that are measured at fair value on a recurring basis.

### Cash and Cash Equivalents

The Company considers all highly liquid instruments that have maturities of three months or less when acquired to be cash equivalents. The Company had cash and cash equivalents at December 31, 2018 of \$45.6 million. The Company maintains its bank accounts at one major financial institution.

### Concentration of Credit Risk

Financial instruments that potentially expose the Company to concentrations of credit risk consist primarily of cash and cash equivalents. The Company maintains each of its cash and cash equivalent balances with high quality, financial institutions and, accordingly, such funds are not exposed to significant credit risk. The Company does not believe that it is subject to unusual credit risk beyond the normal credit risk associated with commercial banking relationships.

### Property and Equipment

Property and equipment consist of computer equipment, furniture and leasehold improvements and are recorded at cost. Property and equipment are depreciated on a straight-line basis over their estimated useful lives. The Company uses a life of three years for computer equipment and five years for furniture, and leasehold improvements are amortized over their estimated life or lease term, whichever is shorter.

# SpringWorks Therapeutics, LLC and Subsidiaries

## Notes to Consolidated Financial Statements

### Convertible Preferred Units

The Company has classified the Series A convertible preferred units ("Series A Convertible Preferred") as temporary equity in the accompanying balance sheets because, upon certain change in control events that are outside of the Company's control, including sale or transfer of control of the Company ("Change of Control Event"), holders of the Series A Convertible Preferred could cause redemption of the units. The Company does not accrete the carrying values of the Series A Convertible Preferred to the redemption values, regardless of the probability that a Change of Control Event could occur, since a liquidation event was not considered probable as of December 31, 2018. Subsequent adjustments of the carrying values to the ultimate redemption values will be made only if it becomes probable that such a liquidation event will occur.

### Research and Development

In accordance with FASB ASC Topic 730 10 55, "Research and Development", expenditures for clinical development, including upfront licensing fees and milestone payments associated with products that have not yet been approved by the FDA, are charged to research and development expense as incurred. These expenses consist of expenses incurred in performing development activities, including salaries and benefits, unit-based compensation expenses, materials and supplies, preclinical expenses, clinical trial and related clinical manufacturing expenses, depreciation of equipment, contract services and other outside expenses. Costs for certain development activities, such as manufacturing and clinical trials, are recognized based on an evaluation of the progress to completion of specific tasks using either time-based measures or data such as information provided to the Company by its vendors on their actual costs incurred. Payments for these activities are based on the terms of the individual arrangements, which may differ from the pattern of costs incurred, and are reflected in the consolidated financial statements as prepaid or accrued development expenses. Nonrefundable advance payments for goods or services to be received in the future for use in development activities are deferred and capitalized. The capitalized amounts are expensed as the related goods are delivered or the services are performed. As of December 31, 2018, the Company had made payments of \$0.5 million for services to be received in the future. These payments are recorded as other assets in the balance sheet as of December 31, 2018.

### General and Administrative

General and administrative expenses consist primarily of payroll and related costs, benefits, rent and utilities, unit-based compensation, infrastructure, corporate insurance, office expenses, professional fees, as well as travel, meal, and entertainment costs.

### Unit-based compensation expense

The Company accounts for employee equity-based compensation in accordance with Financial Accounting Standards Board Accounting Standards Codification Topic ("ASC") 718, *Compensation—Stock Compensation*. ASC 718 requires all equity-based awards to employees and non-employee directors to be recognized as expense in the statement of operations based on the grant date fair value of the Common and Incentive unit awards. Incentive units generally vest over a four-year period with the first 25% vesting following 12 months of employment or service and the remaining Incentive units vesting in equal quarterly installments over the following



## SpringWorks Therapeutics, LLC and Subsidiaries Notes to Consolidated Financial Statements

36 months. Some of the Incentive units are subject to certain performance conditions. Stock compensation expense is recognized using the straight-line method, based on the grant date fair value, over the requisite service period of the award, which is generally the vesting term.

For awards subject to performance conditions, the Company recognizes equity award compensation expense using an accelerated recognition method over the remaining service period when management determines that achievement of the milestone is probable. Management evaluates when the achievement of a performance-based milestone is probable based on the expected satisfaction of the performance conditions as of the reporting date.

The Company recognizes forfeitures at the time of the actual forfeiture event in accordance with the adoption of the guidance per Accounting Standard Update ("ASU") No. 2016-09.

The Company estimates the fair value of equity awards granted using the special case of the market approach, including the guideline public company method and precedent transaction method which is known as a backsolve method. This option pricing model was utilized to solve for the implied total equity value that is consistent with the Company's Series A Convertible Preferred "backsolves" to a preferred share price. The backsolve method derives the implied equity value for one type of equity security from a contemporaneous transaction involving another type of security to calculate the equity value. The use of these valuation approaches requires management to make assumptions with respect to the expected volatility of its units, time until a liquidity event and risk-free interest rates. Equity value was allocated to the common units, incentive units and convertible preferred units using an option-pricing method. Under this method, the common and incentive units have value only if the funds available for distribution exceed the value of the convertible preferred units' liquidation preferences at the time of a liquidity event, such as a strategic sale, merger or IPO.

### Net Loss per Unit

Basic net loss per unit is computed by dividing net loss by the weighted average number of common units outstanding for the period. Diluted net loss per unit excludes the potential impact of convertible preferred units and unvested incentive units because their effect would be anti-dilutive due to the Company's net loss. Since the Company had a net loss in each of the periods presented, basic and diluted net loss per common unit are the same.

### 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 differences between the financial statement carrying amounts of existing assets and liabilities and their respective tax basis and operating loss 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 as income in the period that includes the enactment date. A valuation allowance is provided when it is more likely than not that some portion or all of the deferred tax assets will not be realized.

The Company recognizes the effect of income tax positions only if those positions are more likely than not of being sustained. Recognized income tax positions are measured at the largest amount that is greater than 50% likely of being realized. Changes in recognition or measurement are reflected in the period in which the change in judgment occurs.

# SpringWorks Therapeutics, LLC and Subsidiaries

## Notes to Consolidated Financial Statements

### Recently Adopted Accounting Pronouncements

In March 2016, the Financial Accounting Standards Board (“FASB”) issued ASU No. 2016-09, Improvements to Employee Share-Based Payment Accounting (“ASU 2016-09”). ASU 2016-09 simplified several aspects of the accounting for share-based payment transactions, including the income tax consequences, classification of awards as either equity or liabilities and classification on the statement of cash flows. The Company adopted ASU 2016-09 effective for the year ended December 31, 2018 and has elected to account for forfeitures when they occur instead of estimating the number of awards that are expected to vest. The adoption of ASU 2016-09 did not have a material impact on the Company’s financial statements.

In November 2015, the FASB issued ASU No. 2015-17, Income Taxes (Topic 740): Balance Sheet Classification of Deferred Taxes (“ASU 2015-17”), which simplifies the presentation of deferred income taxes. The amendment eliminates the requirement that entities separate deferred income tax liabilities and assets into current and noncurrent amounts and now requires that deferred tax liabilities and assets be classified as noncurrent in a classified balance sheet. This ASU is effective for annual periods beginning after December 15, 2017. The adoption of ASU 2015-17 on January 1, 2018 did not have a material effect on the Company’s financial position, results of operations or cash flows.

### Recently Issued Accounting Pronouncements

In May 2014, the FASB issued ASU No. 2014-09, Revenue from Contracts with Customers (Topic 606) (“ASU 2014-09”). ASU No. 2014-09 eliminated transaction- and industry-specific revenue recognition guidance under FASB ASC Subtopic 605-15, Revenue Recognition-Products and replaced it with a principle-based approach for determining revenue recognition. The new standard requires a company to recognize revenue upon transfer of goods or services to a customer at an amount that reflects the expected consideration to be received in exchange for those goods or services. ASU 2014-09 defines a five-step approach for recognizing revenue, which may require a company to use more judgment and make more estimates than under the current guidance. The standard is effective for annual periods beginning after December 15, 2018. The Company is currently evaluating the impact that ASU 2014-09 will have, if any, on its financial position, results of operations or cash flows.

In February 2016, the FASB issued ASU 2016-02 “Leases (Topic 842).” This standard requires entities that lease assets to recognize on the balance sheet the assets and liabilities of the rights and obligations created by those leases. The standard is effective for annual periods beginning after December 15, 2019 and interim periods within annual periods beginning after December 15, 2020. Early adoption is permitted. The Company is currently assessing the impact of the adoption of this authoritative guidance on its consolidated financial statements.

In August 2016, the FASB issued ASU 2016-15 “Statement of Cash Flows (Topic 230)—Classification of Certain Cash Receipts and Cash Payments.” This standard requires entities that must present a statement of cash flows under Topic 230 to classify certain cash receipts and cash payments using a standardized method. The standard is effective for annual periods beginning after December 15, 2018 and the interim periods within annual periods beginning after December 15, 2019. The guidance is required to be applied by the retrospective transition approach. Early adoption is permitted. The Company is currently assessing the impact of the adoption of this authoritative guidance on its consolidated financial statements.

## SpringWorks Therapeutics, LLC and Subsidiaries

### Notes to Consolidated Financial Statements

#### 4. Property and Equipment

Property and equipment, net consisted of the following:

(in thousands)	December 31,	
	2017	2018
Leasehold improvements	\$—	\$293
Computer equipment	26	27
Furniture	18	18
	44	338
Less accumulated depreciation	(3)	(21)
	\$41	\$317

Depreciation expense was \$17,328 for the year ended December 31, 2018 and \$3,182 for the period of August 18, 2017 (inception) to December 31, 2017.

#### 5. Accrued Expenses

Accrued expenses consisted of the following:

(in thousands)	December 31,	
	2017	2018
Accrued professional fees	\$129	\$1,040
Accrued compensation and benefits	189	1,178
Accrued other	52	350
	\$370	\$2,568

#### 6. Convertible Preferred Units and Members' Deficit

##### Series A Convertible Preferred

In August 2017, the Company authorized the sale and issuance of up to 103,000,000 units of Series A Convertible Preferred at \$1.00 per share for a total of \$103.0 million of proceeds. The Series A Convertible Preferred financing was structured to close in three tranches.

The first tranche closed in August 2017, resulting in the issuance of 13,200,001 units of Series A Convertible Preferred for gross cash proceeds of \$13.2 million. Issuance costs totaled \$0.6 million. The Company determined that the right of the investors to purchase Series A Convertible Preferred in the second and third tranches does not meet the definition of a freestanding financial instrument because the right to purchase Series A Convertible Preferred units in the second and third tranches was not separable from the Series A Convertible Preferred units issued in the first tranche. In April 2018, the second tranche of 50,399,999 units of Series A Convertible Preferred were issued at \$1.00 per share, or \$50.4 million in gross proceeds. Issuance costs totaled \$24,372. In March 2019, the third tranche of 39,400,000 units of Series A Convertible Preferred were issued at \$1.00 per share, or \$39.4 million in gross proceeds. Issuance costs totaled \$32,694.

## SpringWorks Therapeutics, LLC and Subsidiaries Notes to Consolidated Financial Statements

### Series A Junior Convertible Preferred

In August 2017 and in conjunction with the formation of the Company and the License Agreements (see Note 7), the Company authorized and issued 6,437,500 units of Series A junior convertible preferred units ("Junior Convertible Preferred") in exchange for four license agreements for the development and commercialization of products based on the inventions of Pfizer's researchers. No cash was received by the Company for these units. The Company determined the fair value of Junior Convertible Preferred in aggregate was \$2.0 million based on the calculated enterprise value and the distribution preferences. The fair value of the Junior Convertible Preferred was then allocated across the four licenses relative to the present value of estimated discrete cash flows and recorded as research and development expense in the period from August 18, 2017 (inception) to December 31, 2017.

### Common Units

Common units mean the Company interests designated as common units ("Common Units"). In August 2017, the Company authorized 1,287,501 Common Units. As of December 31, 2017, no Common Units had been issued. On January 30, 2018, the Company issued 1,287,500 Common Units to certain employees, for which the Company recorded unit-based compensation expense of \$0.2 million for the twelve months ended December 31, 2018. The number of Common Units issued and outstanding was 1,287,500 at December 31, 2018.

### Rights and Preferences of Series A Convertible Preferred, Junior Convertible Preferred and Common Units

The rights and preferences of Series A Convertible Preferred, Junior Convertible Preferred and Common Units are summarized below.

### Conversion

Each unit of Series A Convertible Preferred and Junior Convertible Preferred is convertible into one Common Unit at the option of the holder, subject to certain anti-dilution adjustments. The Series A Convertible Preferred and Junior Convertible Preferred are mandatorily convertible in the event of an initial public offering, as defined. If a Series A Convertible Preferred unitholder did not acquire its entire portion in a future tranche closing, then all of its Series A Convertible Preferred would automatically convert into Common Units at the rate of ten Series A Convertible Preferred to one Common Unit. Effective March 2019, upon the issuance of the third tranche of Series A Convertible Preferred, this conversion feature no longer applies.

### Voting

Holders of Series A Convertible Preferred hold the number of votes equal to the number of Common Units into which their Series A Convertible Preferred is convertible. Holders of the Series A Convertible Preferred, voting as a class, are entitled to designate four of the nine members of the Board. Approval of holders of 55% of the Series A Convertible Preferred is required for certain significant corporate events. The holders of Common Units and Series A Convertible Preferred units vote together on all other matters for which a vote of members is required, with each Series A Convertible Preferred unit holder entitled to the number of votes equal to the number of Common Units into which the holder's Series A Convertible Preferred are convertible, and each holder of Common Units entitled to one vote for each Common Unit held by such holder. There are no voting rights associated with the Junior Convertible Preferred.

## SpringWorks Therapeutics, LLC and Subsidiaries Notes to Consolidated Financial Statements

### Liquidation

Holders of Series A Convertible Preferred are entitled to an initial liquidation preference equal to \$1.00 per unit. If proceeds are insufficient to cover the initial Series A Convertible Preferred liquidation preference, proceeds are distributed ratably among the holders of the Series A Convertible Preferred in proportion to the full preferential amount each such holder is otherwise entitled to receive. Following payment to the Series A Convertible Preferred unitholders of their initial liquidation preference, the holders of Series A Convertible Preferred and Junior Convertible Preferred are entitled to liquidation preferences equal to \$1.00. If proceeds are insufficient to cover the Series A Convertible Preferred and Junior Convertible Preferred liquidation preferences, proceeds are distributed ratably among the holders of the Series A Convertible Preferred and Junior Convertible Preferred in proportion to the full preferential amount each such holder is otherwise entitled to receive. Following payment to the Series A Convertible Preferred and Junior Convertible Preferred unitholders, holders of Common Units and Incentive Units are entitled to a liquidation preference equal to \$1.00. After all preferences have been paid, any remaining assets would be distributed to all unit holders as if converted to Common Units. Series A Convertible Preferred and Common Units shall vote together as a single class to approve liquidation. The Series A Convertible Preferred liquidation rights have changed subsequent to the issuance of Series B Convertible Preferred (see Note 13).

### Incentive Units

In January 2018, the Company adopted the 2018 Equity Incentive Plan ("2018 Equity Plan"). There were 18,025,000 incentive units ("Incentive Units") initially available for issuance under the 2018 Equity Plan. The 2018 Plan was expanded by 1,775,000 units to a new total of 19,800,000 as of December 31, 2018.

Holders of Incentive Units have no voting power and are not entitled to vote on any matter except as otherwise required by applicable law. Holders of Incentive Units will participate in distributions subject to certain limitations.

Per the Company's Operating Agreement, holders of Incentive Units will share in the distribution with holders of Common Units (after the Preferred Units have received all of their preferences) until the amount distributed equals the Junior Convertible Preferred original issue price of \$1.00 per share. Thereafter, holders of Incentive Units will share the distribution with all unit holders as if converted to Common Units.

The Company issued 21,657,689 and cancelled 2,536,036 Incentive Units during the twelve months ended December 31, 2018. There were 678,347 Incentive Units available for issuance at December 31, 2018.

## SpringWorks Therapeutics, LLC and Subsidiaries Notes to Consolidated Financial Statements

A summary of the changes in the Company's Incentive Units during the year ended December 31, 2018:

	Number of Units	Weighted Average Grant Date Fair Value
Outstanding at December 31, 2017	0	\$0.00
Granted	21,657,689	0.17
Vested	(2,644,420)	0.16
Forfeited	(2,536,036)	0.14
Unvested and outstanding at December 31, 2018	<u>16,477,233</u>	<u>0.19</u>

The assumptions used in determining the fair value of Incentive Units during 2018 included a risk-free interest rate of 2.58%, expected dividend yield of 0.00%, expected term (years to liquidity) of 3.75 and expected volatility of 73%.

At December 31, 2018, the total unrecognized compensation related to unvested incentive units granted was \$2.5 million, which the Company expects to recognize over a period of approximately 3.75 years.

The Company recorded equity-based compensation expense related to Incentive Units for the periods presented as follows (in thousands):

	Period from August 18, 2017 (inception) to December 31, 2017	Year Ended December 31, 2018
Research and development	\$0	\$164
General and administrative	0	751
Total share-based compensation related to Incentive Units	<u>\$0</u>	<u>\$915</u>

### 7. License and Collaboration Agreements

#### Pfizer Inc.

In August and October 2017, the Subsidiaries entered into four license agreements with Pfizer for rights to certain technologies (the "License Agreements"). Under the License Agreements, the Company obtained from Pfizer the right to use research, develop, manufacture and commercialize certain products, including nirogacestat and PD-0325901. In conjunction with the License Agreements, the Company issued 6,437,500 units of Junior Convertible Preferred to Pfizer (see Note 6). No cash was received by the Company for these units.

The Company is required to pay Pfizer milestones payments of up to an aggregate of \$232.5 million for nirogacestat and up to an aggregate of \$229.8 million for PD-0325901, each upon achievement of certain commercial milestone events. Royalties are also payable under each License Agreement based on a specified percentage of net sales ranging from mid-single digit to

## SpringWorks Therapeutics, LLC and Subsidiaries Notes to Consolidated Financial Statements

low second decile percentages. Royalty payments under each License Agreement continue until the expiration of the last to expire licensed patent applicable to such product, but not less than ten years after the first commercial sale on a country-by-country basis.

### BeiGene, Ltd. ("BeiGene")

In August 2018, the Company entered into a clinical collaboration agreement with BeiGene to conduct a clinical study of the combination of PD-0325901 and a BeiGene compound designated as lifirafenib. In accordance with the terms of the agreement, the Company and BeiGene share equally the costs associated with the clinical study. BeiGene is required to supply the BeiGene compound and the Company is required to supply PD-0325901 to conduct the clinical study. The collaboration is guided by a joint steering committee. Specified areas of development require unanimous agreement among all members of the joint steering committee.

The Company recorded \$0.4 million as of December 31, 2018, in connection with this licensing agreement, which are classified as research and development expenses in the Company's statement of operations.

## 8. Commitments and Contingencies

### Leases

In August 2018, the Company entered into a five-year operating lease in Durham, NC (the Company's clinical development operation), with two five-year renewal options. Rental payments under the renewal period will be at current market rates for the premises. The Company established a security deposit of \$40,467 presented in other assets.

In October 2018, the Company entered into a lease for its corporate headquarters in Stamford, CT. The lease expires in November 2022. The Company received \$1.5 million from the previous tenant in connection with the assumption of the lease. The Company recognizes rent expense for the office it currently occupies and records a deferred rent obligation representing the cumulative difference between actual rent payments, incentive received and rent expense recognized ratably over the lease period. The Company established a security deposit of \$0.5 million in the form of a letter-of-credit, recorded in other noncurrent assets.

The Company's future minimum lease obligations as of December 31, 2018 are:

(in thousands)	Premises Operating Leases
2019	\$1,316
2020	1,344
2021	1,372
2022	1,297
2023	135
Total obligations	<u>\$5,464</u>

The Company recorded rent expense aggregating \$0.2 million and \$42,360 for the year ended December 31, 2018 and the period from August 18, 2017 (Inception) to December 31, 2017, respectively.

# SpringWorks Therapeutics, LLC and Subsidiaries

## Notes to Consolidated Financial Statements

### Contingencies

From time to time, the Company may be involved in disputes or regulatory inquiries that arise in the ordinary course of business. When the Company determines that a loss is both probable and reasonably estimable, a liability is recorded and disclosed if the amount is material to the financial statements taken as a whole. When a material loss contingency is only reasonably possible, the Company does not record a liability, but instead discloses the nature and the amount of the claim, and an estimate of the loss or range of loss, if such an estimate can reasonably be made.

As of December 31, 2018, there was no litigation or contingency with at least a reasonable possibility of a material loss.

### 9. Income Taxes

The Company entity has elected to be treated under the partnership provisions of the Internal Revenue Code and is therefore not a taxable entity. However, its five wholly owned subsidiaries, SpringWorks Operating Company, SpringWorks Subsidiary 1, SpringWorks Subsidiary 2, SpringWorks Subsidiary 3, and SpringWorks Subsidiary 4, ("Combined Subsidiaries") are taxable corporations. The following discussion of income taxes represents the combined tax attributes of Combined Subsidiaries.

For the year ended December 31, 2018 and for the period from August 18, 2017 (Inception) to December 31, 2017, the Company did not have a current or deferred income tax expense or benefit as the Company is a flow-through entity not subject to tax at the entity level. Additionally, the Combined Subsidiaries have incurred losses since inception.

As of December 31, 2018, Combined Subsidiaries had federal, state and city net operating loss carryforwards of \$14.2 million, \$0.6 million and \$3.8 million, respectively, which are available to reduce future taxable income. Federal net operating loss carryforwards of \$4.3 million were reported in 2017 and the state and city net operating loss carryforwards expire at various dates through 2038. Federal net operating loss carryforwards of \$9.9 million reported in 2018 will be available to offset 80% of taxable income for an indefinite period of time, until fully utilized. The Combined Subsidiaries also have federal tax credits of \$0.4 million, which may be used to offset future tax liabilities. These tax credit carryforwards will expire in 2038.

The net operating loss and tax credit carryforwards are subject to review and possible adjustment by the Internal Revenue Service and state tax authorities. Net operating loss and tax credit carryforwards may become subject to an annual limitation in the event of certain cumulative changes in the ownership interest of significant unitholders over a three-year period in excess of 50%, as defined under Sections 382 and 383 of the Internal Revenue Code, respectively, as well as similar state provisions and other provisions within the Internal Revenue Code. This could limit the amount of tax attributes that can be utilized annually to offset future taxable income or tax liabilities. The amount of the annual limitation is determined based on the value of the Company immediately prior to the ownership change. Subsequent ownership changes may further affect the limitation in future years.

The Company has not recorded any reserves for uncertain tax positions as of December 31, 2017 or 2018. The Company has not conducted a study of research and development credit carryforwards. This study may result in an adjustment to the Company's research and



## SpringWorks Therapeutics, LLC and Subsidiaries Notes to Consolidated Financial Statements

development credit carryforwards; however, until a study is completed, and any adjustment is known, no amounts are being presented as an uncertain tax position. A full valuation allowance has been provided against the Company's research and development credits and, if an adjustment is required, this adjustment would be offset by an adjustment to the valuation allowance. Thus, there would be no impact to the balance sheets or statements of operations and comprehensive loss if an adjustment were required.

Interest and penalty charges, if any, related to unrecognized tax benefits will be classified as income tax expense in the accompanying statements of operations and comprehensive loss. As of December 31, 2018, the Company had no accrued interest or penalties related to uncertain tax positions.

Since the Company is in a loss carryforward position, it is generally subject to examination by the U.S. federal, state and local income tax authorities for all tax years in which a loss carryforward is available. The Company is not currently under examination by the Internal Revenue Service or any other jurisdictions for any tax years.

In December 2015, the Protecting Americans from Tax Hikes (PATH) Act of 2015 was signed into law, which created several new research and development ("R&D") tax credit provisions, including allowing qualified small businesses to utilize the R&D tax credit against the employer's portion of payroll tax up to a maximum of \$0.3 million per year. This provision is available for R&D tax credits generated in tax years beginning after 2015. The Company qualified as a small business under PATH for both 2017 and 2018 and has elected to apply the \$0.1 million and maximum \$0.3 million, respectively, for each of the 2017 R&D tax credit and the 2018 R&D tax credit generated against future employer payroll tax liabilities. The \$0.1 million and \$0.3 million benefit was recorded as a reduction of research and development costs for the period from August 18, 2017 (Inception) to December 31, 2017 and the year ended December 31, 2018, respectively.

The principal components of the Subsidiaries deferred tax assets are as follows:

(in thousands)	As of December 31,	
	2017	2018
Deferred tax assets:		
Net operating loss carryforwards	\$ 1,413	\$ 3,342
Research and development credits	53	403
Deferred rent	—	312
Accrued expenses	92	46
Section 195 startup costs	—	1,270
Total deferred tax assets	1,558	5,373
Deferred tax liability	—	—
Valuation allowance	(1,558)	(5,373)
Net deferred tax assets	\$ —	\$ —

ASC 740 requires a valuation allowance to reduce the deferred tax assets reported if, based on the weight of available evidence, it is more likely than not that some portion or all of the deferred tax assets will not be realized. After consideration of all the evidence, both positive and negative, the Company has recorded a full valuation allowance against its deferred tax assets at

## SpringWorks Therapeutics, LLC and Subsidiaries Notes to Consolidated Financial Statements

December 31, 2017 and 2018 because the Company's management has determined that it is more likely than not that these assets will not be realized. The increase in the valuation allowance of \$3.8 million in 2018 primarily relates to the net loss incurred by the Company.

A reconciliation of the income tax expense at the federal statutory tax rate to the Combined Subsidiaries effective income tax rate follows:

	Period from August 18, 2017 (inception) to December 31, 2017	Year Ended December 31, 2018
Statutory tax rate	34.00%	21.00%
State tax expense, net of federal benefit	9.17	0.00
Revaluation of deferred tax assets	(10.46)	0.00
Federal and state return to provision adjustments	0.00	(1.08)
Research and development credit	0.76	2.02
Other	(0.04)	(0.04)
Change in valuation allowance	(33.43)	(21.90)
Effective tax rate	0.00%	0.00%

### 10. 401(k) Plan

In 2017, the Company adopted a tax-qualified employee savings and retirement plan (the "401(k) Plan") that covers all of its full-time employees who are at least 21 years of age. Pursuant to the 401(k) Plan, participants may elect to contribute up to the federally allowed maximum limits of their pretax earnings to the 401(k) Plan. As of December 31, 2017 and 2018, the Company had not made any matching contributions.

### 11. Related Party Transactions

The Company entered into agreements with two of its board members to provide consulting and Board of Director ("BOD") services to the Company. For the period from August 18, 2017 (inception) to December 31, 2017, the Company recorded consulting and BOD expenses totaling \$89,168. For the year ended December 31, 2018, the Company recorded consulting and BOD expenses totaling \$287,079.

Pfizer is a significant shareholder of the Company and a Pfizer employee is a member of the Board of Directors. See Note 7 for further details on transactions entered into with Pfizer.

## SpringWorks Therapeutics, LLC and Subsidiaries

### Notes to Consolidated Financial Statements

#### 12. Net Loss per Unit

Basic and diluted net loss per unit is calculated as follows:

(in thousands except for units and per unit data)	Period from August 18, 2017 (inception) to December 31, 2017	Year Ended December 31, 2018
Net loss	\$(4,639)	\$ (17,813)
Weighted average common units outstanding, basic and diluted	—	2,244,215
Net loss per unit, basic and diluted	—	\$ (7.94)

As of December 31, 2017, there were no vested common units outstanding. Therefore, net loss per unit attributable to common unitholders, basic and diluted, is not presented for the period from August 18, 2017 (inception) through December 31, 2017.

The table below provides potential common units not included in the calculation of the diluted net loss per unit because to do so would be anti-dilutive:

	Period from August 18, 2017 (inception) to December 31, 2017	Year ended December 31, 2018
Series A Convertible Preferred units	13,200,001	63,600,000
Junior Convertible Preferred units	6,437,500	6,437,500
Unvested incentive units	—	16,477,233
Total	19,637,501	86,514,733

#### Unaudited Pro Forma Net Loss Per Share

The following table summarizes the Company's unaudited pro forma net loss per share:

(in thousands except share and per share data)	Year Ended December 31, 2018
Numerator	
Net loss	\$ (17,813)
Denominator	
Shares used to compute net loss per share, basic and diluted	2,244,215
Pro Forma adjustments to reflect assumed weighted average effect of conversion of convertible preferred stock	56,505,445
Shares used to compute pro forma net loss per share, basic and diluted	58,749,660
Pro forma net loss per share, basic and diluted	\$ (0.30)

# SpringWorks Therapeutics, LLC and Subsidiaries

## Notes to Consolidated Financial Statements

### 13. Subsequent Events

#### Series A Third Tranche

In March 2019, the Third Tranche of 39,400,000 units of Series A Convertible Preferred Stock was issued at \$1.00 per share for gross proceeds of \$39.4 million.

#### Reorganization

In March 2019, SpringWorks Therapeutics, Inc. ("Parent") and Merger Sub LLC ("Merger Sub"), a wholly owned subsidiary of Parent, were formed. The Company was subsequently merged with Merger Sub, with the Company surviving the merger as a wholly owned subsidiary of Parent (the "Reorganization"). As a result of the Reorganization, the members of the Company became stockholders of Parent.

As part of the Reorganization:

Holders of Series A Convertible Preferred Units of the Company received one share of Series A Convertible Preferred Stock of Parent for each Series A Convertible Preferred Unit held immediately prior to the Reorganization;

Holders of Junior Convertible Preferred Units of the Company received one share of Junior Convertible Preferred Stock of Parent for each Junior Convertible Preferred Unit held immediately prior to the Reorganization;

Holders of Common Units received one share of Common Stock of Parent for each Common Unit held immediately prior to the Reorganization;

Each outstanding Incentive Unit converted into one share of Common Stock of Parent for each Incentive Unit held immediately prior to the Reorganization, and such Common Stock is subject to vesting in accordance with the vesting schedule applicable to such Incentive Units; and

Holders of options exercisable to purchase Common Units ("Unit Options") of the Company received one stock option ("Stock Options") exercisable to purchase Common Stock of Parent for each Unit Option held immediately prior to the Reorganization, at the same exercise price of such Unit Option immediately prior to the Reorganization. Such Stock Options continue to be subject to vesting in accordance with the vesting schedule applicable to such Unit Options.

In March 2019, following the Reorganization, the Company authorized the sale and issuance of up to 86,639,279 shares of Series B convertible preferred stock ("Series B Convertible Preferred"). The Series B Convertible Preferred financing was closed in a single tranche at the original price of \$1.4428 per share for gross proceeds of \$125 million.

In connection with the Series B financing, the Series B convertible preferred stock became senior to the Series A convertible preferred stock in liquidation preference. Upon a liquidation event, after the holders of Series B convertible preferred stock receive the Series B original issue price plus accrued and unpaid dividends, the holders of Series A convertible preferred stock receive one time the Series A original issue price for each Series A share. Further, Series B convertible preferred stock carries an annual cumulative, non-compounding dividend of eight percent (8%) of the Series B original issue price, payable upon a liquidation event, or earlier when and if declared by the Board, while no dividend is payable on the Series A convertible preferred stock unless and until, prior to any payment of dividends on such stock, the Series B dividend is declared and paid.

## SpringWorks Therapeutics, LLC and Subsidiaries Notes to Consolidated Financial Statements

### MapKure

In June 2019, Parent announced the formation of MapKure, which is jointly owned by Parent and BeiGene. BeiGene licensed to MapKure exclusive rights to BGB-3245, an oral, small molecule selective inhibitor of specific BRAF driver mutations and genetic fusions. MapKure intends to advance BGB-3245 into clinical development for solid tumor patients harboring BRAF driver mutations and genetic fusions that were observed to be sensitive to the compound in preclinical studies. In addition to Parent's equity ownership in MapKure, Parent will select members to MapKure's joint steering committee and board of directors. Parent will also contribute to some of the clinical development and other operational activities for BGB-3245 through a service agreement with MapKure.

*shares*



*Common stock*

## **Prospectus**

**J.P. Morgan**

**Goldman Sachs & Co. LLC**

**Cowen**

**Wedbush PacGrow**

, 2019

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## Part II

### Information not required in prospectus

#### Item 13. *Other expenses of issuance and distribution.*

The following table sets forth the fees and expenses, other than underwriting discounts and commissions, payable in connection with the registration of the common stock hereunder. All amounts are estimates except the SEC registration fee, the FINRA filing fee and listing fee.

	<b>Amount to be paid</b>
SEC registration fee	\$ *
FINRA filing fee	*
listing fee	*
Printing and mailing	*
Legal fees and expenses	*
Accounting fees and expenses	*
Transfer agent and registrar fees and expenses	*
Miscellaneous	*
<b>Total</b>	<b>\$ *</b>

\* To be completed by amendment.

#### Item 14. *Indemnification of directors and officers.*

Section 145 of the Delaware General Corporation Law, or the DGCL, authorizes a corporation to indemnify its directors and officers against liabilities arising out of actions, suits and proceedings to which they are made or threatened to be made a party by reason of the fact that they have served or are currently serving as a director or officer to a corporation. The indemnity may cover expenses (including attorneys' fees) judgments, fines and amounts paid in settlement actually and reasonably incurred by the director or officer in connection with any such action, suit or proceeding. Section 145 permits corporations to pay expenses (including attorneys' fees) incurred by directors and officers in advance of the final disposition of such action, suit or proceeding. In addition, Section 145 provides that a corporation has the power to purchase and maintain insurance on behalf of its directors and officers against any liability asserted against them and incurred by them in their capacity as a director or officer, or arising out of their status as such, whether or not the corporation would have the power to indemnify the director or officer against such liability under Section 145.

We have adopted provisions in our amended and restated certificate of incorporation and amended and restated bylaws to be in effect immediately prior to the completion of this offering that limit or eliminate the personal liability of our directors to the fullest extent permitted by the DGCL, as it now exists or may in the future be amended. Consequently, a director will not be personally liable to us or our stockholders for monetary damages or breach of fiduciary duty as a director, except for liability for:

- any breach of the director's duty of loyalty to us or our stockholders; any act or omission not in good faith or that involves intentional misconduct or a knowing violation of law; any unlawful payments related to dividends or unlawful stock purchases, redemptions or other distributions; or any transaction from which the director derived an improper personal benefit.

These limitations of liability do not alter director liability under the federal securities laws and do not affect the availability of equitable remedies such as an injunction or rescission.

In addition, our bylaws provide that:

- we will indemnify our directors, officers and, in the discretion of our board of directors, certain employees to the fullest extent permitted by the DGCL, as it now exists or may in the future be amended; and
- we will advance reasonable expenses, including attorneys' fees, to our directors and, in the discretion of our board of directors, to our officers and certain employees, in connection with legal proceedings relating to their service for or on behalf of us, subject to limited exceptions.

We have entered into indemnification agreements with each of our directors and intend to enter into such agreements with certain of our executive officers. These agreements provide that we will indemnify each of our directors, certain of our executive officers and, at times, their affiliates to the fullest extent permitted by Delaware law. We will advance expenses, including attorneys' fees (but excluding judgments, fines and settlement amounts), to each indemnified director, executive officer or affiliate in connection with any proceeding in which indemnification is available and we will indemnify our directors and officers for any action or proceeding arising out of that person's services as a director or officer brought on behalf of us or in furtherance of our rights. Additionally, certain of our directors or officers may have certain rights to indemnification, advancement of expenses or insurance provided by their affiliates or other third parties, which indemnification relates to and might apply to the same proceedings arising out of such director's or officer's services as a director referenced herein. Nonetheless, we have agreed in the indemnification agreements that our obligations to those same directors or officers are primary and any obligation of such affiliates or other third parties to advance expenses or to provide indemnification for the expenses or liabilities incurred by those directors are secondary.

We also maintain general liability insurance which covers certain liabilities of our directors and officers arising out of claims based on acts or omissions in their capacities as directors or officers, including liabilities under the Securities Act of 1933, as amended, or the Securities Act.

The underwriting agreement filed as Exhibit 1.1 to this registration statement provides for indemnification of us and our directors and officers by the underwriters against certain liabilities under the Securities Act and the Securities Exchange Act of 1934.

#### **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:

##### **(a) Reorganization**

In connection with the Reorganization:

- Holders of SpringWorks Therapeutics, LLC Junior Series A convertible preferred units received one share of SpringWorks Therapeutics, Inc. Junior Series A convertible preferred stock for each outstanding Junior Series A convertible preferred unit held immediately prior to the Reorganization, with an aggregate of 6,437,500 shares of SpringWorks Therapeutics, Inc. Junior Series A convertible preferred stock issued in the Reorganization;



- Holders of SpringWorks Therapeutics, LLC Series A convertible preferred units received one share of SpringWorks Therapeutics, Inc. Series A convertible preferred stock for each outstanding Series A convertible preferred unit held immediately prior to the Reorganization, with an aggregate of 103,000,000 shares of SpringWorks Therapeutics, Inc. Series A convertible preferred stock issued in the Reorganization;
- Holders of SpringWorks Therapeutics, LLC common units received one share of SpringWorks Therapeutics, Inc. common stock for each outstanding common unit held immediately prior to the Reorganization, with an aggregate of 1,287,500 shares of common stock issued in the Reorganization; and
- Holders of SpringWorks Therapeutics, LLC vested and unvested incentive units exchanged such incentive units for an equal number of shares of common stock or restricted common stock, respectively, given that the strike price for all incentive units that had been issued by SpringWorks Therapeutics, LLC was \$0.00 per unit. The restricted common stock was issued with the same vesting terms as the unvested incentive units held immediately prior to the Reorganization. An aggregate of 19,038,927 shares of common stock and restricted common stock were issued to the prior holders of incentive units in the Reorganization.

### **(b) Issuances of capital stock**

In August 2017, our predecessor issued 1,030,000 common units to Lara Sullivan, one of our founders and 257,500 common units to Yoni Falksson a former employee of ours. All common units issued converted on a one-to-one basis for common stock in connection with the Reorganization.

In August 2017, our predecessor issued an aggregate of 6,437,500 Junior Series A convertible preferred units to Pfizer in connection with our entering into certain License Agreements therewith. All Junior Series A convertible preferred units issued converted on a one-to-one basis for Junior Series A convertible preferred stock in connection with the Reorganization.

In August 2017, our predecessor issued and sold an aggregate of 13,200,001 Series A convertible preferred units at a purchase price of \$1.00 per unit, for an aggregate purchase price of approximately \$13.2 million to OrbiMed, Bain, Pfizer and LifeArc. All Series A convertible preferred units sold converted on a one-to-one basis for Series A convertible preferred stock in connection with the Reorganization.

In April 2018, in a second closing, our predecessor issued and sold an aggregate of 50,399,999 convertible preferred units at a purchase price of \$1.00 per unit, for an aggregate purchase price of approximately \$50.4 million to OrbiMed, Bain, Pfizer and LifeArc. All Series A convertible preferred units sold converted on a one-to-one basis for Series A convertible preferred stock in connection with the Reorganization.

In March 2019, in a third and final closing, our predecessor issued and sold an aggregate of 39,400,000 convertible preferred units at a purchase price of \$1.00 per unit, for an aggregate purchase price of approximately \$39.4 million to OrbiMed, Bain, Pfizer and LifeArc. All Series A convertible preferred units sold converted on a one-to-one basis for Series A convertible preferred stock in connection with the Reorganization.

In March 2019, we issued and sold to investors in a private placement an aggregate of 86,639,279 shares of our Series B Preferred Stock at a purchase price of \$1.4428 per share, for aggregate consideration of approximately \$125 million.

No underwriters were involved in the foregoing sales of securities. Unless otherwise stated, the sales of securities described above were deemed to be exempt from registration pursuant to Section 4(a)(2) of the Securities Act, including Regulation D and Rule 506 promulgated

thereunder, as transactions by an issuer not involving a public offering. All of the purchasers in these transactions represented to us in connection with their purchase that they were acquiring the securities for investment and not distribution, that they could bear the risks of the investment and could hold the securities for an indefinite period of time. Such purchasers received written disclosures that the securities had not been registered under the Securities Act and that any resale must be made pursuant to a registration or an available exemption from such registration. All of the foregoing securities are deemed restricted securities for the purposes of the Securities Act.

### **(c) Grants and exercises of stock options**

Prior to the Reorganization, our predecessor issued an aggregate of 19,038,927 incentive units and 976,795 options to purchase common units. Upon consummation of the Reorganization, all incentive units were exchanged for shares of restricted stock under our 2019 Plan with identical vesting terms and options to purchase common units were exchanged for options to purchase shares of our common stock with identical vesting terms.

Following the Reorganization, we have granted stock options to purchase an aggregate of 15,408,671 shares of our common stock, with exercise prices ranging from \$0.25 to \$0.35 per share, to employees, directors and consultants pursuant to the 2019 Plan. No shares of common stock have been issued upon the exercise of stock options pursuant to the 2019 Plan.

The issuances of the securities described above were deemed to be exempt from registration pursuant to Section 4(a)(2) of the Securities Act or Rule 701 promulgated under the Securities Act as transactions pursuant to compensatory benefit plans. The shares of common stock issued upon the exercise of options are deemed to be restricted securities for purposes of the Securities Act.

### **Item 16. Exhibits and financial statement schedules.**

#### **(a) Exhibits.**

<b>Exhibit No.</b>	<b>Description</b>
1.1*	Form of Underwriting Agreement.
3.1*	Amended and Restated Certificate of Incorporation, as amended, of the Registrant, as currently in effect.
3.2*	Form of Amended and Restated Certificate of Incorporation of the Registrant, to be in effect immediately prior to the completion of the offering.
3.3*	Bylaws of the Registrant, as currently in effect.
3.4*	Form of Amended and Restated Bylaws of the Registrant, to be in effect immediately prior to the completion of the offering.
4.1*	Specimen Common Stock Certificate of the Registrant.
4.2*	Investors' Rights Agreement by and among the Registrant and certain of its stockholders, dated March 29, 2019.
5.1*	Opinion of Goodwin Procter LLP.
10.1*#	2019 Stock Option and Incentive Plan and forms of award agreements thereunder.
10.2*#	2019 Stock Option and Equity Incentive Plan and forms of award agreements thereunder.
10.3*#	2019 Employee Stock Purchase Plan.
10.4*#	Senior Executive Cash Incentive Bonus Plan.
10.5*#	Non-Employee Director Compensation Policy.
10.6*	Form of Indemnification Agreement, by and between the Registrant and each of its directors and officers.
10.7*†	License Agreement by and among the Registrant, Pfizer Inc., Springworks Subsidiary 2, PBC and Pfizer Products, Inc., dated August 18, 2017.

Exhibit No.	Description
10.8*†	License Agreement by and among the Registrant, Pfizer Inc., Springworks Subsidiary 3, PBC and Warner-Lambert Company LLC, dated August 18, 2017.
10.9*†	Clinical Collaboration Agreement by and among Springworks Subsidiary 3, PBC and BeiGene, Ltd., dated August 16, 2018.
10.10*	Assignment and Assumption of Lease, dated as of October 10, 2018, by and between R&D Subsidiary and Structured Portfolio Management LLC.
21.1*	Subsidiaries of the Registrant.
23.1*	Consent of Ernst & Young LLP, Independent Registered Public Accounting Firm.
23.2*	Consent of Goodwin Procter LLP (included in Exhibit 5.1).
24.1*	Power of Attorney (included on signature page).

\* To be filed by amendment.

† Certain confidential portions (indicated by brackets and asterisks) have been omitted from this exhibit.

# Represents management compensation plan, contract or arrangement.

**(b) Financial statement schedules.**

None.

**Item 17. Undertakings.**

Insofar as indemnification for liabilities arising under the Securities Act of 1933, as amended, or the Act, may be permitted to directors, officers and controlling persons of the Registrant pursuant to the foregoing provisions, or otherwise, the Registrant has been advised that in the opinion of the Securities and Exchange Commission such indemnification is against public policy as expressed in the 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 Act and will be governed by the final adjudication of such issue.

The Registrant hereby undertakes that:

- (a) The Registrant will provide to the underwriter at the closing as specified in the underwriting agreement, certificates in such denominations and registered in such names as required by the underwriter to permit prompt delivery to each purchaser.
- (b) For purposes of determining any liability under the Securities Act of 1933, as amended, the information omitted from a form of prospectus filed as part of this registration statement in reliance upon Rule 430A and contained in the form of prospectus filed by the Registrant pursuant to Rule 424(b)(1) or (4) or 497(h) under the Securities Act of 1933, as amended, shall be deemed to be part of this registration statement as of the time it was declared effective.
- (c) For the purpose of determining any liability under the Securities Act of 1933, as amended, 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, the registrant has duly caused this Registration Statement on Form S-1 to be signed on its behalf by the undersigned, thereunto duly authorized, in the City of Boston, Massachusetts, on the day of \_\_\_\_\_, 2019.

SPRINGWORKS THERAPEUTICS, INC.

By: \_\_\_\_\_  
 Name: Saqib Islam, J.D.  
 Title: Chief Executive Officer and Director

## Power of attorney and signatures

Each individual whose signature appears below hereby constitutes and appoints each of Saqib Islam and Badreddin Edris as such person's true and lawful attorney-in-fact and agent with full power of substitution and resubstitution, for such person in such person's name, place and stead, in any and all capacities, to sign any and all amendments (including post-effective amendments) to this Registration Statement (or any Registration Statement for the same offering that is to be effective upon filing pursuant to Rule 462(b) under the Securities Act of 1933), and to file the same, with all exhibits thereto, and all documents in connection therewith, with the Securities and Exchange Commission granting unto each said attorney-in-fact and agent full power and authority to do and perform each and every act and thing requisite and necessary to be done in and about the premises, as fully to all intents and purposes as such person might or could do in person, hereby ratifying and confirming all that any said attorney-in-fact and agent, or any substitute or substitutes of any of them, may lawfully do or cause to be done by virtue hereof.

Pursuant to the requirements of the Securities Act of 1933, as amended, this Registration Statement and Power of Attorney has been signed by the following person in the capacities and on the date indicated.

Name	Title	Date
_____ Saqib Islam, J.D.	Chief Executive Officer and Director (Principal Executive Officer)	, 20
_____	(Principal Financial and Accounting Officer)	, 20
_____ Daniel S. Lynch, M.B.A.	Executive Chairman	, 20
_____ Carl L. Gordon, Ph.D.	Director	, 20
_____ Peter Keen	Director	, 20

<u>Name</u>	<u>Title</u>	<u>Date</u>
<u>Freda Lewis-Hall, M.D., DFAPA</u>	Director	, 20
<u>Deval Patrick, J.D.</u>	Director	, 20
<u>Jeffrey Schwartz, M.B.A.</u>	Director	, 20
<u>Stephen Squinto, Ph.D.</u>	Director	, 20