Filed pursuant to Rule 424(b)(4)
Registration No. 333-239412

PROSPECTUS

20,000,000 Shares

Common Stock

This is the initial public offering of shares of our common stock. Prior to this offering, there has been no public market for our common stock. We are selling 20,000,000 shares of our common stock. The initial public offering price of our common stock is $20.00 per share.

We have been approved to list our common stock on the Nasdaq Global Market under the symbol "RLAY."

We are an "emerging growth company" as that term is used in the Jumpstart Our Business Startups Act of 2012, or the JOBS Act, and, as such, we have elected to comply with certain reduced public company reporting requirements for this prospectus and future filings.

Investing in our common stock involves risks. See "Risk Factors" on page 12.

	Price to Public	Underwriting Discounts and Commissions	Proceeds to Company
Per Share	$ 20.00	$ 1.40	$ 18.60
Total	$ 400,000,000	$ 28,000,000	$ 372,000,000

(1) See "Underwriting" beginning on page 198 of this prospectus for additional information regarding underwriting compensation.

Delivery of the shares of common stock will be made on or about July 20, 2020.

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

The underwriters have an option to purchase up to 3,000,000 additional shares of common stock from us.

Joint Book-Running Managers

J.P. Morgan **Goldman Sachs & Co. LLC** **Cowen** **Guggenheim Securities**

The date of this prospectus is July 15, 2020.

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Through and including August 9, 2020 (25 days after the commencement of this offering), all dealers effecting transactions in these securities, whether or not participating in this offering, may be required to deliver a prospectus. This delivery requirement is in addition to the obligation of dealers to deliver a prospectus when acting as underwriters and with respect to their unsold allotments or subscriptions.

You should rely only on the information contained in this prospectus or in any free writing prospectus we file with the Securities and Exchange Commission, or the SEC. Neither we nor the underwriters have authorized anyone to provide you with information other than that contained in this prospectus or any free writing prospectus prepared by or on behalf of us or to which we have referred you. We take no responsibility for, and can provide no assurance as to the reliability of, any other information that others may give you. We and the underwriters are offering to sell, and seeking offers to buy, common stock only in jurisdictions where offers and sales are permitted. The information contained in this prospectus is accurate only as of the date on the front cover page of this prospectus, or other earlier date stated in this prospectus, regardless of the time of delivery of this prospectus or of any sale of our common stock.

The market data and certain other statistical information used throughout this prospectus are based on independent industry publications, governmental publications, reports by market research firms, or other independent sources that we believe to be reliable sources. Industry publications and third-party research, surveys, and studies generally indicate that their information has been obtained from sources believed to be reliable, although they do not guarantee the accuracy or completeness of such information. We are responsible for all of the disclosure contained in this prospectus, and we believe that these sources are reliable; however, we have not independently verified the information contained in such publications. While we are not aware of any misstatements regarding any third-party information presented in this prospectus, their estimates, in particular, as they relate to projections, involve numerous assumptions, are subject to risks and uncertainties, and are subject to change based on various factors, including those discussed under the section entitled “Risk Factors” and elsewhere in this prospectus. Some data are also based on our good faith estimates.

PROSPECTUS SUMMARY

This summary highlights information contained elsewhere in this prospectus and does not contain all of the information that you should consider in making your investment decision. Before investing in our common stock, you should carefully read this entire prospectus, including our consolidated financial statements and the related notes included elsewhere in this prospectus. You should also consider, among other things, the matters described under "Risk Factors" and "Management's Discussion and Analysis of Financial Condition and Results of Operations," in each case appearing elsewhere in this prospectus. Unless the context otherwise requires, the terms "Relay," "Relay Therapeutics," "the Company," "we," "us," and "our" in this prospectus refer to Relay Therapeutics, Inc. and its subsidiary.

Overview

We are a clinical-stage precision medicines company transforming the drug discovery process with an initial focus on enhancing small molecule therapeutic discovery in targeted oncology. Our company is built upon unparalleled insights into protein motion and how this dynamic behavior relates to protein function. These insights may enable us to more effectively drug protein targets that previously have been intractable (i.e. inadequately drugged or undruggable). We believe we have a differentiated approach to drug these protein targets based on their motion, which enables us to select and advance unique product candidates. We built our Dynamo platform to integrate an array of leading edge experimental and computational approaches, which allows us to apply our understanding of protein structure and motion to drug discovery.

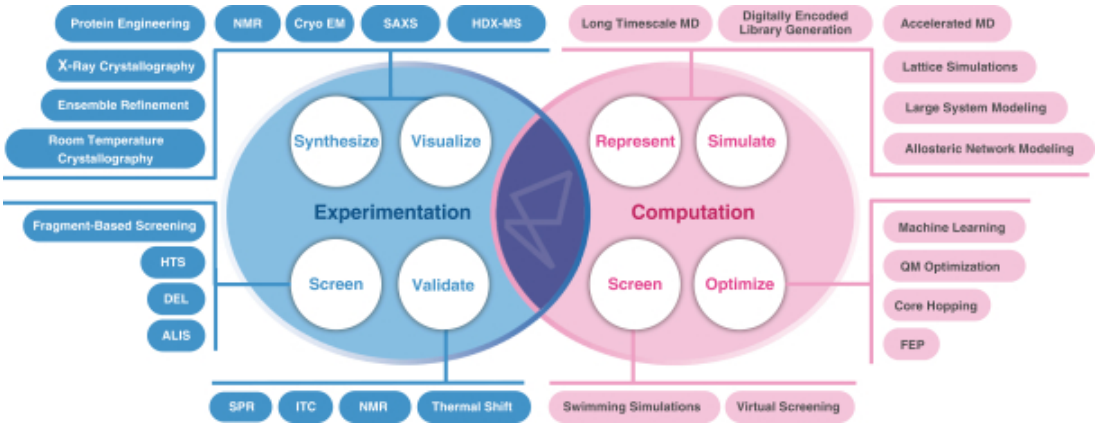
We are advancing a pipeline of medicines to address targets in precision oncology, including our lead product candidates, RLY-1971 and RLY-4008, as well as our PI3Kα mutant selective program (RLY-PI3K1047 program). To date, we have not entered into partnerships to clinically develop or commercialize any of these programs. We initiated a Phase 1 clinical trial for RLY-1971, our inhibitor of Src homology region 2 domain-containing phosphatase-2 (SHP2), in patients with advanced solid tumors in the first quarter of 2020. We have completed Investigational New Drug, or IND, enabling activities for RLY-4008, our inhibitor of fibroblast growth factor receptor 2 (FGFR2) and expect to initiate a Phase 1 clinical trial for RLY-4008 in patients with advanced solid tumors having oncogenic FGFR2 alterations in the second half of 2020. We anticipate the RLY-PI3K1047 program, our program for molecules targeting cancer-associated mutant variants of phosphoinostide 3-kinase alpha (PI3Kα), to be in IND enabling studies in 2021. While our initial focus is on precision oncology, we believe our Dynamo platform may also be broadly applied to other areas of precision medicine, such as genetic disease. In addition to the three product candidates described above, we have five discovery stage programs across precision oncology and genetic disease. We are focused on using the novel insights derived from our approach to transform the lives of patients suffering from debilitating and life-threatening diseases through the discovery, development and commercialization of our therapies.

Precision medicine aims to specifically and potently drug genetically validated target proteins (i.e., genetic variants potentially implicated in biology of disease). However, some target proteins thus far have been intractable using conventional drug discovery tools, such as structure-based drug design (SBDD). While SBDD is well-suited to solving some drug discovery problems such as orthosteric site kinase inhibitors, its reliance on static images of protein fragments limits its ability to gain accurate insights into the dynamic behavior of proteins in their natural state, which in turn limits its ability to discover medicines with exquisite specificity. Our approach pivots the understanding of protein targets from the industry-standard, static view, to a novel paradigm based on fundamental insights into protein motion. We then apply these novel insights into protein motion to drug discovery and design, which we term Motion Based Drug Design (MBDD).

Our Dynamo Platform

Our Dynamo platform puts protein motion at the center of drug discovery and design, integrating a broad and tailored array of leading-edge experimental and computational approaches **(Figure 1)**. This includes leveraging new experimental techniques such as room-temperature crystallography, and deploying the Anton 2 supercomputer, which was custom-built by D. E. Shaw Research to perform molecular dynamic simulations of proteins. We have access to the Anton 2 supercomputer, which we believe to be the only resource of computational power of its caliber, through our collaboration with D. E. Shaw Research, LLC, , or D. E. Shaw Research, pursuant to which we collaborate with D. E. Shaw Research to rapidly develop various protein models. Our use of the Anton 2 supercomputer and our collaboration with D. E. Shaw Research, LLC is subject to the terms and conditions of the Amended and Restated Collaboration and License Agreement with D. E. Shaw Research, or the DESRES Agreement. See "Business—Collaboration and License Agreement with D. E. Shaw Research, LLC."

Figure 1: Dynamo drug-discovery platform integrates leading-edge experimental and computational tools.



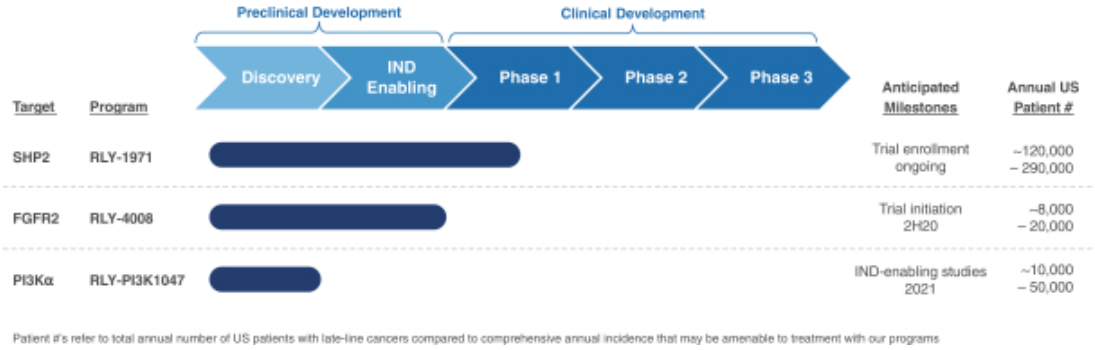
We deploy the power of our Dynamo platform in three key phases of MBDD discovery:

- **Target Modulation Hypothesis.** By generating fundamental insights into the structure and conformational dynamics of full-length proteins, our Dynamo platform enables us to model a target protein's function, to develop unique motion-based hypotheses for how to modulate the protein's behavior, and to identify potential novel binding sites for new therapeutic agents.
- **Hit Finding and Lead Generation.** The integration of our computational and experimental platforms affords a deeper functional understanding of our targets and enables the design of physiologically relevant activity-based, ligand-centric and computational screens. These highly differentiated screens have the ability to yield a larger number of chemical series and potential therapies to proceed into lead optimization than conventional experimental techniques alone.
- **Lead Optimization.** Our Dynamo platform uses advanced computational models in tight integration with our medicinal chemistry, structural biology, enzymology and biophysics capabilities to predict, design and experimentally evaluate compounds that will achieve the most desirable characteristics, including potency, selectivity, bioavailability, and drug-like properties. We believe our approach enables us to converge on optimized compounds with much greater efficiency than conventional approaches, which are typically highly iterative over an extended timeframe.

Our Dynamo platform has the potential to address a diverse range of disease targets, including those proteins that have not been addressed selectively and potently with existing therapies. While we have initially focused our Dynamo platform on small molecule drug discovery in the area of precision oncology, we believe it could be readily deployed across broader precision and genetic medicine areas as well as other therapeutic modalities, such as protein therapeutics and antibody design.

Our Programs

We have deployed our technology platform to build a wholly owned pipeline of product candidates to address targets in precision oncology, where there is clear evidence linking target proteins to disease and where molecular diagnostics can unambiguously identify relevant patients for treatment. We believe this approach will increase the likelihood of successfully translating a specific pharmacological mechanism into clinical benefit. The targets associated with all of our current programs are Category 1 Targets under the DESRES Agreement. See "Business—Collaboration and License Agreement with D. E. Shaw Research, LLC."



RLY-1971

RLY-1971 binds and stabilizes SHP2 in its inactive conformation. SHP2 promotes cancer cell survival and growth through the RAS pathway by transducing signals downstream from receptor tyrosine kinases (RTKs). Additionally, activating SHP2 mutations causes enhanced signaling in the absence of ligand stimulation and has been identified as an oncogenic driver in a range of tumors. As a critical signaling node and regulator, SHP2 drives cancer cell proliferation and plays a key role in the way cancer cells develop resistance to targeted therapies. We believe that inhibition of SHP2 could be effective as a monotherapy in cancers with specific alterations and could block a common path that cancer cells exploit to resist other antitumor agents, thus overcoming or delaying the onset of resistance to those therapies. We are currently evaluating the safety and tolerability of RLY-1971 in a Phase 1 dose escalation study in patients with advanced or metastatic solid tumors. We have dosed 10 patients as of July 8, 2020 and plan to enroll approximately 52 patients in this study. We anticipate providing an update on clinical data and the clinical development plan in 2021. Given the range of cancers that are related to SHP2 dependence, in addition to its potential use in monotherapy settings, we believe RLY-1971 could serve as a backbone for compelling combination therapies. We believe SHP2-mediated cancers affect approximately 125,000 late-line patients annually in both monotherapy and combination therapy settings in the U.S. In the future, if RLY-1971 advances to earlier lines of treatment, we believe it could potentially have applicability to approximately 290,000 patients annually in the U.S.

RLY-4008

RLY-4008 is designed to be an oral, small molecule, selective inhibitor of fibroblast growth factor receptor 2, or FGFR2, a receptor tyrosine kinase that is frequently altered in certain cancers. FGFR2 is one of four members of

the FGFR family, a set of closely related proteins with highly similar protein sequences and properties. RLY-4008 demonstrates FGFR2-dependent killing in cancer cell lines, while showing minimal inhibition of other targets, including other members of the FGFR family. We plan to initiate a Phase 1 clinical trial for RLY-4008 in patients with solid tumors having oncogenic FGFR2 alterations in the second half of 2020. We believe FGFR2-mediated cancers affect approximately 8,000 late-line patients annually in the U.S. In the future, if RLY-4008 advances to earlier lines of treatment, we believe it could potentially address approximately 20,000 patients annually in the U.S.

Mutant-PI3Kα Inhibitor Program

RLY-PI3K1047 is a lead compound in our franchise of programs targeting cancer-associated mutant variants of phosphoinositide 3-kinase alpha, or PI3Kα. RLY-PI3K1047 is a small molecule inhibitor of PI3Kα that we designed specifically to target PI3Kα H1047X mutants via a previously undescribed allosteric mechanism. Oral dosing of RLY-PI3K1047 resulted in tumor growth inhibition in mouse xenograft models of PI3Kα H1047R mutant carcinoma. We expect to begin IND-enabling studies for a differentiated PI3Kα H1047X mutant-selective inhibitor in 2021. We believe PI3Kα H1047X mutant cancers affect approximately 10,000 late-line patients annually in the U.S. In the future, if RLY-PI3K1047 advances to earlier lines of treatment, we believe it could potentially be suitable for use in approximately 50,000 patients annually in the U.S.

Two additional mutations of interest for our PI3Kα franchise are E542X and E545X. We estimate there are approximately 15,000 late-line and 60,000 total patients annually in the United States who might benefit from a PI3Kα targeted inhibitor that targets the mutations at E542 and E545.

Discovery Programs

We are deploying our Dynamo platform and MBDD approach to advance multiple discovery-stage precision oncology programs. As with our lead programs, these programs leverage insights into protein conformational dynamics to address high-value, genetically validated oncogenes that previously have been intractable to conventional drug-discovery approaches. Our Dynamo platform's protein visualization capabilities can be applied to multiple therapeutic areas beyond precision oncology. To further diversify our pipeline, we are leveraging our Dynamo platform to address validated targets in monogenic diseases, where genetic alterations lead to disease-causing defects in protein motion.

Our Strategy

Our mission is to leverage unique insights into protein motion to transform the lives of patients suffering from debilitating and life-threatening diseases through the discovery, development and commercialization of small molecule therapies. We believe that, by placing protein motion at the heart of MBDD discovery, our unique Dynamo platform has the potential to address previously intractable precision medicine targets. To accomplish this, we intend to continue building a team that shares our commitment to patients, to continue to enhance our platform, and to rapidly advance our precision medicine pipeline of product candidates. The key elements of our strategy are to:

- Rapidly advance our lead precision oncology programs, RLY-1971, RLY-4008, RLY-PI3K1047, through clinical development and regulatory approval
- Continue to enhance our unique drug-discovery platform
- Harness the insights and data generated from our platform against intractable targets in oncology and other therapeutic areas
- Selectively enter into strategic collaborations to maximize the value of our platform and pipeline

Our Team

Our company was founded and continues to be supported by world-class scientific advisors, including: Dr. Matt Jacobson, Dr. Mark Murcko and, Dr. Dorothee Kern, as well as by D. E. Shaw Research, led by chief scientist Dr. David E. Shaw. We are leaders in leveraging insights into the dynamic behavior of proteins in drug discovery. We have assembled a scientific team with extensive expertise in leading-edge experimental and computational drug discovery approaches, as well as a development team with extensive experience in the pre-clinical development, translational medicine, clinical development, and commercialization of precision oncology medicines. In aggregate, our team has previously submitted over 70 INDs and 20 NDAs and contributed to the development of more than 20 approved products. Our President and Chief Executive Officer, Dr. Sanjiv K. Patel, has more than 15 years of experience in the biopharmaceutical industry, and has led our key business operations and strategic corporate planning activities since 2017. Dr. Don Bergstrom, our Head of Research and Development, has more than 15 years of experience in the biopharmaceutical industry and has held various leadership positions at other companies in oncology drug discovery, development, and translational medicine. Members of our management team have held leadership positions at companies that have successfully discovered, developed and commercialized therapies for various cancers and devastating rare diseases. These companies include Allergan, Algeta, Blueprint Medicines, Eli Lilly, Merck, Novartis, Sanofi, and Vertex. Through March 31, 2020, we have raised approximately $520 million supported by a leading syndicate of investors, including SoftBank Vision Fund, Third Rock Ventures, an affiliate of D. E. Shaw Research, BVF Partners, Casdin Capital, EcoR1 Capital, Foresite Capital, GV, Perceptive Advisors, Alexandria Equities, Tavistock, and Section 32.

Recent Developments

Since it was first reported to have emerged in December 2019, a novel strain of coronavirus, which causes COVID-19, has spread around the world, including Cambridge, Massachusetts where our primary office and laboratory space are located. The coronavirus pandemic is evolving, and to date has led to the implementation of various responses, including government-imposed quarantines, travel restrictions and other public health safety measures. The extent to which the coronavirus impacts our operations or those of our third-party partners, including our preclinical studies, clinical trials or manufacturing operations, will depend on future developments, which are highly uncertain and cannot be predicted with confidence, including the duration of the outbreak, new information that will emerge concerning the severity of the coronavirus and the actions to contain the coronavirus or treat its impact, among others. We have taken temporary precautionary measures intended to help minimize the risk of the virus to our employees, including temporarily requiring all employees to work remotely, other than those performing or supporting business-critical functions, such as certain members of our laboratory staff, suspending all non-essential travel worldwide for our employees and employee attendance at industry events and in-person work-related meetings, which could negatively affect our business. For those employees that are performing or supporting business-critical functions, we have implemented stringent safety measures designed to comply with applicable federal, state and local guidelines instituted in response to the COVID-19 pandemic. We cannot presently predict the scope and severity of the planned and potential shutdowns or disruptions of businesses and government agencies, such as the Securities and Exchange Commission, or SEC, or FDA.

Risks Associated with Our Business

Our ability to implement our business strategy 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” in this prospectus. These risks include, among others:

- We are a clinical-stage biopharmaceutical company with a limited operating history and have not generated any revenue to date from drug sales, and may never become profitable.

- We have incurred significant operating losses since our inception and anticipate that we will incur continued losses for the foreseeable future.
- Even if we consummate this offering, we will need to raise substantial additional funding. If we are unable to raise capital when needed, we would be forced to delay, reduce or eliminate some of our product development programs or commercialization efforts.
- We cannot be certain that we will be able to obtain regulatory approval for, or successfully commercialize, any of our current or future product candidates.
- Business interruptions resulting from the coronavirus disease (COVID-19) outbreak or similar public health crises could cause a disruption of the development of our product candidates and adversely impact our business.
- If we experience delays or difficulties in the enrollment of patients in clinical trials, our receipt of necessary regulatory approvals could be delayed or prevented.
- If the market opportunities for our product candidates are smaller than we estimate or if any approval that we obtain is based on a narrower definition of the patient population, our revenue and ability to achieve profitability will be adversely affected, possibly materially.
- Our current or future product candidates may cause adverse or other undesirable side effects that could delay or prevent their regulatory approval, limit the commercial profile of an approved label, or result in significant negative consequences following marketing approval, if any.
- Even if we receive regulatory approval for any of our current or future product candidates, we will be subject to ongoing obligations and continued regulatory review, which may result in significant additional expense.
- We rely, and expect to continue to rely, on D. E. Shaw Research for certain capabilities of our Dynamo platform, and other third parties to conduct our ongoing and planned clinical trials for our current and future product candidates. If these third parties do not successfully carry out their contractual duties, comply with regulatory requirements or meet expected deadlines, we may not be able to obtain marketing approval for or commercialize our current and potential future product candidates and our business could be substantially harmed.
- If we are unable to obtain and maintain patent and other intellectual property protection for our technology and product candidates or if the scope of the intellectual property protection obtained is not sufficiently broad, our competitors could develop and commercialize technology and drugs similar or identical to ours, and our ability to successfully commercialize our technology and drugs may be impaired.

Corporate history

We were incorporated under the laws of the State of Delaware on May 4, 2015 under the name “Allostery, Inc.” Our principal corporate office is located at 399 Binney Street, 2nd Floor, Cambridge, MA 02139, and our telephone number is (617) 370-8837. Our website address is www.relaytx.com. We do not incorporate the information on or accessible through our website into this prospectus, and you should not consider any information on, or that can be accessed through, our website as part of this prospectus.

We own various U.S. federal trademark applications and unregistered trademarks, including our company name. 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 and a Smaller Reporting Company

We qualify as an "emerging growth company" as defined in the Jumpstart Our Business Startups Act of 2012, as amended. As an emerging growth company, we may take advantage of specified reduced disclosure and other requirements that are otherwise applicable generally to public companies. These provisions include:

- being permitted to only two years of audited financial statements in addition to any required unaudited interim financial statements with correspondingly reduced "Management's Discussion and Analysis of Financial Condition and Results of Operations" disclosure;
- reduced disclosure about our executive compensation arrangements;
- not being required to hold advisory votes on executive compensation or to obtain stockholder approval of any golden parachute arrangements not previously approved; and
- an exemption from the auditor attestation requirement in the assessment of our internal control over financial reporting.

We may take advantage of these exemptions for up to five years or such earlier time that we are no longer an emerging growth company. We would cease to be an emerging growth company 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 our fiscal year following the fifth anniversary of the date of the completion of this offering; (iii) the date on which we have issued more than $1.0 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. We are in the process of evaluating the benefits of relying on other exemptions and reduced reporting requirements under the JOBS Act. Subject to certain conditions, as an emerging growth company, we may rely on certain of these exemptions, including without limitation, providing an auditor's attestation report on our system of internal controls over financial reporting pursuant to Section 404(b) of the Sarbanes-Oxley Act.

We are also a "smaller reporting company" as defined in the Exchange Act. We may continue to be a smaller reporting company even after we are no longer an emerging growth company. We may take advantage of certain of the scaled disclosures available to smaller reporting companies until the fiscal year following the determination that our voting and non-voting common stock held by non-affiliates is more than $250 million measured on the last business day of our second fiscal quarter, or our annual revenues are more than $100 million during the most recently completed fiscal year and our voting and non-voting common stock held by non-affiliates is more than $700 million measured on the last business day of our second fiscal quarter.

THE OFFERING

Common stock offered by us	20,000,000 shares.
Common stock to be outstanding immediately after this offering	86,875,742 shares (89,875,742 shares if the underwriters exercise their option to purchase additional shares in full).
Underwriters' option to purchase additional shares	We have granted a 30-day option to the underwriters to purchase up to an aggregate of 3,000,000 additional shares of common stock from us at the initial public offering price, less underwriting discounts and commissions on the same terms as set forth in this prospectus.
Use of proceeds	We estimate that our net proceeds from the sale of shares of our common stock in this offering will be approximately $369.0 million, or $424.8 million if the underwriters exercise in full their option to purchase additional shares, based on the initial public offering price of $20.00 per share, and after deducting underwriting discounts and commissions and estimated offering expenses payable by us. We currently intend to use the net proceeds from this offering to fund drug discovery and clinical development efforts as well as further expansion of our manufacturing platform and capabilities, and infrastructure to support our pipeline. See "Use of Proceeds" for additional information.
Directed share program	At our request, the underwriters have reserved up to 441,000 shares, or 2.2% of the shares being offered by this prospectus, for sale, at the initial public offering price, to certain of our directors, officers, employees and persons having business relationships with us. The number of shares of common stock available for sale to the general public will be reduced to the extent these parties purchase any of such reserved shares. Any reserved shares of common stock that are not so purchased will be offered by the underwriters to the general public on the same terms as the other shares offered by this prospectus. Please see "Underwriting."
Risk factors	You should carefully read the "Risk Factors" section of this prospectus for a discussion of factors that you should consider before deciding to invest in our common stock.
Nasdaq Global Market symbol	RLAY

The number of shares of our common stock to be outstanding after this offering is based on 4,883,208 shares of our common stock outstanding as of June 30, 2020, including 290,477 shares of non-vested restricted common stock, and 61,992,534 shares of our common stock issuable upon the automatic conversion of all outstanding shares of our preferred stock immediately prior to the completion of this offering, and excludes:

- 7,471,087 shares of common stock issuable upon the exercise of stock options outstanding as of June 30, 2020, at a weighted average exercise price of $5.05 per share;
- 769,354 shares of common stock reserved for future issuance as of June 30, 2020 under our 2016 Relay Therapeutics, Inc. Stock Option and Grant Plan, as amended, or 2016 Plan, which ceased to be available for issuance at the time that our 2020 Stock Option and Incentive Plan, or 2020 Stock Plan, became effective;
- 8,376,080 shares of our common stock that became available for future issuance under our 2020 Stock Plan, which includes 769,354 shares of common stock available for issuance as of June 30, 2020 under our 2016 Plan and which became effective in connection with the completion of this offering; and
- 1,092,532 shares of our common stock that became available for future issuance under our 2020 Employee Stock Purchase Plan, or ESPP, which became effective in connection with the completion of this offering.

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

- the conversion of all outstanding shares of our convertible preferred stock into an aggregate of 61,992,534 shares of our common stock immediately prior to the completion of this offering;
- no exercise of the outstanding options described above;
- no exercise by the underwriters of their option to purchase up to an additional 3,000,000 shares of our common stock in this offering;
- a one-for-3.55092 reverse split of our common stock effected on July 8, 2020; and
- the filing of our fourth amended and restated certificate of incorporation which will occur immediately prior to the completion of this offering, and the adoption of our amended and restated bylaws, which became effective upon the effectiveness of the registration statement of which this prospectus is a part.

SUMMARY CONSOLIDATED FINANCIAL DATA

You should read the following summary financial data together with our consolidated financial statements and the related notes appearing at the end of this prospectus and the "Selected Consolidated Financial Data" and "Management's Discussion and Analysis of Financial Condition and Results of Operations" sections of this prospectus. We have derived the statement of operations data for the years ended December 31, 2018 and 2019 from our audited consolidated financial statements appearing at the end of this prospectus. The statement of operations data for the three months ended March 31, 2019 and 2020 and the balance sheet data as of March 31, 2020 have been derived from our unaudited financial statements appearing at the end of this prospectus and have been prepared on the same basis as the audited financial statements. In the opinion of management, the unaudited data reflect all adjustments, consisting only of normal recurring adjustments, necessary for a fair statement of the financial information in those statements. Our historical results are not necessarily indicative of results that should be expected in any future period, and our results for any interim period are not necessarily indicative of results that should be expected for any full year.

	Year Ended December 31,		Three Months Ended March 31,	
	2018	2019	2019	2020
	(in thousands, except share and per share data)			
Statement of Operations Data:				
Operating expenses:				
Research and development expenses	$ 41,034	$ 70,306	$ 13,335	$ 21,700
General and administrative expenses	8,855	13,742	3,067	4,758
Total operating expenses	49,889	84,048	16,402	26,458
Loss from operations	(49,889)	(84,048)	(16,402)	(26,458)
Other income (expense), net	1,104	8,743	2,220	1,572
Net loss	$ (48,785)	$ (75,305)	$ (14,182)	$ (24,886)
Net loss per share, basic and diluted(1)	$ (19.63)	$ (21.82)	$ (4.59)	$ (5.99)
Weighted average shares of common stock, basic and diluted	2,485,163	3,450,500	3,087,779	4,153,791
Pro forma net loss per share, basic and diluted (unaudited)(2)		$ (1.15)		$ (0.38)
Pro forma weighted average shares of common stock, basic and diluted (unaudited)		65,428,521		66,146,325

(1) See Note 11 to our consolidated financial statements appearing at the end of this prospectus for details on the calculation of basic and diluted net loss per share.

(2) See Note 12 to our consolidated financial statements appearing at the end of this prospectus for details on the calculation of basic and diluted pro forma net loss per share.

The following table sets forth summary balance sheet data as of March 31, 2020:

- on an actual basis;
- on a pro forma basis to give effect to (i) the automatic conversion of all outstanding shares of our preferred stock into an aggregate of 61,992,534 shares of common stock immediately prior to the completion of this offering and (ii) the exercise of options to purchase 95,573 shares of common stock at a weighted average exercise price of $3.84 per share from April 1, 2020 through June 30, 2020 under our 2016 Plan as if the exercises had occurred on March 31, 2020;

- on a pro forma as adjusted basis to give further effect to our issuance and sale of 20,000,000 shares of our common stock in this offering at the initial public offering price of $20.00 per share, after deducting underwriting discounts and commissions and estimated offering expenses payable by us.

	As of March 31, 2020		
	Actual	Pro Forma	Pro Forma As Adjusted
	(in thousands)		
Balance Sheet Data:			
Cash, cash equivalents, restricted cash, and investments	$ 335,081	$335,448	$ 704,448
Working capital(1)	327,118	327,485	696,485
Total assets	370,274	370,641	739,641
Convertible preferred stock	537,781	—	—
Total stockholders' equity (deficit)	(202,351)	335,797	704,797

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

RISK FACTORS

Investing in our common stock involves a high degree of risk. You should carefully consider the risks described below, as well as the other information in this prospectus, including our consolidated financial statements and the related notes and "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, Business, Technology, and Industry

We are a biopharmaceutical company with a limited operating history.

We are a biopharmaceutical company with a limited operating history and have incurred net losses in each year since our inception. Our net losses were $48.8 million, $75.3 million, $14.2 million and $24.9 million for the years ended December 31, 2018 and 2019 and the three months ended March 31, 2019 and 2020, respectively. We had an accumulated deficit of $214.4 million as of March 31, 2020. Biopharmaceutical product development is a highly speculative undertaking and involves a substantial degree of risk. We commenced operations in May 2015. Since inception, we have focused substantially all of our efforts and financial resources on developing our drug discovery platform and initial product candidates. We have no products approved for commercial sale and therefore have never generated any revenue from product sales, and we do not expect to in the foreseeable future. We have not obtained regulatory approvals for any of our product candidates and there is no assurance that we will obtain approvals in the future. We expect to continue to incur significant expenses and operating losses over the next several years and for the foreseeable future. Our prior losses, combined with expected future losses, have had and will continue to have an adverse effect on our stockholders' deficit and working capital.

We have incurred significant operating losses since our inception and anticipate that we will incur continued losses for the foreseeable future.

Substantially all of our operating losses have resulted from costs incurred in connection with our research and development programs and from general and administrative costs associated with our operations. We expect our research and development expenses to significantly increase in connection with the commencement and continuation of clinical trials of our product candidates. In addition, if we obtain marketing approval for our product candidates, we will incur significant sales, marketing and outsourced-manufacturing expenses. Once we are a public company, we will incur additional costs associated with operating as a public company. As a result, we expect to continue to incur significant and increasing operating losses for the foreseeable future. Because of the numerous risks and uncertainties associated with developing pharmaceutical products, we are unable to predict the extent of any future losses or when we will become profitable, if at all. Even if we do become profitable, we may not be able to sustain or increase our profitability on a quarterly or annual basis.

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, including as a result of the COVID-19 pandemic; 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.

We have no products approved for commercial sale and have not generated any revenue from product sales

Our ability to become profitable depends upon our ability to generate revenue. To date, we have not generated any revenue from our product candidates and we do not expect to generate any revenue from the sale of products in the near future. We do not expect to generate significant revenue unless and until we obtain marketing approval of, and begin to sell one or more of our product candidates. Our ability to generate revenue depends on a number of factors, including, but not limited to, our ability to:

- successfully complete preclinical studies;
- successfully enroll subjects in, and complete, clinical trials;
- have our IND applications go into effect for our planned clinical trials or future clinical trials;
- receive regulatory approvals from applicable regulatory authorities;
- initiate and successfully complete all safety studies required to obtain U.S. and foreign marketing approval for our product candidates;
- establish commercial manufacturing capabilities or make arrangements with third-party manufacturers for clinical supply and commercial manufacturing;
- obtain and maintain patent and trade secret protection or regulatory exclusivity for our product candidates;
- launch commercial sales of our product candidates, if and when approved, whether alone or in collaboration with others;

- obtain and maintain acceptance of the product candidates, if and when approved, by patients, the medical community and third party payors;
- effectively compete with other therapies;
- obtain and maintain healthcare coverage and adequate reimbursement;
- enforce and defend intellectual property rights and claims;
- take temporary precautionary measures to help minimize the risk of the COVID-19 to our employees; and
- maintain a continued acceptable safety profile of the product candidates following approval.

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

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

The development of pharmaceutical products is capital-intensive. We have only initiated a Phase 1 monotherapy dose escalation Phase 1 clinical trial of RLY-1971 in patients with advanced solid tumors. We are currently advancing most of our product candidates through preclinical development and anticipate beginning a Phase 1 clinical trial for RLY-4008 in the second half of 2020. We expect our expenses to increase in connection with our ongoing activities, particularly as we continue the research and development of, initiate clinical trials of, and seek marketing approval for, our product candidates. In addition, depending on the status of regulatory approval or, if we obtain marketing approval for any of our product candidates, we expect to incur significant commercialization expenses related to product sales, marketing, manufacturing and distribution. We may also need to raise additional funds sooner if we choose to pursue additional indications and/or geographies for our product candidates or otherwise expand more rapidly than we presently anticipate. Furthermore, upon the closing of this offering, we expect to incur additional costs associated with operating as a public company. Accordingly, we will need to obtain substantial additional funding in connection with our continuing operations. If we are unable to raise capital when needed or on attractive terms, we would be forced to delay, reduce or eliminate certain of our research and development programs or future commercialization efforts.

We expect that the net proceeds from this offering, together with our existing cash and cash equivalents and investments will be sufficient to fund our operations through at least 2023. Our future capital requirements will depend on and could increase significantly as a result of many factors, including:

- the scope, progress, results and costs of product discovery, preclinical and clinical development, laboratory testing and clinical trials for our product candidates;
- the potential additional expenses attributable to adjusting our development plans (including any supply related matters) to the COVID-19 pandemic;
- the scope, prioritization and number of our research and development programs;
- the costs, timing and outcome of regulatory review of our product candidates;
- our ability to establish and maintain additional collaborations on favorable terms, if at all;
- the achievement of milestones or occurrence of other developments that trigger payments under any additional collaboration agreements we obtain;
- the extent to which we are obligated to reimburse, or entitled to reimbursement of, clinical trial costs under future collaboration agreements, if any;

- the costs of preparing, filing and prosecuting patent applications, maintaining and enforcing our intellectual property rights and defending intellectual property-related claims;
- the extent to which we acquire or in-license other product candidates and technologies;
- the costs of securing manufacturing arrangements for commercial production; and
- the costs of establishing or contracting for sales and marketing capabilities if we obtain regulatory approvals to market our product candidates.

Identifying potential product candidates and conducting preclinical development testing and clinical trials is a time-consuming, expensive and uncertain process that takes years to complete, and we may never generate the necessary data or results required to obtain marketing approval and achieve product sales. In addition, our product candidates, if approved, may not achieve commercial success. Our commercial revenues, if any, will be derived from sales of products that we do not expect to be commercially available for many years, if at all. Accordingly, we will need to continue to rely on additional financing to achieve our business objectives.

Any additional fundraising efforts may divert our management from their day-to-day activities, which may adversely affect our ability to develop and commercialize our product candidates. Disruptions in the financial markets in general and more recently due to the COVID-19 pandemic have made equity and debt financing more difficult to obtain, and may have a material adverse effect on our ability to meet our fundraising needs. We cannot guarantee that future financing will be available in sufficient amounts or on terms acceptable to us, if at all. Moreover, the terms of any financing may adversely affect the holdings or the rights of our stockholders and the issuance of additional securities, whether equity or debt, by us, or the possibility of such issuance, may cause the market price of our shares to decline. The sale of additional equity or convertible securities would dilute all of our stockholders. The incurrence of indebtedness would result in increased fixed payment obligations and we may be required to agree to certain restrictive covenants, such as limitations on our ability to incur additional debt, limitations on our ability to acquire, sell or license intellectual property rights and other operating restrictions that could adversely impact our ability to conduct our business. We could also be required to seek funds through arrangements with collaborators or otherwise at an earlier stage than otherwise would be desirable and we may be required to relinquish rights to some of our technologies or product candidates or otherwise agree to terms unfavorable to us, any of which may have a material adverse effect on our business, operating results and prospects.

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

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

Until such time, if ever, as we can generate substantial product revenues, we expect to finance our cash needs through a combination of private and public equity offerings, debt financings, collaborations, strategic alliances and licensing arrangements. We do not have any committed external source of funds. To the extent that we raise additional capital through the sale of common stock or securities convertible or exchangeable into common stock, your ownership interest will be diluted, and the terms of those securities may include liquidation or other preferences that materially adversely affect your rights as a common stockholder. Debt financing, if available, would increase our fixed payment obligations and may involve agreements that include covenants limiting or restricting our ability to take specific actions, such as incurring additional debt, making capital expenditures or declaring dividends.

If we raise funds through additional collaborations, strategic alliances or licensing arrangements with third parties, we may have to relinquish valuable rights to our intellectual property, future revenue streams, research

programs or product candidates or to grant licenses on terms that may not be favorable to us. If we are unable to raise additional funds through equity or debt financings when needed, we may be required to delay, limit, reduce or terminate our product development or future commercialization efforts or grant rights to develop and market product candidates that we would otherwise prefer to develop and market ourselves.

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

We have not yet demonstrated our ability to successfully complete any clinical trials, including large-scale, pivotal clinical trials, obtain regulatory approvals, manufacture a commercial scale product, or arrange for a third party to do so on our behalf, or conduct sales and marketing activities necessary for successful commercialization. We only have one product candidate, a SHP2 inhibitor (RLY-1971), in Phase 1 clinical development. We filed an IND application and received clearance to begin a Phase 1 clinical trial for our FGFR2 program in the second half of 2020. We expect to be in IND-enabling studies for our PI3K program by the end of 2021. We may not be able to file such IND or INDs for any of our other product candidates on the timelines we expect, if at all. For example, we may experience manufacturing delays with IND-enabling studies. Moreover, we cannot be sure that submission of an IND will result in the FDA allowing further clinical trials to begin, or that, once begun, issues will not arise that require us to suspend or terminate clinical trials. Commencing each of these clinical trials is subject to finalizing the trial design based on discussions with the FDA and other regulatory authorities. Any guidance we receive from the FDA or other regulatory authorities is subject to change. These regulatory authorities could change their position, including, on the acceptability of our trial designs or the clinical endpoints selected, which may require us to complete additional clinical trials or impose stricter approval conditions than we currently expect. Successful completion of our clinical trials is a prerequisite to submitting a new drug application, or NDA, to the FDA and a Marketing Authorization Application, or MAA, to the European Medicines Agency, or EMA, for each product candidate and, consequently, the ultimate approval and commercial marketing of each product candidate. We have initiated our Phase 1 RLY-1971 clinical trial, but we do not know whether any of our future clinical trials will begin on time or ever be completed on schedule, if at all.

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

- be delayed in obtaining marketing approval for our product candidates;
- not obtain marketing approval at all;
- obtain approval for indications or patient populations that are not as broad as intended or desired;
- be subject to post-marketing testing requirements; or
- have the product removed from the market after obtaining marketing approval.

Clinical product development involves a lengthy and expensive process, with an uncertain outcome.

It is impossible to predict when or if any of our product candidates will prove effective and safe in humans or will receive regulatory approval. Before obtaining marketing approval from regulatory authorities for the sale of any product candidate, we must complete preclinical studies and then conduct extensive clinical trials to demonstrate the safety and efficacy of our product candidates in humans. Clinical testing is expensive, difficult to design and implement, can take many years to complete and is uncertain as to outcome. A failure of one or more clinical trials can occur at any stage of testing. The outcome of preclinical development testing and early clinical trials may not be predictive of the success of later clinical trials, and interim results of a clinical trial do not necessarily predict final results. Moreover, preclinical and clinical data are often susceptible to varying interpretations and analyses, and many companies that have believed their product candidates performed satisfactorily in preclinical studies and clinical trials have nonetheless failed to obtain marketing approval of their product candidates. Our preclinical studies and future clinical trials may not be successful.

From time to time, we may publish interim top-line or preliminary data from our clinical trials. Interim data from clinical trials 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 data also remain subject to audit and verification procedures that may result in the final data being materially different from the preliminary data we previously published. As a result, interim and preliminary data should be viewed with caution until the final data are available. Adverse differences between preliminary or interim data and final data could significantly harm our business prospects.

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 may experience delays in completing our preclinical studies and initiating or completing clinical trials, and we 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 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 trial sites and prospective contract research organizations, or CROs, the terms of which can be subject to extensive negotiation and may vary significantly among different CROs and trial sites;
- clinical trials of our product candidates may 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 patients required for clinical trials of our product candidates may be larger than we anticipate, enrollment in these clinical trials may be slower than we anticipate or participants may drop out of these clinical trials 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 or IRBs or ethics committees may require us or our investigators to, suspend or terminate clinical research 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 our 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 insufficient or inadequate; and
- our product candidates may have undesirable side effects or other unexpected characteristics, causing us or our investigators, regulators or IRBs or ethics committees to suspend or terminate the trials, or reports may arise from preclinical or clinical testing of other cancer therapies that raise safety or efficacy concerns about our product candidates.

We could encounter delays if a clinical trial is suspended or terminated by us, by the IRBs of the institutions at which such trials are being conducted, by the Data Safety Monitoring Board, or DSMB, for such trial or by the FDA or other regulatory authorities. Such authorities may impose such a suspension or termination or clinical hold 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 trial site by the FDA or other regulatory authorities, unforeseen safety issues or adverse side effects, failure to demonstrate a benefit from

using a product, 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 may disagree with our clinical trial design and our interpretation of data from clinical trials, or may change the requirements for approval even after it has reviewed and commented on the design for our clinical trials.

Our product development costs will also increase if we experience delays in testing or regulatory approvals. We do not know whether any of our future clinical trials will begin as planned, or whether any of our current or future clinical trials will need to be restructured or will be completed on schedule, if at all. Significant preclinical study or clinical trial delays, including those caused by the COVID-19 pandemic, also could shorten any periods during which we may have the exclusive right to commercialize our product candidates or allow our competitors to bring products to market before we do and impair our ability to successfully commercialize our product candidates and may harm our business and results of operations. Any delays in our preclinical or future clinical development programs may harm our business, financial condition and prospects significantly.

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

We may not be able to initiate or continue clinical trials for our product candidates if we are unable to locate and enroll a sufficient number of eligible patients to participate in these trials as required by the FDA or similar regulatory authorities outside the United States. In particular, because we will be deploying our drug discovery platform across a broad target space, our ability to enroll eligible patients may be limited or may result in slower enrollment than we anticipate. In addition, some of our competitors have ongoing clinical trials for product candidates that treat the same indications as our product candidates, and patients who would otherwise be eligible for our clinical trials may instead enroll in clinical trials of our competitors' product candidates. Furthermore, our ability to enroll patients may be significantly delayed by the evolving COVID-19 pandemic and we do not know the extent and scope of such delays at this point.

In addition to the competitive trial environment, the eligibility criteria of our planned clinical trials will further limit the pool of available study participants as we will require that patients have specific characteristics that we can measure to assure their cancer is either severe enough or not too advanced to include them in a study. Additionally, the process of finding patients may prove costly. We also may not be able to identify, recruit and enroll a sufficient number of patients to complete our clinical studies because of the perceived risks and benefits of the product candidates under study, the availability and efficacy of competing therapies and clinical trials, the proximity and availability of clinical trial sites for prospective patients, and the patient referral practices of physicians. If patients are unwilling to participate in our studies for any reason, the timeline for recruiting patients, conducting studies and obtaining regulatory approval of potential products may be delayed.

We may also engage third parties to develop companion diagnostics for use in our clinical trials, but such third parties may not be successful in developing such companion diagnostics, furthering the difficulty in identifying patients with the targeted genetic mutations for our clinical trials. Further, if we are required to develop companion diagnostics and are unable to include patients with the targeted genetic mutations, this could compromise our ability to seek participation in the FDA's expedited review and development programs, including Breakthrough Therapy Designation and Fast Track Designation, or otherwise to seek to accelerate clinical development and regulatory timelines. The FDA has indicated that if we continue RLY-4008 in a specific biomarker-defined population, a companion diagnostic device will be required to ensure its safe and effective use.

Patient enrollment may be affected by other factors including:

- the severity of the disease under investigation;

- the eligibility criteria for the clinical trial in question;
- the availability of an appropriate genomic screening test;
- the perceived risks and benefits of the product candidate under study;
- the efforts to facilitate timely enrollment in clinical trials;
- the patient referral practices of physicians;
- the ability to monitor patients adequately during and after treatment;
- the proximity and availability of clinical trial sites for prospective patients; and
- factors we may not be able to control, such as current or potential pandemics that may limit patients, principal investigators or staff or clinical site availability (e.g., outbreak of COVID-19).

Positive results from early preclinical studies of our product candidates are not necessarily predictive of the results of later preclinical studies and any future clinical trials of our product candidates. If we cannot replicate the positive results from our earlier preclinical studies of our product candidates in our later preclinical studies and future clinical trials, we may be unable to successfully develop, obtain regulatory for and commercialize our product candidates.

Any positive results from our preclinical studies of our product candidates may not necessarily be predictive of the results from required later preclinical studies and clinical trials. Similarly, even if we are able to complete our planned preclinical studies or any future clinical trials of our product candidates according to our current development timeline, the positive results from such preclinical studies and clinical trials of our product candidates may not be replicated in subsequent preclinical studies or clinical trial results.

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 and other nonclinical 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, nonclinical 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 or EMA approval.

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

Before obtaining regulatory approvals for the commercial sale of any products, we must demonstrate through lengthy, complex and expensive preclinical studies and clinical trials that our product candidates are both safe and effective for use in each target indication. Clinical testing is expensive and can take many years to complete, and its outcome is inherently uncertain. Failure can occur at any time during the clinical trial process. The results of preclinical studies and early clinical trials of our product candidates may not be predictive of the results of later-stage clinical trials. In addition, initial success in clinical trials may not be indicative of results obtained when such trials are completed. There is typically an extremely high rate of attrition from the failure of product candidates proceeding through clinical trials. Product candidates in later stages of clinical trials also may fail to show the desired safety and efficacy profile despite having progressed through nonclinical studies and initial clinical trials. A number of companies in the biopharmaceutical industry have suffered significant setbacks in advanced clinical trials due to lack of efficacy or unacceptable safety issues, notwithstanding promising results in earlier trials. Most product candidates that commence clinical trials are never approved as products and there can be no assurance that any of our current or future clinical trials will ultimately be successful or support further clinical development of any of our product candidates.

We may develop future product candidates, in combination with one or more cancer therapies. The uncertainty resulting from the use of our product candidates in combination with other cancer therapies may make it difficult to accurately predict side effects in future clinical trials.

As is the case with many treatments for cancer and rare diseases, it is likely that there may be side effects associated with the use of our product candidates. If significant adverse events or other side effects are observed in any of our current or future clinical trials, we may have difficulty recruiting patients to 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. We, the FDA or other applicable regulatory authorities, or an IRB may suspend or terminate 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 from obtaining or maintaining marketing approval, undesirable side effects may inhibit market acceptance of the approved product due to its tolerability versus other therapies. Any of these developments could materially harm our business, financial condition and prospects.

We intend to develop our SHP2 program, our FGFR2 program, our PI3K program, and potentially future product candidates, in combination with other therapies, which exposes us to additional risks.

We intend to develop our SHP2 program, our FGFR2 program, or our PI3K program, and may develop future product candidates, for use in combination with one or more currently approved cancer therapies. Even if any product candidate we develop was to receive marketing approval or be commercialized for use in combination with other existing therapies, we would continue to bear the risks that the FDA or similar foreign regulatory authorities could revoke approval of the therapy used in combination with our product candidate or that safety, efficacy, manufacturing or supply issues could arise with these existing therapies. Combination therapies are commonly used for the treatment of cancer, and we would be subject to similar risks if we develop any of our product candidates for use in combination with other drugs or for indications other than cancer. This could result in our own products being removed from the market or being less successful commercially.

We may also evaluate our SHP2 program, our FGFR2 program, or our PI3K program or any other future product candidates in combination with one or more other cancer therapies that have not yet been approved for marketing by the FDA or similar foreign regulatory authorities. We will not be able to market and sell our SHP2 program, our FGFR2 program, or our PI3K program or any product candidate we develop in combination with any such unapproved cancer therapies that do not ultimately obtain marketing approval.

If the FDA or similar foreign regulatory authorities do not approve these other drugs or revoke their approval of, or if safety, efficacy, manufacturing, or supply issues arise with, the drugs we choose to evaluate in combination with our SHP2 program, our FGFR2 program, or our PI3K program or any product candidate we develop, we may be unable to obtain approval of or market our SHP2 program, our FGFR2 program, or our PI3K program or any product candidate we develop.

Our product candidates utilize a novel mechanism of action and novel binding locations, which may result in greater research and development expenses, regulatory issues that could delay or prevent approval, or discovery of unknown or unanticipated adverse effects.

Our product candidates utilize novel mechanisms of action and novel binding locations, which may result in greater research and development expenses, regulatory issues that could delay or prevent approval, or discovery of unknown or unanticipated adverse effects. Our Dynamo platform uses advanced computational models in tight integration with our medicinal chemistry, structural biology, enzymology and biophysics capabilities to predict and design the compounds that will achieve the most desirable characteristics, including potency, selectivity, bioavailability, and drug-like properties. A disruption in any of these capabilities may have significant adverse

effects in our abilities to expand our Dynamo platform, and we cannot predict whether we will continue to have access to these capabilities in the future to support our Dynamo platform. In addition, there can be no assurance that we will be able to rapidly identify, design and synthesize the necessary compounds or that these or other problems related to the development of this novel mechanism will not arise in the future, which may cause significant delays or we raise problems we may not be able to resolve.

Regulatory approval of novel product candidates such as ours can be more expensive, riskier and take longer than for other, more well-known or extensively studied pharmaceutical or biopharmaceutical product candidates due to our and regulatory agencies' lack of experience with them. The novelty of our mechanism of action may lengthen the regulatory review process, require us to conduct additional studies or clinical trials, increase our development costs, lead to changes in regulatory positions and interpretations, delay or prevent approval and commercialization of our product candidates or lead to significant post-approval limitations or restrictions. The novel mechanism of action also means that fewer people are trained in or experienced with product candidates of this type, which may make it more difficult to find, hire and retain personnel for research, development and manufacturing positions. Because our inhibitors utilize a novel mechanism of action that has not been the subject of extensive study compared to more well-known product candidates, there is also an increased risk that we may discover previously unknown or unanticipated adverse effects during our preclinical studies and clinical trials. Any such events could adversely impact our business prospects, financial condition and results of operations.

We may in the future conduct clinical trials for our product candidates outside the United States, and the FDA and similar foreign regulatory authorities may not accept data from such trials.

We may in the future choose to conduct additional clinical trials outside the United States, including in Australia, Europe, Asia or other foreign jurisdictions. The acceptance of trial data from clinical trials conducted outside the United States by the FDA may be subject to certain conditions. In cases where data from clinical trials conducted outside the United States are intended to serve as the sole basis for marketing approval in the United States, the FDA will generally not approve the application on the basis of foreign data alone unless (i) the data are applicable to the United States population and United States medical practice; (ii) the trials were performed by clinical investigators of recognized competence and (iii) the data may be considered valid without the need for an on-site inspection by the FDA or, if the FDA considers such an inspection to be necessary, the FDA is able to validate the data through an on-site inspection or other appropriate means. Additionally, the FDA's clinical trial requirements, including sufficient size of patient populations and statistical powering, must be met. Many foreign regulatory bodies have similar approval requirements. In addition, such foreign trials would be subject to the applicable local laws of the foreign jurisdictions where the trials are conducted. There can be no assurance that the FDA or any similar foreign regulatory authority will accept data from trials conducted outside of the United States or the applicable jurisdiction. If the FDA or any similar foreign regulatory authority does not accept such data, it would result in the need for additional trials, which would be costly and time-consuming and delay aspects of our business plan, and which may result in our product candidates not receiving approval or clearance for commercialization in the applicable jurisdiction.

The incidence and prevalence for target patient populations of our product candidates have not been established with precision. If the market opportunities for our product candidates are smaller than we estimate or if any approval that we obtain is based on a narrower definition of the patient population, our revenue and ability to achieve profitability will be adversely affected, possibly materially.

We are currently evaluating the safety and tolerability of RLY-1971 in a Phase 1 dose escalation study in patients with advanced or metastatic solid tumors. We estimate that, across all solid tumors, there are approximately 68,000 late-line patients annually in the U.S. who might benefit from a SHP2 targeted inhibitor as a monotherapy. Additionally, we estimate there are more than 56,000 late-line patients annually in the U.S. with advanced lung cancer who might benefit from a combination of RLY-1971 with another targeted inhibitor. This results in approximately 125,000 late-line cancer patients annually in the U.S. that could benefit from RLY-1971.

In the future, if RLY-1971 advances to earlier lines of treatment, it could potentially address approximately 290,000 patients annually in the U.S. We plan to initiate a Phase 1 clinical trial for RLY-4008 in solid tumor patients with oncogenic FGFR2 alterations in the second half of 2020. We believe FGFR2-mediated cancers affect approximately 8,000 late-line patients annually in the U.S., of which fusions represent approximately 2,700, amplifications 1,600, and mutations 3,800. In the future, if RLY-4008 advances to earlier lines of treatment, it could potentially address approximately 20,000 patients annually in the U.S. Our projections of both the number of people who have these diseases, as well as the subset of people with these diseases who have the potential to benefit from treatment with RLY-1971, RLY-4008 or our product candidates, are based on estimates.

The total addressable market opportunity will ultimately depend upon, among other things, the diagnosis criteria included in the final label, if our product candidates are approved for sale for these indications, acceptance by the medical community and patient access, product pricing and reimbursement. The number of patients with cancers and solid tumors may turn out to be lower than expected, patients may not be otherwise amenable to treatment with our products, or new patients may become increasingly difficult to identify or gain access to, all of which would adversely affect our results of operations and our business. We may not be successful in our efforts to identify additional product candidates. Due to our limited resources and access to capital, we must prioritize development of certain product candidates, which may prove to be the wrong choice and may adversely affect our business.

Although we intend to explore other therapeutic opportunities, in addition to the product candidates that we are currently developing, we may fail to identify viable new product candidates for clinical development for a number of reasons. If we fail to identify additional potential product candidates, our business could be materially harmed.

Research programs to pursue the development of our existing and planned product candidates for additional indications and to identify new product candidates and disease targets require substantial technical, financial and human resources whether or not they are ultimately successful. For example, pursuant to our Amended and Restated Collaboration and License Agreement with D. E. Shaw Research, LLC, or the DESRES Agreement, we collaborate with D. E. Shaw Research, LLC, or D. E. Shaw Research, to develop various protein models and make predictions as to how molecules might move, with subsequent validation efforts in our and our CROs' labs. There can be no assurance that we will find potential additional targets using this approach, that any such targets will be tractable, or that such clinical validations will be successful. Our research programs may initially show promise in identifying potential indications and/or product candidates, yet fail to yield results for clinical development for a number of reasons, including:

- the research methodology used may not be successful in identifying potential indications and/or product candidates;
- potential 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; or
- it may take greater human and financial resources than we will possess to identify additional therapeutic opportunities for our product candidates or to develop suitable potential product candidates through internal research programs, thereby limiting our ability to develop, diversify and expand our product portfolio.

Because we have limited financial and human resources, we intend to initially focus on research programs and product candidates for a limited set of indications. As a result, we may forgo or delay pursuit of opportunities with other product candidates or for other indications that later prove to have greater commercial potential or a greater likelihood of success. Our resource allocation decisions may cause us to fail to capitalize on viable commercial products or profitable market opportunities.

Accordingly, there can be no assurance that we will ever be able to identify additional therapeutic opportunities for our product candidates or to develop suitable potential product candidates through internal research programs,

which could materially adversely affect our future growth and prospects. We may focus our efforts and resources on potential product candidates or other potential programs that ultimately prove to be unsuccessful.

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

Our product candidates and the activities associated with their development and commercialization, including their design, testing, manufacture, safety, efficacy, recordkeeping, labeling, storage, approval, advertising, promotion, sale, distribution, import and export are subject to comprehensive regulation by the FDA and other regulatory agencies in the United States and by comparable authorities in other countries. Before we can commercialize any of our product candidates, we must obtain marketing approval. Currently, all of our product candidates are in development, and we have not received approval to market any of our product candidates from regulatory authorities in any jurisdiction. It is possible that our product candidates, including any product candidates we may seek to develop in the future, will never obtain regulatory approval. We have only limited experience in filing and supporting the applications necessary to gain regulatory approvals and expect to rely on third-party CROs and/or regulatory consultants to assist us in this process. Securing regulatory approval requires the submission of extensive preclinical and clinical data and supporting information to the various regulatory authorities for each therapeutic indication to establish the product candidate's safety and efficacy. Securing regulatory approval also requires the submission of information about the product manufacturing process to, and inspection of manufacturing facilities by, the relevant regulatory authority. Our product candidates may not be effective, may be only moderately effective or may prove to have undesirable or unintended side effects, toxicities or other characteristics that may preclude our obtaining marketing approval or prevent or limit commercial use. In addition, regulatory authorities may find fault with our manufacturing process or facilities or that of third-party contract manufacturers. We may also face greater than expected difficulty in manufacturing our product candidates.

The process of obtaining regulatory approvals, both in the United States and abroad, is expensive and often takes many years. If the FDA or a comparable foreign regulatory authority requires that we perform additional preclinical or clinical trials, approval, if obtained at all, may be delayed. The length of such a delay varies substantially based upon a variety of factors, including the type, complexity and novelty of the product candidates involved. Changes in marketing approval policies during the development period, changes in or the enactment of additional statutes or regulations, or changes in regulatory review for each submitted NDA, 510(k), premarket approval application, or PMA, or equivalent application types, may cause delays in the approval or rejection of an application. The FDA and comparable authorities in other countries have substantial discretion in the approval process and may refuse to accept any application or may decide that our data are insufficient for approval and require additional preclinical, clinical or other studies. Our product candidates could be delayed in receiving, or fail to receive, regulatory approval for many reasons, including the following:

- the FDA or comparable foreign regulatory authorities may disagree with the design or implementation of our clinical trials;
- we may not be able to enroll a sufficient number of patients in our clinical studies;
- we may be unable to demonstrate to the satisfaction of the FDA or comparable foreign regulatory authorities that a product candidate is safe and effective for its proposed indication or a related companion diagnostic is suitable to identify appropriate patient populations;
- the results of clinical trials may not meet the level of statistical significance required by the FDA or comparable foreign regulatory authorities for approval;
- we may be unable to demonstrate that a product candidate's clinical and other benefits outweigh its safety risks;
- the FDA or comparable foreign regulatory authorities may disagree with our interpretation of data from preclinical studies or clinical trials;

- the data collected from clinical trials of our product candidates may not be sufficient to support the submission of an NDA or other submission or to obtain regulatory approval in the United States or elsewhere;
- the FDA or comparable foreign regulatory authorities may find deficiencies with or 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 or comparable foreign regulatory authorities may significantly change such that our clinical data are insufficient for approval.

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

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

Our business and operations would suffer in the event of computer system failures, cyber-attacks or deficiencies in our or related parties' cyber security.

Given our limited operating history, we are still in the process of implementing our internal security measures. Our internal computer systems and those of current and future third parties on which we rely may fail and are vulnerable to damage from computer viruses and unauthorized access. Our information technology and other internal infrastructure systems, including corporate firewalls, servers, leased lines and connection to the Internet, face the risk of systemic failure that could disrupt our operations. 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 clinical trial data from completed or future clinical trials could result in delays in our regulatory approval efforts and significantly increase our costs to recover or reproduce the data. Likewise, we rely on third parties for the manufacture of our product candidate or any future product candidates and to conduct clinical trials, and similar events relating to their computer systems could also have a material adverse effect on our business. 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 confidential or proprietary information, we could incur liability, our competitive position could be harmed and the further development and commercialization of our product candidate or any future product candidates could be hindered or delayed. In addition, in response to the ongoing COVID-19 pandemic, a majority of our workforce is currently working remotely. This could increase our cyber security risk, create data accessibility concerns, and make us more susceptible to communication disruptions.

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

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

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

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. For example, in 2008, the global financial crisis caused extreme volatility and disruptions in the capital and credit markets and the current COVID-19 pandemic has caused significant volatility and uncertainty in U.S. and international markets. See "*—A pandemic, epidemic, or outbreak of an infectious disease, such as COVID-19, or coronavirus, may materially and adversely affect our business and our financial results and could cause a disruption to the development of our product candidates.*" A severe or prolonged economic downturn could result in a variety of risks to our business, including, weakened demand for our product candidates and our ability to raise additional capital when needed on acceptable terms, if at all. A weak or declining economy could also strain our suppliers, possibly resulting in supply disruption, or cause our customers to delay making payments for our services. Any of the foregoing could harm our business and we cannot anticipate all of the ways in which the current economic climate and financial market conditions could adversely impact our business.

Our current operations are located in Massachusetts; and we or the third parties upon whom we depend may be adversely affected by natural disasters and our business continuity and disaster recovery plans may not adequately protect us from a serious disaster.

Our current operations are located in Massachusetts. Any unplanned event, such as flood, fire, explosion, earthquake, extreme weather condition, medical epidemics, including any potential effects from the current global spread of COVID-19, power shortage, telecommunication failure or other natural or man-made 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. Natural disasters or pandemics such as the COVID-19 outbreak could further disrupt our operations, and have a material and adverse effect on our business, financial condition, results of operations and prospects. For example, we have instituted a temporary work from home policy for non-essential office personnel and it is possible that this could have a negative impact on the execution of our business plans and operations. If a natural disaster, power outage or other event occurred that prevented us from using all or a significant portion of our headquarters, that damaged critical infrastructure, such as our research facilities or the manufacturing facilities of our third-party contract manufacturers, or that otherwise disrupted operations, it may be difficult or, in certain cases, impossible, for us to continue our business for a substantial period of time. The disaster recovery and business continuity plans we have in place may prove inadequate in the event of a serious disaster or similar event. We may incur substantial expenses as a result of the limited nature of our disaster recovery and business continuity plans, which could have a material adverse effect on our business. As part of our risk management policy, 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 our investors 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.

A pandemic, epidemic, or outbreak of an infectious disease, such as COVID-19, may materially and adversely affect our business and our financial results and could cause a disruption to the development of our product candidates.

Public health crises such as pandemics or similar outbreaks could adversely impact our business. Recently, a novel strain of a virus named SARS-CoV-2 (severe acute respiratory syndrome coronavirus 2), or coronavirus, which causes COVID-19 has spread to most countries across the world, including all 50 states within the U.S., including specifically Cambridge, Massachusetts where our primary office and laboratory space is located. The coronavirus pandemic is evolving, and to date has led to the implementation of various responses, including government-imposed quarantines, travel restrictions and other public health safety measures. The extent to which the coronavirus impacts our operations or those of our third party partners, including our preclinical studies or clinical trial operations, will depend on future developments, which are highly uncertain and cannot be predicted with confidence, including the duration of the outbreak, new information that will emerge concerning the severity of the coronavirus and the actions to contain the coronavirus or treat its impact, among others. The continued spread of COVID-19 globally could adversely impact our preclinical or clinical trial operations in the U.S., including our ability to recruit and retain patients and principal investigators and site staff who, as healthcare providers, may have heightened exposure to COVID-19 if an outbreak occurs in their geography. For example, similar to other biopharmaceutical companies, we may experience delays in initiating IND-enabling studies, protocol deviations, enrolling our clinical trials, or dosing of patients in our clinical trials as well as in activating new trial sites. COVID-19 may also affect employees of third-party CROs located in affected geographies that we rely upon to carry out our clinical trials. In addition, as a result of medical complications associated with SDC and mCPRC, the patient populations that our lead core and other core product candidates target may be particularly susceptible to COVID-19, which may make it more difficult for us to identify patients able to enroll in our current and future clinical trials and may impact the ability of enrolled patients to complete any such trials. Any negative impact COVID-19 has to patient enrollment or treatment or the execution of our product candidates could cause costly delays to clinical trial activities, which could adversely affect our ability to obtain regulatory approval for and to commercialize our product candidates, increase our operating expenses, and have a material adverse effect on our financial results.

Additionally, timely enrollment in planned clinical trials is dependent upon clinical trial sites which could be adversely affected by global health matters, such as pandemics. We plan to conduct clinical trials for our product candidates in geographies which are currently being affected by the coronavirus. Some factors from the coronavirus outbreak that will delay or otherwise adversely affect enrollment in the clinical trials of our product candidates, as well as our business generally, include:

- the potential diversion of healthcare resources away from the conduct of clinical trials to focus on pandemic concerns, including the attention of physicians serving as our clinical trial investigators, hospitals serving as our clinical trial sites and hospital staff supporting the conduct of our prospective clinical trials;
- limitations on travel that could interrupt key trial and business activities, such as clinical trial site initiations and monitoring, domestic and international travel by employees, contractors or patients to clinical trial sites, including any government-imposed travel restrictions or quarantines that will impact the ability or willingness of patients, employees or contractors to travel to our clinical trial sites or secure visas or entry permissions, a loss of face-to-face meetings and other interactions with potential partners, any of which could delay or adversely impact the conduct or progress of our prospective clinical trials;
- the potential negative affect on the operations of our third-party manufacturers;
- interruption in global shipping affecting the transport of clinical trial materials, such as patient samples, investigational drug product and conditioning drugs and other supplies used in our prospective clinical trials; and
- business disruptions caused by potential workplace, laboratory and office closures and an increased reliance on employees working from home, disruptions to or delays in ongoing laboratory experiments

and operations, staffing shortages, travel limitations or mass transit disruptions, any of which could adversely impact our business operations or delay necessary interactions with local regulators, ethics committees and other important agencies and contractors.

We have taken temporary precautionary measures intended to help minimize the risk of the virus to our employees, including temporarily requiring all employees to work remotely, suspending all non-essential travel worldwide for our employees and discouraging employee attendance at industry events and in-person work-related meetings, which could negatively affect our business. We cannot presently predict the scope and severity of the planned and potential shutdowns or disruptions of businesses and government agencies, such as the Securities and Exchange Commission, or the SEC, or FDA.

These and other factors arising from the coronavirus could worsen in countries that are already afflicted with the coronavirus or could continue to spread to additional countries. Any of these factors, and other factors related to any such disruptions that are unforeseen, could have a material adverse effect on our business and our results of operation and financial condition. Further, uncertainty around these and related issues could lead to adverse effects on the economy of the United States and other economies, which could impact our ability to raise the necessary capital needed to develop and commercialize our product candidates.

Risks Related to Our Reliance on Third Parties

Under the DESRES Agreement, we collaborate with D. E. Shaw Research to rapidly develop various protein models, a process that depends on D. E. Shaw Research's use of their proprietary supercomputer, Anton 2. A termination of the DESRES Agreement could have a material adverse effect on our business, financial condition, results of operations, and prospects.

Under the DESRES Agreement, we collaborate with D. E. Shaw Research to develop various protein models to make predictions as to how molecules might move in connection with identifying potential new biological targets and prospective drug compounds. There can be no assurance these protein models, or the technology used by D. E. Shaw Research to develop them (including the Anton 2 supercomputer), will provide reliable data or target information, or that the findings from these activities and our subsequent validation efforts will translate into the ability to develop therapeutically effective compounds. Our collaboration with D. E. Shaw Research is our key computational collaboration, and there can be no assurance that this collaboration will continue past the current term of the DESRES Agreement, on favorable terms or at all, or that at any time while the collaboration is in effect D. E. Shaw Research will provide a level of service that benefits our programs in a meaningfully positive manner. While we also have other computational collaborations, mostly focused on developing machine learning models, such collaborations do not provide a substitute for the technology made available through our collaboration with D. E. Shaw Research. The termination of the DESRES Agreement or any reduction in our collaboration with D. E. Shaw Research would require us to rely more heavily on these other collaborations and our own internal resources, and may delay or impair our development efforts.

Furthermore, while the termination of the DESRES Agreement would not directly impact the development of our lead product candidates, we cannot predict the effects such termination could have on our preclinical studies and development efforts and our ability to discover and develop additional product candidates. In particular, the technologies accessed through D. E. Shaw Research, including the Anton 2 supercomputer, are important aspects of our Dynamo platform, and we do not currently have access to another source of computational power comparable to that provided by the Anton 2 supercomputer. Currently, not only is our collaboration with D. E. Shaw Research for a limited time period, but it is also limited in the current collaboration year to collaboration across a total of eleven target proteins (with such number subject to increases or decreases from year to year, with any increase in such number of targets in each collaboration year capped at four more than the highest number of such targets in the previous year, and with the number of targets capped at twenty, subject to some limitations), which could restrict our ability to broaden our platform across a larger number of targets and programs.

Under the DESRES Agreement, D. E. Shaw Research controls the rights to its technology, we control the rights to certain compounds, and we jointly own with D. E. Shaw Research any other work product created by D. E. Shaw Research and us. Any work product we jointly own with D. E. Shaw Research and any other information that we or D. E. Shaw Research share is subject to a non-exclusive cross-license between us and D. E. Shaw Research, subject to certain exceptions. In some instances, D. E. Shaw Research is required to assign to us some of the work product created by D. E. Shaw Research. Disputes may arise between us and D. E. Shaw Research, as well as any future potential collaborators, regarding intellectual property subject to the DESRES Agreement. If disputes over intellectual property that we co-own or we own individually prevent or impair our ability to maintain our current collaboration arrangements on acceptable terms, or undermine our ability to successfully control the intellectual property necessary to protect our product candidates, we may be unable to successfully develop and commercialize the affected product candidates. Uncertainties or disagreements around our rights under any such intellectual property may undermine our ability to partner our programs with third parties.

In addition, the DESRES Agreement is complex and certain provisions may be susceptible to multiple interpretations. The resolution of any contract interpretation disagreement that may arise could be adverse to us, for example by narrowing what we believe to be the scope of our rights to certain intellectual property, or increasing what we believe to be our financial or other obligations under the DESRES Agreement, and any such outcome could have a material adverse effect on our business, financial condition, results of operations, and prospects.

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

Moreover, we are subject to certain payment obligations under the DESRES Agreement, including payments to D. E. Shaw Research in connection with certain transactions. These payment obligations may decrease the value to us of certain transactional opportunities or otherwise burden our ability to enter into such transactions.

We rely on third parties to conduct our Phase 1 clinical trial of RLY-1971 and expect to rely on third parties to conduct future clinical trials, as well as investigator-sponsored clinical trials of our product candidates. If these third parties do not successfully carry out their contractual duties, comply with regulatory requirements or meet expected deadlines, we may not be able to obtain regulatory approval for or commercialize our product candidates and our business could be substantially harmed.

We do not have the ability to independently conduct clinical trials. We rely and expect to continue to rely on medical institutions, clinical investigators, contract laboratories and other third parties, such as CROs, to conduct or otherwise support clinical trials for our product candidates, including our Phase 1 clinical trial of RLY-1971. We may also rely on academic and private non-academic institutions to conduct and sponsor clinical trials relating to our product candidates. We will not control the design or conduct of the investigator-sponsored trials, and it is possible that the FDA or non-U.S. regulatory authorities will not view these investigator-sponsored trials as providing adequate support for future clinical trials, whether controlled by us or third parties, for any one or more reasons, including elements of the design or execution of the trials or safety concerns or other trial results.

Such arrangements will likely provide us certain information rights with respect to the investigator-sponsored trials, including access to and the ability to use and reference the data, including for our own regulatory filings, resulting from the investigator-sponsored trials. However, we would not have control over the timing and reporting of the data from investigator-sponsored trials, nor would we own the data from the investigator-sponsored trials. If we are unable to confirm or replicate the results from the investigator-sponsored trials or if negative results are obtained, we would likely be further delayed or prevented from advancing further clinical development of our product candidates. Further, if investigators or institutions breach their obligations with respect to the clinical development of our product candidates, or if the data proves to be inadequate compared to

the first-hand knowledge we might have gained had the investigator-sponsored trials been sponsored and conducted by us, then our ability to design and conduct any future clinical trials ourselves may be adversely affected.

We rely and expect to continue to rely heavily on these parties for execution of clinical trials for our product candidates and control only certain aspects of their activities. 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 CROs will not relieve us of our regulatory responsibilities. For any violations of laws and regulations during the conduct of our clinical trials, we could be subject to warning letters or enforcement action that may include civil penalties up to and including criminal prosecution.

We, our principal investigators and our CROs are required to comply with regulations, including Good Clinical Practices, or GCPs, for conducting, monitoring, recording and reporting the results of clinical trials to ensure that the data and results are scientifically credible and accurate, and that the trial patients are adequately informed of the potential risks of participating in clinical trials and their rights are protected. These regulations are enforced by the FDA, the Competent Authorities of the Member States of the European Economic Area and comparable foreign regulatory authorities for any products in clinical development. The FDA enforces GCP regulations through periodic inspections of clinical trial sponsors, principal investigators and trial sites. If we, our principal investigators or our CROs fail to comply with applicable GCPs, the clinical data generated in our clinical trials may be deemed unreliable and the FDA or comparable foreign regulatory authorities may require us to perform additional clinical trials before approving our marketing applications. We cannot assure you that, upon inspection, the FDA will determine that any of our future clinical trials will comply with GCPs. In addition, our clinical trials must be conducted with product candidates produced under current Good Manufacturing Practice, or cGMP, regulations. Our failure or the failure of our principal investigators or CROs to comply with these regulations may require us to repeat clinical trials, which would delay the regulatory approval process and could also subject us to enforcement action. We also are required to register ongoing clinical trials and post the results of completed clinical trials on a government-sponsored database, ClinicalTrials.gov, within certain timeframes. Failure to do so can result in fines, adverse publicity and civil and criminal sanctions.

Although we designed our Phase 1 clinical trial of RLY-1971 and intend to design the future clinical trials for our product candidates, we expect that CROs will conduct all of our clinical trials. As a result, many important aspects of our development programs, including their conduct and timing, are outside of our direct control. Our reliance on third parties to conduct future clinical trials also results in less direct control over the management of data developed through clinical trials than would be the case if we were relying entirely upon our own staff. Communicating with outside parties can also be challenging, potentially leading to mistakes as well as difficulties in coordinating activities. Outside parties may:

- have staffing difficulties;
- fail to comply with contractual obligations;
- experience regulatory compliance issues;
- undergo changes in priorities or become financially distressed; or
- form relationships with other entities, some of which may be our competitors.

These factors may materially adversely affect the willingness or ability of third parties to conduct our clinical trials and may subject us to unexpected cost increases that are beyond our control. If the principal investigators or CROs do not perform clinical trials in a satisfactory manner, breach their obligations to us or fail to comply with regulatory requirements, the development, regulatory approval and commercialization of our product candidates may be delayed, we may not be able to obtain regulatory approval and commercialize our product candidates, or our development program materially and irreversibly harmed. If we are unable to rely on clinical data collected

by our principal investigators or CROs, we could be required to repeat, extend the duration of, or increase the size of any clinical trials we conduct and this could significantly delay commercialization and require significantly greater expenditures.

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

We contract with third parties for the manufacture of our product candidates for preclinical development, clinical testing, and expect to continue to do so for commercialization. This reliance on third parties increases the risk that we will not have sufficient quantities of our product candidates or products or such quantities at an acceptable cost, which could delay, prevent or impair our development or commercialization efforts.

We do not currently own or operate, nor do we have any plans to establish in the future, any manufacturing facilities or personnel. We rely, and expect to continue to rely, on third parties for the manufacture of our product candidates for preclinical development and clinical testing, as well as for the commercial manufacture of our products if any of our product candidates receive marketing approval. This reliance on third parties increases the risk that we will not have sufficient quantities of our product candidates or products or such quantities at an acceptable cost or quality, which could delay, prevent or impair our development or commercialization efforts.

The facilities used by our contract manufacturers to manufacture our product candidates must be inspected by the FDA pursuant to pre-approval inspections that will be conducted after we submit our marketing applications to the FDA. We do not control the manufacturing process of, and will be completely dependent on, our contract manufacturers for compliance with cGMPs in connection with the manufacture of our product candidates. If our contract manufacturers cannot successfully manufacture material that conforms to our specifications and the strict regulatory requirements of the FDA or others, they will not be able to pass regulatory inspections and/or maintain regulatory compliance for their manufacturing facilities. In addition, we have no control over the ability of our contract manufacturers to maintain adequate quality control, quality assurance and qualified personnel. If the FDA or a comparable foreign regulatory authority finds deficiencies with or does not approve these facilities for the manufacture of our product candidates or if it finds deficiencies or withdraws any such 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. Further, our failure, or the failure of our third party manufacturers, to comply with applicable regulations could result in sanctions being imposed on us, including clinical holds, fines, injunctions, civil penalties, delays, suspension or withdrawal of approvals, license revocation, seizures or recalls of product candidates or products, if approved, operating restrictions and criminal prosecutions, any of which could significantly and adversely affect our business and supplies of our product candidates.

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

- reliance on the third party for regulatory compliance and quality assurance;
- the possible breach of the manufacturing agreement by the third party;
- the possible misappropriation of our proprietary information, including our trade secrets and know-how; and

- the possible termination or nonrenewal of the agreement by the third party at a time that is costly or inconvenient for us.

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

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

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

The third parties upon whom we rely for the supply of the active pharmaceutical ingredient used in our product candidates are our sole source of supply, and the loss of any of these suppliers could significantly harm our business.

The active pharmaceutical ingredients, or API, used in our product candidates are supplied to us from single-source suppliers. Our ability to successfully develop our product candidates, and to ultimately supply our commercial products in quantities sufficient to meet the market demand, depends in part on our ability to obtain the API for these products in accordance with regulatory requirements and in sufficient quantities for clinical testing and commercialization. We do not currently have arrangements in place for a redundant or second-source supply of any such API in the event any of our current suppliers of such API cease their operations for any reason. We are also unable to predict how changing global economic conditions or potential global health concerns such as the COVID-19 pandemic will affect our third-party suppliers and manufacturers. Any negative impact of such matters on our third-party suppliers and manufacturers may also have an adverse impact on our results of operations or financial condition.

For all of our product candidates, we intend to identify and qualify additional manufacturers to provide such API prior to submission of an NDA to the FDA and/or an MAA to the EMA. We are not certain, however, that our single-source suppliers will be able to meet our demand for their products, either because of the nature of our agreements with those suppliers, our limited experience with those suppliers or our relative importance as a customer to those suppliers. It may be difficult for us to assess their ability to timely meet our demand in the future based on past performance. While our suppliers have generally met our demand for their products on a timely basis in the past, they may subordinate our needs in the future to their other customers.

Establishing additional or replacement suppliers for the API used in our product candidates, if required, may not be accomplished quickly. If we are able to find a replacement supplier, such replacement supplier would need to be qualified and may require additional regulatory inspection or approval, which could result in further delay. While we seek to maintain adequate inventory of the API used in our product candidates, any interruption or delay in the supply of components or materials, or our inability to obtain such API from alternate sources at acceptable prices in a timely manner could impede, delay, limit or prevent our development efforts, which could harm our business, results of operations, financial condition and prospects.

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

Our product development programs and the potential commercialization of our product candidates will require substantial additional cash to fund expenses. For some of our product candidates, we may decide to collaborate

with additional pharmaceutical and biotechnology companies for the development and potential commercialization of those product candidates.

We face significant competition in seeking appropriate collaborators. Whether we reach a definitive agreement for a collaboration will depend, among other things, upon our assessment of the collaborator's resources and expertise, the terms and conditions of the proposed collaboration and the proposed collaborator's evaluation of a number of factors. Those factors may include the design or results of clinical trials, the likelihood of approval by the FDA or similar regulatory authorities outside the United States, the potential market for the subject product candidate, the costs and complexities of manufacturing and delivering such product candidate to patients, the potential of competing products, the existence of uncertainty with respect to our ownership of technology, which can exist if there is a challenge to such ownership without regard to the merits of the challenge and industry and market conditions generally. The collaborator may also consider alternative product candidates or technologies for similar indications that may be available to collaborate on and whether such a collaboration could be more attractive than the one with us for our product candidate. The terms of any additional collaborations or other arrangements that we may establish may not be favorable to us.

We may also be restricted under collaboration agreements from entering into future agreements on certain terms with potential collaborators. Collaborations are complex and time-consuming to negotiate and document. In addition, there have been a significant number of recent business combinations among large pharmaceutical companies that have resulted in a reduced number of potential future collaborators.

We may not be able to negotiate additional collaborations on a timely basis, on acceptable terms, or at all. If we are unable to do so, we may have to curtail the development of the product candidate for which we are seeking to collaborate, reduce or delay its development program or one or more of our other development programs, delay its potential commercialization or reduce the scope of any sales or marketing activities, or increase our expenditures and undertake development or commercialization activities at our own expense. If we elect to increase our expenditures to fund development or commercialization activities on our own, we may need to obtain additional capital, which may not be available to us on acceptable terms or at all. If we do not have sufficient funds, we may not be able to further develop our product candidates or bring them to market and generate product revenue.

In addition, any future collaborations that we enter into may not be successful. The success of our collaboration arrangements will depend heavily on the efforts and activities of our collaborators. Collaborators generally have significant discretion in determining the efforts and resources that they will apply to these collaborations. Disagreements between parties to a collaboration arrangement regarding clinical development and commercialization matters can lead to delays in the development process or commercializing the applicable product candidate and, in some cases, termination of the collaboration arrangement. These disagreements can be difficult to resolve if neither of the parties has final decision-making authority. Collaborations with pharmaceutical or biotechnology companies and other third parties often are terminated or allowed to expire by the other party. Any such termination or expiration would adversely affect us financially and could harm our business reputation.

Risks Related to Our Intellectual Property

If we are unable to adequately protect our proprietary technology or obtain and maintain patent protection for our technology and products or if the scope of the patent protection obtained is not sufficiently broad, our competitors could develop and commercialize technology and products similar or identical to ours, and our ability to successfully commercialize our technology and products may be impaired.

Our commercial success will depend in part on our ability to obtain and maintain proprietary or intellectual property protection in the United States and other countries for our product candidates, and our core technologies, including our novel target discovery technology and our proprietary compound library and other

know-how. We seek to protect our proprietary and intellectual property position by, among other methods, filing patent applications in the United States and abroad related to our proprietary technology, inventions and improvements that are important to the development and implementation of our business. We also rely on trade secrets, know-how and continuing technological innovation to develop and maintain our proprietary and intellectual property position.

We co-own with D. E. Shaw Research pending United States, PCT, Argentine, and Taiwanese patent applications, which relate to RLY-1971 composition of matter and methods of treatment. We solely own a pending provisional patent application which relates to RLY-1971 solid forms and methods of manufacture. We co-own with D. E. Shaw Research pending unpublished PCT, Argentine, and Taiwanese applications which relate to RLY-4008 composition of matter and methods of treatment. We co-own with D. E. Shaw Research a pending provisional patent application which relates to the composition of matter of and methods of treatment using our PI3K lead series.

Most of the research and development for our programs has been performed under the DESRES Agreement. Under the DESRES Agreement, D. E. Shaw Research controls the rights to its technology (including its supercomputer and software, each of which are important aspects of our Dynamo platform), we control the rights to certain compounds, and we jointly own with D. E. Shaw Research any other work product created by D. E. Shaw Research and us. Subject to certain limits, we have the right to have the following work product assigned to us: the composition of matter, method of use, and method of manufacture of certain compounds directed to a Category 1 Target, as set forth in the DESRES Agreement. For more information regarding the DESRES Agreement, see “Business—Collaboration and License Agreement with D. E. Shaw Research, LLC.” We have not yet designated all of the compounds for which we will have this right of assignment, and thus, we do not yet know the scope of exclusivity we will enjoy under our patent rights for our product candidates.

After any work product is assigned to us, we will have the right to prepare, file, prosecute and maintain patents that cover such assigned work product. We also have the implicit right to defend patents that cover work product owned by us.

To date, much of the work product created under our agreement with D. E. Shaw Research has been created by D. E. Shaw Research and us, together, and is thus co-owned. We have the first right to prepare, file, prosecute, maintain and defend patents that cover work product created by D. E. Shaw Research and us, together. If we choose not to exercise those rights with respect to patents and patent applications that cover joint work product, D. E. Shaw Research will have the right to take over such activities. The party that is preparing, filing, prosecuting and maintaining a patent that covers joint work product also has the right to enforce such patent against infringers.

We do not currently own or in-license any issued patents relating to our platform, our SHP2 program, our FGFR2 program, or our PI3K program We own patent applications relating to our SHP2 program, and RLY-1971 specifically, and a patent application relating to our PI3K program. We also own patent applications that relate to our FGFR2 program, and RLY-4008 specifically. All of these patent applications are co-owned with D. E. Shaw Research.

The patent position of biotechnology and pharmaceutical companies generally is highly uncertain, involves complex legal and factual questions and has in recent years been the subject of much litigation.

The degree of patent protection we require to successfully commercialize our product candidates may be unavailable or severely limited in some cases and may not adequately protect our rights or permit us to gain or keep any competitive advantage. We cannot provide any assurances that any of our pending patent applications will issue, or that any of our pending patent applications that mature into issued patents will include claims with a scope sufficient to protect RLY-1971, RLY-4008 or our other product candidates. In addition, the laws of foreign

countries may not protect our rights to the same extent as the laws of the United States. Furthermore, patents have a limited lifespan. In the United States, the natural expiration of a patent is generally twenty years after it is filed. Various extensions may be available; however, the life of a patent, and the protection it affords, is limited. Given the amount of time required for the development, testing and regulatory review of new product candidates, patents protecting such candidates might expire before or shortly after such candidates are commercialized. As a result, our owned patent portfolio and any patent portfolio we may license in the future may not provide us with adequate and continuing patent protection sufficient to exclude others from commercializing products similar or identical to our product candidates, including generic versions of such products.

Other parties have developed technologies that may be related or competitive to our own, and such parties may have filed or may file patent applications, or may have received or may receive patents, claiming inventions that may overlap or conflict with those claimed in our own patent applications, with respect to either the same methods or formulations or the same subject matter, in either case that we may rely upon to dominate our patent position in the market. Publications of discoveries in the scientific literature often lag behind the actual discoveries, and patent applications in the United States and other jurisdictions are typically not published until 18 months after filing, or in some cases not at all. Therefore, we cannot know with certainty whether we were the first to make the inventions claimed in our owned or licensed pending patent applications, or that we were the first to file for patent protection of such inventions. As a result, the issuance, scope, validity, enforceability and commercial value of our patent rights cannot be predicted with any certainty.

In addition, the patent prosecution 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. Further, with respect to most of the pending patent applications covering our product candidates, prosecution has yet to commence. Patent prosecution is a lengthy process, during which the scope of the claims initially submitted for examination by the U.S. Patent and Trademark Office, or USPTO, have been significantly narrowed by the time they issue, if at all. 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 do not have the right to control the preparation, filing and prosecution of patent applications, or to maintain the patents, covering technology that we license from third parties. Therefore, these patents and applications may not be prosecuted and enforced in a manner consistent with the best interests of our business.

Even if we acquire patent protection that we expect should enable us to maintain such competitive advantage, third parties may challenge the validity, enforceability or scope thereof, which may result in such patents being narrowed, invalidated or held unenforceable. The issuance of a patent is not conclusive as to its inventorship, scope, validity or enforceability, and our owned and licensed patents may be challenged in the courts or patent offices in the United States and abroad. For example, we may be subject to a third-party submission of prior art to the USPTO challenging the priority of an invention claimed within one of our patents, which submissions may also be made prior to a patent’s issuance, precluding the granting of any of our pending patent applications. We may become involved in opposition, derivation, reexamination, inter parties review, post-grant review or interference proceedings challenging our patent rights or the patent rights of others from whom we have obtained licenses to such rights.

Competitors may claim that they invented the inventions claimed in our issued patents or patent applications prior to us, or may file patent applications before we do. Competitors may also claim that we are infringing on their patents and that we therefore cannot practice our technology as claimed under our patents, if issued. Competitors may also contest our patents, if issued, by showing the patent examiner that the invention was not original, was not novel or was obvious. In litigation, a competitor could claim that our patents, if issued, are not valid for a number of reasons. If a court agrees, we would lose our rights to those challenged patents.

In addition, we may in the future be subject to claims by our former employees or consultants asserting an ownership right in our patents or patent applications, as a result of the work they performed on our behalf. Although we generally require all of our employees, consultants and advisors and any other third parties who

have access to our proprietary know-how, information or technology to assign or grant similar rights to their inventions to us, we cannot be certain that we have executed such agreements with all parties who may have contributed to our intellectual property, nor can we be certain that our agreements with such parties will be upheld in the face of a potential challenge, or that they will not be breached, for which we may not have an adequate remedy. With respect to intellectual property arising in the course of our collaboration with D. E. Shaw Research, disagreements between us and D. E. Shaw Research may impact our exclusive control of intellectual property important for protecting our product candidates and proprietary position. A loss of exclusivity, in whole or in part, could allow others to compete with us and harm our business.

An adverse determination in any such submission or proceeding may result in loss of exclusivity or freedom to operate or in patent claims being narrowed, invalidated or held unenforceable, in whole or in part, which could limit our ability to stop others from using or commercializing similar or identical technology and products, without payment to us, or could limit the duration of the patent protection covering our technology and product candidates. Such challenges may also result in our inability to manufacture or commercialize our product candidates without infringing third party patent rights. In addition, if the breadth or strength of protection provided by our patents and patent applications is threatened, it could dissuade companies from collaborating with us to license, develop or commercialize current or future product candidates.

Even if they are unchallenged, our owned patent portfolio and any patent portfolio we may license in the future may not provide us with any meaningful protection or prevent competitors from designing around our patent claims to circumvent our owned or licensed patents by developing similar or alternative technologies or products in a non-infringing manner. For example, a third party may develop a competitive product that provides benefits similar to one or more of our product candidates but that has a different composition that falls outside the scope of our patent protection. If the patent protection provided by the patents and patent applications we hold or pursue with respect to our product candidates is not sufficiently broad to impede such competition, our ability to successfully commercialize our product candidates could be negatively affected, which would harm our business.

Obtaining and maintaining 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.

The USPTO and various foreign governmental patent agencies require compliance with a number of procedural, documentary, fee payment and other similar provisions during the patent application process. In addition, periodic maintenance fees on issued patents often must be paid to the USPTO and foreign patent agencies over the lifetime of the patent. While an unintentional lapse can in many cases be cured by payment of a late fee or by other means in accordance with the applicable rules, there are situations in which noncompliance can result in abandonment or lapse of the patent or patent application, resulting in partial or complete loss of patent rights in the relevant jurisdiction. Non-compliance events that could result in abandonment or lapse of a patent or patent application include, 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. If we fail to maintain the patents and patent applications covering our products or procedures, we may not be able to stop a competitor from marketing products that are the same as or similar to our product candidates, which would have a material adverse effect on our business.

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

In addition to the protection afforded by patents, we rely upon unpatented trade secret protection, unpatented know-how and continuing technological innovation to develop and maintain our competitive position. With respect to the building of our proprietary compound library, we consider trade secrets and know-how to be our primary intellectual property. We seek to protect our proprietary technology and processes, in part, by entering into confidentiality agreements with our collaborators, scientific advisors, employees and consultants, and invention assignment agreements with our consultants and employees. We may not be able to prevent the

unauthorized disclosure or use of our technical know-how or other trade secrets by the parties to these agreements, however, despite the existence generally of confidentiality agreements and other contractual restrictions. Monitoring unauthorized uses and disclosures is difficult, and we do not know whether the steps we have taken to protect our proprietary technologies will be effective. If any of the collaborators, scientific advisors, employees and consultants who are parties to these agreements breaches or violates the terms of any of these agreements, we may not have adequate remedies for any such breach or violation, and we could lose our trade secrets as a result. Enforcing a claim that a third party illegally obtained and is using our trade secrets, like patent litigation, is expensive and time consuming, and the outcome is unpredictable. In addition, courts outside the United States are sometimes less willing to protect trade secrets.

Our trade secrets could otherwise become known or be independently discovered by our competitors. Competitors could purchase our product candidates and attempt to replicate some or all of the competitive advantages we derive from our development efforts, willfully infringe our intellectual property rights, design around our protected technology or develop their own competitive technologies that fall outside of our intellectual property rights. If any of our trade secrets were to be lawfully obtained or independently developed by a competitor, we would have no right to prevent them, or those to whom they communicate it, from using that technology or information to compete with us. If our trade secrets are not adequately protected so as to protect our market against competitors' products, our competitive position could be adversely affected, as could our business.

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

Our commercial success depends upon our ability and the ability of our collaborators to develop, manufacture, market and sell our product candidates and use our proprietary technologies without infringing the proprietary rights and intellectual property of third parties. The biotechnology and pharmaceutical industries are characterized by extensive and frequent litigation regarding patents and other intellectual property rights. We may in the future become party to, or threatened with, adversarial proceedings or litigation regarding intellectual property rights with respect to our product candidates and technology, including interference proceedings before the USPTO. Our competitors or other third parties may assert infringement claims against us, alleging that our products or technologies are covered by their patents. Given the vast number of patents in our field of technology, we cannot be certain that we do not infringe existing patents or that we will not infringe patents that may be granted in the future. Many companies have filed, and continue to file, patent applications related to SHP2 inhibitors, FGFR2 inhibitors, and PI3K inhibitors. Some of these patent applications have already been allowed or issued, and others may issue in the future. Since these areas are competitive and of strong interest to pharmaceutical and biotechnology companies, there will likely be additional patent applications filed and additional patents granted in the future, as well as additional research and development programs expected in the future. Furthermore, because patent applications can take many years to issue and may be confidential for 18 months or more after filing, and because pending patent claims can be revised before issuance, there may be applications now pending which may later result in issued patents that may be infringed by the manufacture, use or sale of our product candidates, or the practice of our technology. If a patent holder believes our product or product candidate infringes on its patent, the patent holder may sue us even if we have received patent protection for our technology. Moreover, we may face patent infringement claims from non-practicing entities that have no relevant product revenue and against whom our owned patent portfolio and any patent portfolio we may license in the future may thus have no deterrent effect.

If we are found to infringe a third party's intellectual property rights, we could be required to obtain a license from such third party to continue developing and marketing our product candidates and technology. We may choose to obtain a license, even in the absence of an action or finding of infringement. In either case, we may not be able to obtain any required license on commercially reasonable terms or at all. Even if we were able to obtain such a license, it could be granted on non-exclusive terms, thereby providing our competitors and other third parties access to the same technologies licensed to us. Without such a license, we could be forced, including by court order, to cease developing and commercializing the infringing technology or product candidates. In addition, we could be found liable for monetary damages, including treble damages and attorneys' fees if we are

found to have willfully infringed such third-party patent rights. A finding of infringement could prevent us from commercializing our product candidates or force us to cease some of our business operations, which could materially harm our business. If we lose a foreign patent lawsuit, alleging our infringement of a competitor's patents, we could be prevented from marketing our products in one or more foreign countries, which would have a materially adverse effect on our business.

We may be subject to damages resulting from claims that we or our employees have wrongfully used or disclosed alleged trade secrets of our competitors or are in breach of non-competition or non-solicitation agreements with our competitors.

We could in the future be subject to claims that we or our employees have inadvertently or otherwise used or disclosed alleged trade secrets or other proprietary information of former employers or competitors. Although we try to ensure that our employees and consultants do not use the intellectual property, proprietary information, know-how or trade secrets of others in their work for us, we may in the future be subject to claims that we caused an employee to breach the terms of his or her non-competition or non-solicitation agreement, or that we or these individuals have, inadvertently or otherwise, used or disclosed the alleged trade secrets or other proprietary information of a former employer or competitor. Litigation may be necessary to defend against these claims. Even if we are successful in defending against these claims, litigation could result in substantial costs and could be a distraction to management. If our defenses to these claims fail, in addition to requiring us to pay monetary damages, a court could prohibit us from using technologies or features that are essential to our product candidates, if such technologies or features are found to incorporate or be derived from the trade secrets or other proprietary information of the former employers. An inability to incorporate such technologies or features would have a material adverse effect on our business, and may prevent us from successfully commercializing our product candidates. In addition, we may lose valuable intellectual property rights or personnel as a result of such claims. Moreover, any such litigation or the threat thereof may adversely affect our ability to hire employees or contract with independent sales representatives. A loss of key personnel or their work product could hamper or prevent our ability to commercialize our product candidates, which would have an adverse effect on our business, results of operations and financial condition.

We may become involved in lawsuits to protect or enforce our patents and other intellectual property rights, which could be expensive, time consuming and unsuccessful.

Competitors and other third parties may infringe, misappropriate or otherwise violate our patents and other intellectual property rights. To counter infringement or unauthorized use, we may be required to file infringement claims. A court may disagree with our allegations, however, and may refuse to stop the other party from using the technology at issue on the grounds that our patents do not cover the third-party technology in question. Further, such third parties could counterclaim that we infringe their intellectual property or that a patent we have asserted against them is invalid or unenforceable. In patent litigation in the United States, defendant counterclaims challenging the validity, enforceability or scope of asserted patents are commonplace. In addition, third parties may initiate legal proceedings against us to assert such challenges to our intellectual property rights. The outcome of any such proceeding is generally unpredictable. Grounds for a validity challenge could be an alleged failure to meet any of several statutory requirements, including lack of novelty, obviousness or non-enablement. Patents may be unenforceable if someone connected with prosecution of the patent withheld relevant information from the USPTO or made a misleading statement during prosecution. It is possible that prior art of which we and the patent examiner were unaware during prosecution exists, which could render any patents that may issue invalid. Moreover, it is also possible that prior art may exist that we are aware of but do not believe is relevant to our future patents, should they issue, but that could nevertheless be determined to render our patents invalid.

An adverse result in any litigation proceeding could put one or more of our patents at risk of being invalidated or interpreted narrowly. If a defendant were to prevail on a legal assertion of invalidity or unenforceability of our patents covering one of our product candidates, we would lose at least part, and perhaps all, of the patent

protection covering such product candidate. Competing products may also be sold in other countries in which our patent coverage might not exist or be as strong.

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

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

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

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

Filing, prosecuting and defending patents on our product candidates in all countries throughout the world would be prohibitively expensive. The requirements for patentability may differ in certain countries, particularly in developing countries. Moreover, our ability to protect and enforce our intellectual property rights may be adversely affected by unforeseen changes in foreign intellectual property laws. Additionally, the patent laws of some foreign countries do not afford intellectual property protection to the same extent as the laws of the United States. Many companies have encountered significant problems in protecting and defending intellectual property rights in certain foreign jurisdictions. The legal systems of some countries, particularly developing countries, do not favor the enforcement of patents and other intellectual property rights. This could make it difficult for us to stop the infringement of our patents or the misappropriation of our other intellectual property rights. For example, many foreign countries have compulsory licensing laws under which a patent owner must grant licenses to third parties. Consequently, we may not be able to prevent third parties from practicing our inventions in all countries outside the United States. 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, if our ability to enforce our patents to stop infringing activities is inadequate. These products may compete with our product candidates, and our patents or other intellectual property rights may not be effective or sufficient to prevent them from competing.

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

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.

We may need to license certain intellectual property from third parties, and such licenses may not be available or may not be available on commercially reasonable terms.

A third party may hold intellectual property, including patent rights, that are important or necessary to the development of our products. It may be necessary for us to use the patented or proprietary technology of third parties to commercialize our products, in which case we would be required to obtain a license from these third parties on commercially reasonable terms, or our business could be harmed, possibly materially. Although we believe that licenses to these patents are available from these third parties on commercially reasonable terms, if we were not able to obtain a license, or were not able to obtain a license on commercially reasonable terms, our business could be harmed, possibly materially.

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

We expect our future license agreements will impose, various development, diligence, commercialization, and other obligations on us in order to maintain the licenses. In spite of our efforts, a future licensor might conclude that we have materially breached our obligations under such license agreements and seek to terminate the license agreements, thereby removing or limiting our ability to develop and commercialize products and technology covered by these license agreements. If these in-licenses are terminated, or if the underlying patent rights licensed thereunder fail to provide the intended exclusivity, competitors or other third parties would have the freedom to seek regulatory approval of, and to market, products identical to ours and we may be required to cease our development and commercialization of certain of our product candidates. Any of the foregoing could have a material adverse effect on our competitive position, business, financial conditions, results of operations, and prospects.

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

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

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

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

These and similar issues may arise with respect to our collaboration agreements, such as our DESRES Agreement. Our collaboration with D. E. Shaw Research is our key computational collaboration, and there can be no assurance that this collaboration will continue past the current term of the DESRES Agreement, on favorable terms or at all, or that at any time while the collaboration is in effect D. E. Shaw Research will provide any particular level of services or that the parties will operate under the agreement without disputes. These disputes may involve ownership or control of intellectual property rights, exclusivity obligations, diligence and payment obligations, for example.

The DESRES Agreement imposes certain exclusivity obligations on us during the term of the agreement with respect to Category 2 targets, and certain exclusivity obligations on DESRES during and after the term of the agreement. While we have some degree of control over how we designate various targets under the DESRES Agreement, D. E. Shaw Research has some degree of control over such designations as well, and our exclusivity obligations limit or delay our ability to conduct research on selected targets with third parties.

Under the DESRES Agreement, D. E. Shaw Research controls the rights to its technology, we control the rights to certain compounds, and we jointly own with D. E. Shaw Research any other work product created by D. E. Shaw Research and us. Any work product we jointly own with D. E. Shaw Research and any other information that we or D. E. Shaw Research share is subject to a non-exclusive cross-license between us and D. E. Shaw Research, subject to certain exceptions. In some instances, D. E. Shaw Research is required to assign to us some of the work product created by D. E. Shaw Research. Disputes may arise between us and D. E. Shaw Research, as well as any future potential collaborators, regarding intellectual property subject to the DESRES Agreement. If disputes over intellectual property that we co-own or we own individually prevent or impair our ability to maintain our current collaboration arrangements on acceptable terms, or undermine our ability to successfully control the intellectual property necessary to protect our product candidates, we may be unable to successfully develop and commercialize the affected product candidates. Uncertainties or disagreements around our rights under any such intellectual property may undermine our ability to partner our programs with third parties.

In addition, the DESRES Agreement is complex and certain provisions may be susceptible to multiple interpretations. The resolution of any contract interpretation disagreement that may arise could be adverse to us, for example by narrowing what we believe to be the scope of our rights to certain intellectual property, or increasing what we believe to be our financial or other obligations under the DESRES Agreement, and any such outcome could have a material adverse effect on our business, financial condition, results of operations, and prospects.

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

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. Recent patent reform legislation in the United States and other countries, including the Leahy-Smith America Invents Act, or Leahy-Smith Act, signed into law on September 16, 2011, could increase those uncertainties and costs. The Leahy-Smith Act includes a number of significant changes to U.S. patent law. These include provisions that affect the way patent applications are prosecuted, redefine prior art and provide more efficient and cost-effective avenues for competitors to challenge the validity of patents. In addition, the Leahy-Smith Act has transformed the U.S. patent system into a "first to file" system. The first-to-file provisions, however, only became effective on March 16, 2013. Accordingly, it is not yet clear what, if any, impact the Leahy-Smith Act will have on the operation of our business. However, the Leahy-Smith Act and its implementation could make it more difficult to obtain patent protection for our inventions and increase the uncertainties and costs surrounding the prosecution of our patent applications and the enforcement or defense of our issued patents, all of which could harm our business, results of operations and financial condition.

The U.S. Supreme Court has ruled on several patent cases in recent years, either narrowing the scope of patent protection available in certain circumstances or weakening the rights of patent owners in certain situations. Additionally, there have been recent proposals for additional changes to the patent laws of the United States and other countries that, if adopted, could impact our ability to obtain patent protection for our proprietary technology or our ability to enforce rights in our proprietary technology. Depending on future actions by the U.S. Congress, the U.S. courts, the USPTO and the relevant law-making bodies in other countries, the laws and regulations governing patents could change in unpredictable ways that would weaken our ability to obtain new patents or to enforce any patents that we may obtain in the future.

Intellectual property rights do not necessarily address all potential threats.

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

- others may be able to make products that are similar to our product candidates or utilize similar technology but that are not covered by the claims of the patents that we license or may own;
- we or our licensors or collaborators, might not have been the first to make the inventions covered by the issued patent or pending patent application that we license or own now or in the future;
- we or our licensors or collaborators, might not have been the first to file patent applications covering certain of our or their inventions;
- others may independently develop similar or alternative technologies or duplicate any of our technologies without infringing our owned or licensed intellectual property rights;
- it is possible that our present or future pending patent applications (whether owned or licensed) will not lead to issued patents;
- issued patents that we hold rights to may be held invalid or unenforceable, including as a result of legal challenges by our competitors or other third parties;
- our competitors or other third parties might conduct research and development activities in countries where we do not have patent rights and then use the information learned from such activities to develop competitive products for sale in our major commercial markets;
- we may not develop additional proprietary technologies that are patentable;

- the patents of others may harm our business; and
- we may choose not to file a patent in order to maintain certain trade secrets or know-how, and a third party may subsequently file a patent covering such intellectual property.

Should any of these events occur, they could have a material adverse effect on our business, financial condition, results of operations and prospects.

Risks Related to Government Regulation

Even if we receive regulatory approval for any of our product candidates, we will be subject to ongoing regulatory obligations and continued regulatory review, which may result in significant additional expense. Additionally, our product candidates, if approved, could be subject to post-market study requirements, marketing and labeling restrictions, and even recall or market withdrawal if unanticipated safety issues are discovered following approval. In addition, we may be subject to penalties or other enforcement action if we fail to comply with regulatory requirements.

If the FDA or a comparable foreign regulatory authority approves any of our product candidates, the manufacturing processes, labeling, packaging, distribution, adverse event reporting, storage, advertising, promotion and recordkeeping for the product will be subject to extensive and ongoing regulatory requirements. These requirements include submissions of safety and other post-marketing information and reports, establishment registration and listing, as well as continued compliance with cGMPs and GCPs for any clinical trials that we conduct post-approval. Any regulatory approvals that we receive for our product candidates may also 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 studies, including Phase 4 clinical trials, and surveillance to monitor the safety and efficacy of the product. Later discovery of previously unknown problems with a product, 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, among other things:

- restrictions on the marketing or manufacturing of the product, withdrawal of the product from the market, or voluntary or mandatory product recalls;
- clinical trial holds
- fines, warning letters or other regulatory enforcement action;
- refusal by the FDA to approve pending applications or supplements to approved applications filed by us;
- product seizure or detention, or refusal to permit the import or export of products; and
- injunctions or the imposition of civil or criminal penalties.

The FDA's policies may change and additional government regulations may be enacted that could prevent, limit or delay regulatory approval of our product candidates. If we are slow or unable to adapt to changes in existing requirements or the adoption of new requirements or policies, or if we are not able to maintain regulatory compliance, we may lose any marketing approval that we may have obtained, which would adversely affect our business, prospects and ability to achieve or sustain profitability.

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

If any of our product candidates are approved and we are found to have improperly promoted off-label uses of those products, we may become subject to significant liability. The FDA and other regulatory agencies strictly regulate the promotional claims that may be made about approved prescription drug products. In particular, while

the FDA permits the dissemination of truthful and non-misleading information about an approved product, a manufacturer may not promote a product for uses that are not approved by the FDA. If we are found to have promoted such off-label uses, we may become subject to significant liability. The federal government has levied large civil and criminal fines against companies for alleged improper promotion of regulated products for off-label uses and has enjoined several companies from engaging in off-label promotion. The FDA has also requested that companies enter into consent decrees, corporate integrity agreements or permanent injunctions under which specified promotional conduct must be changed or curtailed. If we cannot successfully manage the promotion of our product candidates, if approved, we could become subject to significant liability, which would materially adversely affect our business and financial condition.

European data collection is governed by restrictive regulations governing the use, processing and cross-border transfer of personal information.

In the event we decide to conduct clinical trials or continue to enroll subjects in our ongoing or future clinical trials, we may be subject to additional privacy restrictions. The collection, use, storage, disclosure, transfer, or other processing of personal data regarding individuals in the EU, including personal health data, is subject to the EU General Data Protection Regulation, or GDPR. The GDPR is wide-ranging in scope and imposes numerous requirements on companies that process personal data, including requirements relating to processing health and other sensitive data, obtaining consent of the individuals to whom the personal data relates, providing information to individuals regarding data processing activities, implementing safeguards to protect the security and confidentiality of personal data, providing notification of data breaches, and taking certain measures when engaging third-party processors. Compliance with the GDPR will be a rigorous and time-intensive process that may increase our cost of doing business or require us to change our business practices, and despite those efforts, there is a risk that we may be subject to fines and penalties, litigation, and reputational harm in connection with our European activities.

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.

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.

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, comparable regulatory authorities in foreign jurisdictions 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 nonclinical studies or clinical trials as clinical trials conducted in one jurisdiction may not be accepted by regulatory authorities in other jurisdictions. In short, the foreign regulatory approval process involves all of the risks associated with FDA approval. 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 may intend to charge for our products will also be subject to approval.

If we are unable to successfully validate, develop and obtain regulatory approval for companion diagnostic tests for our product candidates that require or would commercially benefit from such tests, or experience significant delays in doing so, we may not realize the full commercial potential of these product candidates.

In connection with the clinical development of our product candidates for certain indications, we may engage third parties to develop or obtain access to *in vitro* companion diagnostic tests to identify patient subsets within a disease category who may derive selective and meaningful benefit from our product candidates. Further, the FDA has indicated that if we continue RLY-4008 in a specific biomarker-defined population, a companion diagnostic device will be required to ensure its safe and effective use. Such companion diagnostics would be used during our clinical trials as well as in connection with the commercialization of our product candidates. To be successful, we or our collaborators will need to address a number of scientific, technical, regulatory and logistical challenges. The FDA and comparable foreign regulatory authorities regulate *in vitro* companion diagnostics as medical devices and, under that regulatory framework, will likely require the conduct of clinical trials to demonstrate the safety and effectiveness of any diagnostics we may develop, which we expect will require separate regulatory clearance or approval prior to commercialization.

We intend to rely on third parties for the design, development and manufacture of companion diagnostic tests for our therapeutic product candidates that may require such tests. If we enter into such collaborative agreements, we will be dependent on the sustained cooperation and effort of our future collaborators in developing and obtaining approval for these companion diagnostics. It may be necessary to resolve issues such as selectivity/specificity, analytical validation, reproducibility, or clinical validation of companion diagnostics during the development and regulatory approval processes. Moreover, even if data from preclinical studies and early clinical trials appear to support development of a companion diagnostic for a product candidate, data generated in later clinical trials may fail to support the analytical and clinical validation of the companion diagnostic. We and our future collaborators may encounter difficulties in developing, obtaining regulatory approval for, manufacturing and commercializing companion diagnostics similar to those we face with respect to our therapeutic candidates themselves, including issues with achieving regulatory clearance or approval, production of sufficient quantities at commercial scale and with appropriate quality standards, and in gaining market acceptance. If we are unable to successfully develop companion diagnostics for these therapeutic product candidates, or experience delays in doing so, the development of these therapeutic product candidates may be adversely affected, these therapeutic product candidates may not obtain marketing approval, and we may not realize the full commercial potential of any of these therapeutics that obtain marketing approval. As a result, our business, results of operations and financial condition could be materially harmed. In addition, a diagnostic company with whom we contract may decide to discontinue selling or manufacturing the companion diagnostic test that we anticipate using in connection with development and commercialization of our product candidates or our relationship with such diagnostic company may otherwise terminate. We may not be able to enter into arrangements with another diagnostic company to obtain supplies of an alternative diagnostic test for use in connection with the development and commercialization of our product candidates or do so on commercially reasonable terms, which could adversely affect and/or delay the development or commercialization of our therapeutic candidates.

Laws and regulations governing any international operations we may have in the future may preclude us from developing, manufacturing and selling certain products outside of the United States and require us to develop and implement costly compliance programs.

If we 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 Foreign Corrupt Practices Act, or FCPA, prohibits any U.S. individual or business from paying, offering, authorizing payment or offering of anything of value, directly or indirectly, to any foreign official, political party or candidate for the purpose of influencing any act or decision of the foreign entity in order to assist the individual or business in obtaining or retaining business. The FCPA also obligates companies whose securities are listed in the United States to comply with 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 Securities and Exchange Commission, or 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

We may seek priority review designation for one or more of our other product candidates, but we might not receive such designation, and even if we do, such designation may not lead to a faster regulatory review or approval process.

If the FDA determines that a product candidate offers a treatment for a serious condition and, if approved, the product would provide a significant improvement in safety or effectiveness, the FDA may designate the product candidate for priority review. A priority review designation means that the goal for the FDA to review an application is six months, rather than the standard review period of ten months. We may request priority review for our product candidates. The FDA has broad discretion with respect to whether or not to grant priority review status to a product candidate, so even if we believe a particular product candidate is eligible for such designation or status, the FDA may decide not to grant it. Moreover, a priority review designation does not necessarily result in an expedited regulatory review or approval process or necessarily confer any advantage with respect to approval compared to conventional FDA procedures. Receiving priority review from the FDA does not guarantee approval within the six-month review cycle or at all.

We may seek orphan drug designation for certain of our product candidates, and we may be unsuccessful or may be unable to maintain the benefits associated with orphan drug designation, including the potential for market exclusivity.

As part of our business strategy, we may seek orphan drug designation for certain of our product candidates, and we may be unsuccessful. Regulatory authorities in some jurisdictions, including the United States and Europe, may designate drugs for relatively small patient populations as orphan drugs. Under the Orphan Drug Act, the FDA may designate a drug as an orphan drug if it is a drug intended to treat a rare disease or condition, which is generally defined as a patient population of fewer than 200,000 individuals annually in the United States, or a patient population of 200,000 or more in the United States where there is no reasonable expectation that the cost of developing the drug will be recovered from sales in the United States. In the United States, orphan drug designation entitles a party to financial incentives such as opportunities for grant funding towards clinical trial costs, tax advantages and user-fee waivers.

Similarly, in Europe, the European Commission, upon the recommendation of the EMA's Committee for Orphan Medicinal Products, grants orphan drug designation to promote the development of drugs that are intended for the diagnosis, prevention or treatment of life-threatening or chronically debilitating conditions affecting not more than 5 in 10,000 persons in Europe and for which no satisfactory method of diagnosis, prevention, or treatment has been authorized (or the product would be a significant benefit to those affected). Additionally, designation is granted for drugs intended for the diagnosis, prevention, or treatment of a life-threatening, seriously debilitating or serious and chronic condition and when, without incentives, it is unlikely that sales of the drug in Europe would be sufficient to justify the necessary investment in developing the drug. In Europe, orphan drug designation entitles a party to financial incentives such as reduction of fees or fee waivers.

Generally, if a drug with an orphan drug designation subsequently receives the first marketing approval for the indication for which it has such designation, the drug is entitled to a period of marketing exclusivity, which precludes the FDA or the EMA from approving another marketing application for the same drug and indication for that time period, except in limited circumstances. The applicable period is seven years in the United States and ten years in Europe. The European exclusivity period can be reduced to six years if a drug no longer meets the criteria for orphan drug designation or if the drug is sufficiently profitable so that market exclusivity is no longer justified.

Even if we obtain orphan drug exclusivity for a drug, that exclusivity may not effectively protect the drug from competition because different drugs can be approved for the same condition. Even after an orphan drug is approved, the FDA can subsequently approve the same drug for the same condition if the FDA concludes that the later drug is clinically superior in that it is shown to be safer, more effective or makes a major contribution to patient care. In addition, a designated orphan drug may not receive orphan drug exclusivity if it is approved for a use that is broader than the indication for which it received orphan designation. Moreover, orphan drug exclusive marketing rights in the United States may be lost if the FDA later determines that the request for designation was materially defective or if the manufacturer is unable to assure sufficient quantity of the drug to meet the needs of patients with the rare disease or condition or if another drug with the same active moiety is determined to be safer, more effective, or represents a major contribution to patient care. Orphan drug designation neither shortens the development time or regulatory review time of a drug nor gives the drug any advantage in the regulatory review or approval process. While we may seek orphan drug designation for our product candidates, we may never receive such designations. Even if we do receive such designations, there is no guarantee that we will enjoy the benefits of those designations.

Breakthrough therapy designation and fast track designation by the FDA, even if granted for any of our product candidates, may not lead to a faster development, regulatory review or approval process, and each designation does not increase the likelihood that any of our product candidates will receive marketing approval in the United States.

We may seek a breakthrough therapy designation for some of our product candidates. A breakthrough therapy is defined as a drug that is intended, alone or in combination with one or more other drugs, to treat a serious or life-threatening disease or condition, and preliminary clinical evidence indicates that the drug may demonstrate substantial improvement over existing therapies on one or more clinically significant endpoints, such as substantial treatment effects observed early in clinical development. For drugs that have been designated as breakthrough therapies, interaction and communication between the FDA and the sponsor of the trial can help to identify the most efficient path for clinical development while minimizing the number of patients placed in ineffective control regimens. Drugs designated as breakthrough therapies by the FDA may also be eligible for priority review and accelerated approval. 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 for a product candidate may not result in a faster development process, review or approval compared to therapies considered for approval under conventional FDA procedures and does not assure ultimate approval by the FDA. In addition, even if one or more of our product candidates qualify as breakthrough therapies, the FDA may later decide that such product candidates no longer meet the conditions for qualification or decide that the time period for FDA review or approval will not be shortened.

We may seek fast track designation for some of our product candidates. If a drug is intended for the treatment of a serious or life-threatening condition and the drug demonstrates the potential to address unmet medical needs for this condition, the drug sponsor may apply for fast track designation. The FDA has broad discretion whether or not to grant this designation, so even if we believe a particular product candidate is eligible for this designation, we cannot assure you that the FDA would decide to grant it. Even if we do receive fast track designation, we may not experience a faster development process, review or approval compared to conventional FDA procedures. The FDA may withdraw fast track designation if it believes that the designation is no longer supported by data from our clinical development program. Fast track designation alone does not guarantee qualification for the FDA's priority review procedures.

Accelerated approval by the FDA, even if granted for our FGFR2 program or our PI3K program or any other future product candidates, may not lead to a faster development or regulatory review or approval process and it does not increase the likelihood that our product candidates will receive marketing approval.

We may seek accelerated approval of our FGFR2 program or our PI3K program and for future product candidates. A product may be eligible for accelerated approval if it treats a serious or life-threatening condition and generally provides a meaningful advantage over available therapies. In addition, it must demonstrate an effect on a surrogate endpoint that is reasonably likely to predict clinical benefit or on a clinical endpoint that can be measured earlier than irreversible morbidity or mortality, or IMM, that is reasonably likely to predict an effect on IMM or other clinical benefit. As a condition of approval, the FDA may require that a sponsor of a drug or biologic receiving accelerated approval perform adequate and well-controlled post-marketing clinical trials. In addition, the FDA currently requires as a condition for accelerated approval pre-approval of promotional materials, which could adversely impact the timing of the commercial launch of the product. Even if we do receive accelerated approval, we may not experience a faster development or regulatory review or approval process, and receiving accelerated approval does not provide assurance of ultimate FDA approval.

The FDA, the EMA and other regulatory authorities may implement additional regulations or restrictions on the development and commercialization of our product candidates, and such changes can be difficult to predict.

The FDA, the EMA and regulatory authorities in other countries have each expressed interest in further regulating biotechnology products. Agencies at both the federal and state level in the United States, as well as the U.S. Congressional committees and other governments or governing agencies, have also expressed interest in further regulating the biotechnology industry. Such action may delay or prevent commercialization of some or all of our product candidates. Adverse developments in clinical trials of products conducted by others may cause the FDA or other oversight bodies to change the requirements for approval of any of our product candidates. These regulatory review agencies and committees and the new requirements or guidelines they promulgate may lengthen the regulatory review process, require us to perform additional studies or trials, increase our development costs, lead to changes in regulatory positions and interpretations, delay or prevent approval and commercialization of our product candidates or lead to significant post-approval limitations or restrictions. As we advance our product candidates, we will be required to consult with these regulatory agencies and comply with applicable requirements and guidelines. If we fail to do so, we may be required to delay or discontinue development of such product candidates. These additional processes may result in a review and approval process that is longer than we otherwise would have expected. Delays as a result of an increased or lengthier regulatory approval process or further restrictions on the development of our product candidates can be costly and could negatively impact our ability to complete clinical trials and commercialize our current and future product candidates in a timely manner, if at all.

Healthcare legislative reform measures may have a material adverse effect on our business and results of operations.

The U.S. and many foreign jurisdictions have enacted or proposed legislative and regulatory changes affecting the healthcare system that could prevent or delay marketing approval of our current or future product candidates or any future product candidates, restrict or regulate post-approval activities and affect our ability to profitably sell a product for which we obtain marketing approval. 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 U.S., there have been and continue to be a number of legislative initiatives to contain healthcare costs. For example, in March 2010, the Affordable Care Act, or the ACA, was passed, which substantially changed the way healthcare is financed by both governmental and private insurers, and significantly impacted the U.S. pharmaceutical industry. The ACA, among other things, subjects biological products to potential competition by lower-cost biosimilars, addresses 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, increases the minimum Medicaid rebates owed by manufacturers under the Medicaid Drug Rebate Program and extends the rebate program to individuals enrolled in Medicaid managed care organizations, establishes annual fees and taxes on manufacturers of certain branded prescription drugs, and creates a new Medicare Part D coverage gap discount program, in which manufacturers must agree to offer 70% (increased pursuant to the Bipartisan Budget Act of 2018, effective as of 2019) 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. Since then, the ACA risk adjustment program payment parameters have been updated annually.

Members of the U.S. Congress and the current administration have expressed intent to pass legislation or adopt executive orders to fundamentally change or repeal parts of the ACA. While Congress has not passed repeal legislation to date, the TCJA, 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.” On December 14, 2018, a federal district court in

Texas ruled the individual mandate is a critical and inseverable feature of the ACA, and therefore, because it was repealed as part of the TCJA, the remaining provisions of the ACA are invalid as well. The current administration and Centers for Medicare & Medicaid Services, or CMS, have both stated that the ruling will have no immediate effect, and on December 18, 2019, the Fifth Circuit U.S. Court of Appeals held that the individual mandate is unconstitutional, and remanded the case to the lower court to reconsider its earlier invalidation of the full ACA. Pending review, the ACA remains in effect, but it is unclear at this time what effect the latest ruling will have on the status of the ACA. Litigation and legislation over the ACA are likely to continue, with unpredictable and uncertain results. We will continue to evaluate the effect that the ACA and its possible repeal and replacement has on our business.

Further, on January 20, 2017, an Executive Order was signed 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 burden on states or a cost, fee, tax, penalty or regulatory burden on individuals, healthcare providers, health insurers, or manufacturers of pharmaceuticals or medical devices. On October 13, 2017, an Executive Order was signed terminating the cost-sharing subsidies that reimburse insurers under the ACA. The current 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. 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. The loss of the cost share reduction payments is expected to increase premiums on certain policies issued by qualified health plans under the ACA. Further, on June 14, 2018, the U.S. Court of Appeals for the Federal Circuit ruled that the federal government was not required to pay to third-party payors more than $12 billion in ACA risk corridor payments that they argued were owed to them. The effects of this gap in reimbursement on third-party payors, the viability of the ACA marketplace, providers, and potentially our business, are not yet known.

Moreover, on January 22, 2018, a continuing resolution on appropriations for fiscal year 2018 was approved that delayed the implementation of certain ACA-mandated fees, including the so called “Cadillac” tax on certain high cost employer-sponsored insurance plans, the annual fee imposed on certain health insurance providers based on market share, and the medical device excise tax on non-exempt medical devices; however on December 20, 2019, the Further Consolidated Appropriations Act (H.R. 1865) was signed into law, which repeals the Cadillac tax, the health insurance provider tax, and the medical device excise tax. It is impossible to determine whether similar taxes could be instated in the future. The Bipartisan Budget Act of 2018, 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.” 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. In addition, CMS has recently published a final rule that would give states greater flexibility, starting in 2020, 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. Other legislative changes have been proposed and adopted in the U.S. since the ACA was enacted. In August 2011, 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. This includes aggregate reductions of Medicare payments to providers up to 2% per fiscal year, and, due to subsequent legislative amendments, will remain in effect through 2029 unless additional Congressional action is taken. The American Taxpayer Relief Act of 2012 among other things, reduced Medicare payments to several providers, including hospitals, imaging centers and cancer treatment centers, and increased the statute of limitations period for the government to recover overpayments to providers from three to five years.

There has been increasing legislative and enforcement interest in the U.S. with respect to specialty drug pricing practices. Specifically, there have been several recent U.S. Congressional inquiries and proposed 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. At the federal level, the current administration's budget for fiscal years 2019 and 2020 contain further drug price control measures that could be enacted during the budget process 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. Additionally, the current administration released a "Blueprint" to lower drug prices and reduce out of pocket costs of drugs that contains additional proposals to increase manufacturer competition, increase the negotiating power of certain federal healthcare programs, incentivize manufacturers to lower the list price of their products and reduce the out of pocket costs of product candidates paid by consumers. The U.S. Department of Health and Human Services, or HHS, has already started the process of soliciting feedback on some of these measures and, at the same time, is immediately implementing others under its existing authority. For example, in May 2019, CMS issued a final rule to allow Medicare Advantage Plans the option of using step therapy, a type of prior authorization, for Part B drugs beginning January 1, 2020. This final rule codified CMS's policy change that was effective January 1, 2019.

Further, on May 30, 2018, the Right to Try Act, was signed into law. The law, among other things, provides a federal framework for certain patients to access certain investigational new product candidates that have completed a Phase 1 clinical trial and that are undergoing investigation for FDA approval. Under certain circumstances, eligible patients can seek treatment without enrolling in clinical trials and without obtaining FDA permission under the FDA expanded access program. There is no obligation for a pharmaceutical manufacturer to make its product candidates available to eligible patients as a result of the Right to Try Act.

At the state level, individual states are increasingly aggressive in 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. In addition, regional health care authorities and individual hospitals are increasingly using bidding procedures to determine what pharmaceutical products and which suppliers will be included in their prescription drug and other health care programs. These measures could reduce the ultimate demand for our products, once approved, or put pressure on our product pricing.

We expect that additional state and federal healthcare reform measures will 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 our current or future product candidates or additional pricing pressures. In particular any policy changes through CMS as well as local state Medicaid programs could have a significant impact on our business in light of the higher proportion of SCD patients that utilize Medicare and Medicaid programs to pay for treatments.

Our revenue prospects could be affected by changes in healthcare spending and policy in the U.S. and abroad. We operate in a highly regulated industry and new laws, regulations or judicial decisions, or new interpretations of existing laws, regulations or decisions, related to healthcare availability, the method of delivery or payment for healthcare products and services could negatively impact our business, operations and financial condition.

There have been, and likely will continue to be, legislative and regulatory proposals at the foreign, federal and state levels directed at broadening the availability of healthcare and containing or lowering the cost of healthcare. We cannot predict the initiatives that may be adopted in the future, including repeal, replacement or significant revisions to the ACA. The continuing efforts of the government, insurance companies, managed care

organizations and other payors of healthcare services to contain or reduce costs of healthcare and/or impose price controls may adversely affect:

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

Any reduction in reimbursement from Medicare or other government programs may result in a similar reduction in payments from private payors, which may adversely affect our future profitability.

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

Although we do not currently have any products on the market, once we begin commercializing our product candidates, we will be subject to additional healthcare statutory and regulatory requirements and enforcement by the federal government and the states and foreign governments in which we conduct our business. Healthcare providers, physicians and third-party payors play a primary role in the recommendation and prescription of any product candidates for which we obtain marketing approval. Our future arrangements with third-party payors and customers may expose us to broadly applicable fraud and abuse and other healthcare laws and regulations that may constrain the business or financial arrangements and relationships through which we market, sell and distribute our product candidates for which we obtain marketing approval. Restrictions under applicable federal and state healthcare laws and regulations, include the following:

- the federal Anti-Kickback Statute prohibits, among other things, persons from knowingly and willfully soliciting, offering, receiving or providing remuneration, directly or indirectly, in cash or in kind, to induce or reward either the referral of an individual for, or the purchase, order or recommendation of, any good or service, for which payment may be made under federal and state healthcare programs such as Medicare and Medicaid. A person or entity does not need to have actual knowledge of the statute or specific intent to violate it in order to have committed a violation;
- the federal civil and criminal false claims and civil monetary penalties laws, including the federal False Claims Act, or FCA, imposes criminal and civil penalties, including through civil whistleblower or qui tam actions, against individuals or entities for knowingly presenting, or causing to be presented, to the federal government, claims for payment that are false or fraudulent or making a false statement to avoid, decrease or conceal an obligation to pay money to the federal government. In addition, the government may assert that a claim including items and services resulting from a violation of the federal Anti-Kickback Statute constitutes a false of fraudulent claim for purposes of the False Claims Act;
- the federal Health Insurance Portability and Accountability Act of 1996, or HIPAA, imposes criminal and civil liability for executing a scheme to defraud any healthcare benefit program, or knowingly and willfully falsifying, concealing or covering up a material fact or making any materially false statement in connection with the delivery of or payment for healthcare benefits, items or services; similar to the federal Anti-Kickback Statute, a person or entity does not need to have actual knowledge of the statute or specific intent to violate it in order to have committed a violation;
- the federal physician payment transparency requirements, sometimes referred to as the “Sunshine Act” under the Affordable Care Act, require manufacturers of drugs, devices, biologics and medical supplies

that are reimbursable under Medicare, Medicaid, or the Children's Health Insurance Program to report to the Department of Health and Human Services information related to transfers of value made to physicians (currently defined to include doctors, dentists, optometrists, podiatrists and chiropractors) and teaching hospitals, as well as ownership and investment interests of such physicians and their immediate family members. Effective January 1, 2022, these reporting obligations will extend to include transfers of value made to certain non-physician providers such as physician assistants and nurse practitioners;

- HIPAA, as amended by the Health Information Technology for Economic and Clinical Health Act of 2009 and its implementing regulations, impose obligations on certain covered entity healthcare providers, health plans, and healthcare clearinghouses as well as their business associates that perform certain services involving the use or disclosure of individually identifiable health information, including mandatory contractual terms, with respect to safeguarding the privacy, security and transmission of individually identifiable health information; and
- analogous state laws and regulations, such as state anti-kickback and false claims laws may apply to sales or marketing arrangements and claims involving healthcare items or services reimbursed by non-governmental third-party payors, including private insurers. Some state laws require pharmaceutical companies to comply with the pharmaceutical industry's voluntary compliance guidelines and the relevant compliance guidance promulgated by the federal government in addition to requiring drug manufacturers to report information related to payments to physicians and other health care providers or marketing expenditures. Further, many state laws governing the privacy and security of health information in certain circumstances, differ from each other in significant ways and often are not preempted by HIPAA, thus complicating compliance efforts.

Ensuring that our future business arrangements with third parties comply with applicable healthcare laws and regulations could involve substantial costs. It is possible that governmental authorities will conclude that our business practices do 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, including anticipated activities to be conducted by our sales team, were to be found to be in violation of any of these laws or any other governmental regulations that may apply to us, we may be subject to significant civil, criminal and administrative penalties, damages, fines, imprisonment, exclusion from government funded healthcare programs, such as Medicare and Medicaid, and the curtailment or restructuring of our operations. If any of the physicians or other providers or entities with whom we expect to do business is found not to be in compliance with applicable laws, they may be subject to criminal, civil or administrative sanctions, including exclusions from government funded healthcare programs.

Risks Relating to Employee Matters and Managing Growth

Our future success depends on our ability to retain key executives and experienced scientists and to attract, retain and motivate qualified personnel.

We are highly dependent on the research and development, clinical and business development expertise of Sanjiv K. Patel, our President and Chief Executive Officer, Don Bergstrom, our Executive Vice President, Head of Research and Development, Brian Adams, our General Counsel, Andy Porter, our Executive Vice President, Chief People Experience Officer, Tom Catinazzo, our Vice President, Head of Finance and Ben Wolf, our Chief Medical Officer as well as the other principal members of our management, scientific and clinical team. Although we have entered into employment letter agreements with our executive officers, each of them may terminate their employment with us at any time. We do not maintain "key person" insurance for any of our executives or other employees. In addition, we rely on consultants and advisors, including scientific and clinical advisors, to assist us in formulating our research and development and commercialization strategy. Our consultants and advisors may be employed by employers other than us and may have commitments under consulting or advisory contracts with other entities that may limit their availability to us. If we are unable to continue to attract and retain high quality personnel, our ability to pursue our growth strategy will be limited.

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

In particular, we have experienced a very competitive hiring environment in Cambridge, Massachusetts, where we are headquartered. Many of the other pharmaceutical companies that we compete against for qualified personnel have greater financial and other resources, different risk profiles and a longer history in the industry than we do. They also may provide more diverse opportunities and better chances for career advancement. Some of these characteristics may be more appealing to high-quality candidates than what we have to offer. If we are unable to continue to attract and retain high-quality personnel, the rate and success with which we can discover and develop product candidates and our business will be limited.

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

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

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

As of April 30, 2020, we had 122 full-time employees. We expect to experience significant growth in the number of our employees and the scope of our operations, particularly as we function as a public company and in the areas of product development, regulatory affairs and, if any of our product candidates receives marketing approval, sales, marketing and distribution. To manage our anticipated future growth, we must continue to implement and improve our managerial, operational and financial systems, expand our facilities and continue to recruit and train additional qualified personnel. Due to our limited financial resources and the limited experience of our management team in managing a company with such anticipated growth, we may not be able to effectively manage the expansion of our operations or recruit and train additional qualified personnel. The expansion of our operations may lead to significant costs and may divert our management and business development resources. Any inability to manage growth could delay the execution of our business plans or disrupt our operations.

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

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

The development and commercialization of new products in the biopharmaceutical and related industries is highly competitive. We compete in the segments of the pharmaceutical, biotechnology, and other related markets that address computationally focused structure-based drug design in cancer and genetic diseases. There are other companies focusing on structure-based drug design to develop therapies in the fields of cancer and other diseases. Some of these competitive products and therapies are based on scientific approaches that are the same as or similar to our approach, and others are based on entirely different approaches. These companies include divisions of large pharmaceutical companies and biotechnology companies of various sizes. We face competition with respect to our current product candidates, and will face competition with respect to any product candidates that we may seek to develop or commercialize in the future, from major pharmaceutical companies, specialty pharmaceutical companies and biotechnology companies worldwide. Potential competitors also include academic institutions, government agencies and other public and private research organizations that conduct research, seek patent protection and establish collaborative arrangements for research, development, manufacturing and commercialization.

Any product candidates that we successfully develop and commercialize will compete with currently approved therapies and new therapies that may become available in the future from segments of the pharmaceutical, biotechnology and other related markets that pursue precision medicines. Key product features that would affect our ability to effectively compete with other therapeutics include the efficacy, safety and convenience of our products. We believe principal competitive factors to our business include, among other things, the accuracy of our computations and predictions, ability to integrate experimental and computational capabilities, ability to successfully transition research programs into clinical development, ability to raise capital, and the scalability of the platform, pipeline, and business.

Many of the companies that we compete against or against which we may compete in the future have significantly greater financial resources and expertise in research and development, manufacturing, preclinical

testing, conducting clinical trials, obtaining regulatory approvals and marketing approved products than we do. Mergers and acquisitions in the pharmaceutical, biotechnology and diagnostic industries may result in even more resources being concentrated among a smaller number of our competitors. Smaller or early stage companies may also prove to be significant competitors, particularly through collaborative arrangements with large and established companies. These competitors also compete with us in recruiting and retaining qualified scientific and management personnel and establishing clinical trial sites and patient registration for clinical trials, as well as in acquiring technologies complementary to, or necessary for, our programs. In addition, we cannot predict whether our current competitive advantages, such as our ability to leverage our Dynamo platform and our relationship with D. E. Shaw Research, will remain in place in the future. If these or other barriers to entry do not remain in place, other companies may be able to more directly or effectively compete with us.

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

Risks Related to Our Common Stock and This Offering

We are an "emerging growth company" as defined in the JOBS Act and a "smaller reporting company" as defined in the Securities Exchange Act of 1934, as amended, or the Exchange Act, and will be able to avail ourselves of reduced disclosure requirements applicable to emerging growth companies and smaller reporting companies, which could make our common stock less attractive to investors and adversely affect the market price of our common stock.

We are an "emerging growth company," as defined in the Jumpstart Our Business Startups Act of 2012, or the JOBS Act. We will remain an emerging growth company until the earlier of (i) the last day of the fiscal year in which we have total annual gross revenues of $1.07 billion or more; (ii) the last day of the fiscal year following the fifth anniversary of the date of the completion of this offering; (iii) the date on which we have issued more than $1 billion in nonconvertible debt during the previous three years; or (iv) the date on which we are deemed to be a large accelerated filer under the rules of the Securities and Exchange Commission, which means the market value of our common stock that is held by non-affiliates exceeds $700 million as of the prior June 30th. For so long as we remain an emerging growth company, we are permitted and intend to rely on exemptions from certain disclosure requirements that are applicable to other public companies that are not emerging growth companies. These exemptions include:

- not being required to comply with the auditor attestation requirements of Section 404 of the Sarbanes-Oxley Act of 2002, or Section 404;
- not being required to comply with any requirement that may be adopted by the Public Company Accounting Oversight Board regarding mandatory audit firm rotation or a supplement to the auditor's report providing additional information about the audit and the financial statements;
- providing only two years of audited financial statements in addition to any required unaudited interim financial statements and a correspondingly reduced "Management's Discussion and Analysis of Financial Condition and Results of Operations" disclosure;
- reduced disclosure obligations regarding executive compensation; and
- exemptions from the requirements of holding a nonbinding advisory vote on executive compensation and shareholder approval of any golden parachute payments not previously approved. In this prospectus, we have not included all of the executive compensation-related information that would be required if we were not an emerging growth company.

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

In addition, the JOBS Act provides that an emerging growth company can take advantage of an extended transition period for complying with new or revised accounting standards. This allows an emerging growth company to delay the adoption of certain accounting standards until those standards would otherwise apply to private companies. We have elected to use the extended transition period for new or revised accounting standards during the period in which we remain an emerging growth company; however, we may adopt certain new or revised accounting standards early.

We are also a "smaller reporting company" as defined in the Exchange Act. We may continue to be a smaller reporting company even after we are no longer an emerging growth company. We may take advantage of certain of the scaled disclosures available to smaller reporting companies until the fiscal year following the determination that our voting and non-voting common stock held by non-affiliates is more than $250 million measured on the last business day of our second fiscal quarter, or our annual revenues are more than $100 million during the most recently completed fiscal year and our voting and non-voting common stock held by non-affiliates is more than $700 million measured on the last business day of our second fiscal quarter.

Although we are still evaluating the JOBS Act, we currently intend to take advantage of some, but not all, of the reduced regulatory and reporting requirements that will be available to us so long as we qualify as an "emerging growth company" and "smaller reporting company." We have elected to avail ourselves of this exemption and, therefore, we are not subject to the same new or revised accounting standards as other public companies that are not emerging growth companies or smaller reporting company. As a result, changes in rules of U.S. generally accepted accounting principles or their interpretation, the adoption of new guidance or the application of existing guidance to changes in our business could significantly affect our financial position and results of operations. In addition, our independent registered public accounting firm will not be required to provide an attestation report on the effectiveness of our internal control over financial reporting so long as we qualify as an "emerging growth company," which may increase the risk that material weaknesses or significant deficiencies in our internal control over financial reporting go undetected. Likewise, so long as we qualify as a "smaller reporting company" or an "emerging growth company," we may elect not to provide you with certain information, including certain financial information and certain information regarding compensation of our executive officers, that we would otherwise have been required to provide in filings we make with the SEC, which may make it more difficult for investors and securities analysts to evaluate our company. We cannot predict if investors will find our common stock less attractive because we may rely on these exemptions. If some investors find our common stock less attractive as a result, there may be a less active trading market for our common stock, and our stock price may be more volatile and may decline.

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

Our stock price is likely to be volatile. The stock market in general and the market for biopharmaceutical companies in particular have experienced extreme volatility that has often been unrelated to the operating performance of particular companies. As a result of this volatility, you may not be able to sell your common stock at or above the initial public offering price. The market price for our common stock may be influenced by many factors, including:

- the success of competitive products or technologies;
- results of clinical trials of our product candidates or those of our competitors;

- regulatory or legal developments in the United States and other countries;
- developments or disputes concerning patent applications, issued patents or other proprietary rights;
- the recruitment or departure of key personnel;
- the level of expenses related to any of our product candidates or clinical development programs;
- the results of our efforts to discover, develop, acquire or in-license additional product candidates or products;
- actual or anticipated changes in estimates as to financial results, development timelines or recommendations by securities analysts;
- variations in our financial results or those of companies that are perceived to be similar to us;
- changes in the structure of healthcare payment systems;
- market conditions in the pharmaceutical and biotechnology sectors;
- general economic, industry and market conditions; and
- the other factors described in this "Risk Factors" section.

Further, at our request, the underwriters have reserved up to 441,000 shares, or 2.2% of the shares being offered by this prospectus, for sale to certain of our directors, officers, employees and persons having a business relationship with us. To the extent these persons purchase reserved shares in this offering, fewer shares may be actively traded in the public market because these stockholders may be restricted from selling the shares by restrictions under applicable securities laws and the lock-up agreements described in the "Shares eligible for future sale" and "Underwriting" sections of this prospectus, which would reduce the liquidity of the market for our common stock.

Sales of a substantial number of shares of our common stock 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 market price of our common stock could decline. Based upon the number of shares of common stock, on an as-converted basis, outstanding as of June 30, 2020, upon the completion of this offering, we will have outstanding a total of 86,875,742 shares of common stock, including 290,477 shares of non-vested restricted common stock, and assuming no exercise of the underwriters' option to purchase additional shares. Of these shares, as of the date of this prospectus, approximately 28,049,425 shares of our common stock, 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, assuming that current stockholders do not purchase shares in this offering. The representatives of the underwriters, however, may, in their sole discretion, permit our officers, directors and other stockholders who are subject to these lock-up agreements to sell shares prior to the expiration of the lock-up agreements.

The lock-up agreements pertaining to this offering will expire 180 days from the date of this prospectus. After the lock-up agreements expire, based upon the number of shares of common stock, on an as-converted basis, outstanding as of June 30, 2020, up to an additional 66,297,404 shares of common stock will be eligible for sale in the public market, 70.6% of which 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.

Upon completion of this offering, 16,939,699 shares of common stock that are either subject to outstanding options or reserved for future issuance under our equity incentive 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 market price of our common stock could decline.

After this offering, the holders of approximately 61,992,534 shares of our common stock will be entitled to rights with respect to the registration of their shares under the Securities Act, subject to the lock-up agreements described above. 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 purchased by affiliates. Any sales of securities by these stockholders could have a material adverse effect on the market our common stock.

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

Prior to this offering, there has been no public market for shares of our common stock. While our common stock has been approved for listing on The Nasdaq Global Market, or Nasdaq, an active trading market for our shares may never develop or be sustained following this offering. The initial public offering price of our common stock has been determined through negotiations between us and the underwriters. This initial public offering price may not be indicative of the market price of our common stock after this offering. In the absence of an active trading market for our common stock, investors may not be able to sell their common stock at or above the initial public offering price or at the time that they would like to sell.

Our executive officers, directors, principal stockholders and their affiliates will continue to exercise significant control over our company after this offering, which will limit your ability to influence corporate matters and could delay or prevent a change in corporate control.

Immediately following the completion of this offering, and disregarding any shares of common stock that they purchase in this offering, the existing holdings of our executive officers, directors, principal stockholders and their affiliates, including entities affiliated with SoftBank Vision Fund and Third Rock Ventures, will represent beneficial ownership, in the aggregate, of approximately 55.0% of our outstanding common stock, assuming no exercise of the underwriters' option to acquire additional common stock in this offering and assuming we issue the number of shares of common stock as set forth on the cover page of this prospectus. As a result, these stockholders, if they act together, will be able to influence our management and affairs and control the outcome of matters submitted to our stockholders for approval, including the election of directors and any sale, merger, consolidation, or sale of all or substantially all of our assets. These stockholders acquired their shares of common stock for substantially less than the price of the shares of common stock being acquired in this offering, and these stockholders may have interests, with respect to their common stock, that are different from those of investors in this offering and the concentration of voting power among these stockholders may have an adverse effect on the price of our common stock. In addition, this concentration of ownership might adversely affect the market price of our common stock by:

- delaying, deferring or preventing a change of control of us;
- impeding a merger, consolidation, takeover or other business combination involving us; or
- discouraging a potential acquirer from making a tender offer or otherwise attempting to obtain control of us.

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

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

You will suffer immediate and substantial dilution in the net tangible book value of the common stock you purchase in this offering. Based on the initial public offering price of $20.00 per share, purchasers of common stock in this offering will experience immediate dilution of $11.89 per share in net tangible book value of the common stock. In addition, investors purchasing common stock in this offering will contribute 32.4% of the total

amount invested by stockholders since inception but will only own 18.0% of the shares of common stock outstanding. In the past, we issued options and other securities to acquire common stock at prices significantly below the initial public offering price. To the extent these outstanding securities are ultimately exercised, investors purchasing common stock in this offering will sustain further dilution. See "Dilution" for a more detailed description of the dilution to new investors in the offering.

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

We will have considerable discretion in the application of the net proceeds of this offering. We intend to use the net proceeds from this offering to fund discovery and clinical development efforts as well as further expansion of our manufacturing platform and capabilities, and infrastructure to support our pipeline, and to fund new and ongoing research activities, working capital and other general corporate purposes, which may include funding for the hiring of additional personnel, capital expenditures and the costs of operating as a public company. As a result, investors will be relying upon management's judgment with only limited information about our specific intentions for the use of the balance of the net proceeds of this offering. We may use the net proceeds for purposes that do not yield a significant return or any return at all for our stockholders. In addition, pending their use, we may invest the net proceeds from this offering in a manner that does not produce income or that loses value.

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

Under Section 382 of the Internal Revenue Code of 1986, as amended, or the IRC, if a corporation undergoes an "ownership change" (generally defined as a greater than 50% change (by value) in the ownership of its equity over a three year period), the corporation's ability to use its pre-change net operating loss carryforwards and certain other pre-change tax attributes to offset its post-change income may be limited. We may have experienced such ownership changes in the past, and we may experience ownership changes in the future as a result of this offering or subsequent shifts in our stock ownership, some of which are outside the Company's control. As of December 31, 2019, we had federal net operating loss carryforwards of approximately $154.3 million, and our ability to utilize those net operating loss carryforwards could be limited by an "ownership change" as described above, which could result in increased tax liability to the Company.

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

On December 22, 2017, the Tax Cuts and Jobs Act, or TCJA, was signed into law, which significantly reformed the IRC. The TCJA, among other things, contains significant changes to corporate and individual taxation, some of which could adversely impact an investment in our common stock. You are urged to consult your tax adviser regarding the implications of the TCJA on an investment in our common stock.

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

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

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

As a public company, and particularly after we are no longer an "emerging growth company," we will incur significant legal, accounting and other expenses that we did not incur as a private company. In addition, the

Sarbanes-Oxley Act of 2002 and rules subsequently implemented by the Securities and Exchange Commission and Nasdaq have imposed various requirements on public companies, including establishment and maintenance of effective disclosure and financial controls and corporate governance practices. Our management and other personnel will need to devote a substantial amount of time to these compliance initiatives. Moreover, these rules and regulations will increase our legal and financial compliance costs and will make some activities more time-consuming and costly. For example, we expect that these rules and regulations may make it more difficult and more expensive for us to obtain director and officer liability insurance.

Pursuant to Section 404, we will be required to furnish a report by our management on our internal control over financial reporting, including an attestation report on internal control over financial reporting issued by our independent registered public accounting firm. However, while we remain an emerging growth company, we will not be required to include an attestation report on internal control over financial reporting issued by our independent registered public accounting firm. To achieve compliance with Section 404 within the prescribed period, we will be engaged in a process to document and evaluate our internal control over financial reporting, which is both costly and challenging. In this regard, we will need to continue to dedicate internal resources, potentially engage outside consultants and adopt a detailed work plan to assess and document the adequacy of internal control over financial reporting, continue steps to improve control processes as appropriate, validate through testing that controls are functioning as documented and implement a continuous reporting and improvement process for internal control over financial reporting. Despite our efforts, there is a risk that neither we nor our independent registered public accounting firm will be able to conclude within the prescribed timeframe that our internal control over financial reporting is effective as required by Section 404. This could result in an adverse reaction in the financial markets due to a loss of confidence in the reliability of our financial statements. In additional, if we are not able to continue to meet these requirements, we may not be able to remain listed on Nasdaq.

Anti-takeover provisions in our charter documents and under Delaware law could make an acquisition of us, which may be beneficial to our stockholders, more difficult and may prevent attempts by our stockholders to replace or remove our current management.

Our fourth amended and restated certificate of incorporation, which will become effective immediately prior to the completion of this offering, and our amended and restated bylaws, which became effective upon the effectiveness of the registration statement of which this prospectus is a part, 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 the stockholders may be called only by the board of directors acting pursuant to a resolution approved by the affirmative vote of a majority of the directors then in office, and special meetings of stockholders may not be called by any other person or persons;
- 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 (2/3) 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 a majority of all outstanding shares of our voting stock to amend any bylaws by stockholder action and not less than two-thirds (2/3) of all outstanding shares of

our voting stock to amend specific provisions of our fourth amended and restated certificate of incorporation; and

- the authority of the board of directors to issue preferred stock on terms determined by the board of directors without stockholder approval, which 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 Corporate 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 fourth 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.

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 the periodic reporting requirements of the Exchange Act. We designed our disclosure controls and procedures to reasonably assure that information we must disclose in reports we file or submit under the Exchange Act is accumulated and communicated to management, and recorded, processed, summarized and reported within the time periods specified in the rules and forms of the SEC. We believe that any disclosure controls and procedures or internal controls and procedures, no matter how well-conceived and operated, can provide only reasonable, not absolute, assurance that the objectives of the control system are met. These inherent limitations include the 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 due to error or fraud may occur and not be detected.

Our amended and restated bylaws designate specific courts as the exclusive forum for certain litigation that may be initiated by the Combined Company's stockholders, which could limit its stockholders' ability to obtain a favorable judicial forum for disputes with us.

Pursuant to our amended and restated bylaws, unless we consent in writing to the selection of an alternative forum, the Court of Chancery of the State of Delaware is the sole and exclusive forum for any state law claims for (1) any derivative action or proceeding brought on our behalf; (2) any action asserting a claim of or based on a breach of a fiduciary duty owed by any director, officer or other employee of ours to us or our stockholders; (3) any action asserting a claim pursuant to any provision of the Delaware General Corporation Law, our fourth amended and restated certificate of incorporation or our amended and restated bylaws; or (4) any action asserting a claim governed by the internal affairs doctrine, or the Delaware Forum Provision. The Delaware Forum Provision will not apply to any causes of action arising under the Securities Act or the Exchange Act. Our amended and restated bylaws further provide that unless we consent in writing to the selection of an alternative forum, the United States District Court for the District of Massachusetts shall be the sole and exclusive forum for resolving any complaint asserting a cause of action arising under the Securities Act, or the Federal Forum Provision. In addition, our amended and restated bylaws provide that any person or entity purchasing or otherwise acquiring any interest in shares of our capital stock is deemed to have notice of and consented to the Delaware Forum Provision and the Federal Forum Provision; provided, however, that stockholders cannot and will not be deemed to have waived our compliance with the federal securities laws and the rules and regulations thereunder.

We recognize that the Delaware Forum Provision and the Federal Forum Provision in our amended and restated bylaws may impose additional litigation costs on stockholders in pursuing any such claims, particularly if the stockholders do not reside in or near the State of Delaware or the Commonwealth of Massachusetts. Additionally, the forum selection clauses in our amended and restated bylaws may limit our stockholders' ability to bring a claim in a judicial forum that they find favorable for disputes with us or our directors, officers or employees, which may discourage the filing of lawsuits against us and our directors, officers and employees, even though an action, if successful, might benefit our stockholders. In addition, while the Delaware Supreme Court ruled in March 2020 that federal forum selection provisions purporting to require claims under the Securities Act be brought in federal court are "facially valid" under Delaware law, there is uncertainty as to whether other courts will enforce our Federal Forum Provision. If the Federal Forum Provision is found to be unenforceable, we may incur additional costs associated with resolving such matters. The Federal Forum Provision may also impose additional litigation costs on stockholders who assert that the provision is not enforceable or invalid. The Court of Chancery of the State of Delaware and the United States District Court for the District of Massachusetts may also reach different judgments or results than would other courts, including courts where a stockholder considering an action may be located or would otherwise choose to bring the action, and such judgments may be more or less favorable to us than our stockholders.

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

The trading market for our common stock will rely in part on the research and reports that industry or financial analysts publish about us or our business. We may never obtain research coverage by industry or financial analysts. If no or few analysts commence coverage of us, the trading price of our stock would likely decrease. Even if we do obtain analyst coverage, if one or more of the analysts covering our business downgrade their evaluations of our stock, the price of our stock could decline. If one or more of these analysts cease to cover our stock, we could lose visibility in the market for our stock, which in turn could cause our stock price to decline.

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

The market price of our common stock may be volatile. The stock market in general, and Nasdaq and 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. In the past, companies that have experienced volatility in the market price of their stock have been subject to securities class action litigation. We may be the target of this type of litigation in the future. Securities litigation against us could result in substantial costs and divert our management's attention from other business concerns, which could seriously harm our business.

SPECIAL NOTE REGARDING FORWARD-LOOKING STATEMENTS

This prospectus, including the sections entitled “Prospectus Summary,” “Risk Factors,” “Management’s Discussion and Analysis of Financial Condition and Results of Operations,” and “Business,” contains express or implied forward-looking statements that are based on our management’s belief and assumptions and on information currently available to our management. Although we believe that the expectations reflected in these forward-looking statements are reasonable, these statements relate to future events or our future operational or financial performance, and involve known and unknown risks, uncertainties, and other factors that may cause our actual results, performance or achievements to be materially different from any future results, performance or achievements expressed or implied by these forward-looking statements. Forward-looking statements in this prospectus include, but are not limited to, statements about:

- the initiation, timing, progress, results, and cost of our research and development programs and our current and future preclinical and clinical studies, including statements regarding the timing of initiation and completion of studies or trials and related preparatory work, the period during which the results of the trials will become available, and our research and development programs;
- our ability to identify research priorities and apply a risk-mitigated strategy to efficiently discover and develop product candidates, including by applying learnings from one program to other programs and from one modality to our other modalities;
- our ability and the potential to successfully manufacture our drug substances, delivery vehicles, and product candidates for preclinical use, for clinical trials and on a larger scale for commercial use, if approved;
- the ability and willingness of our third-party strategic collaborators to continue research and development activities relating to our development candidates and product candidates;
- our ability to obtain funding for our operations necessary to complete further development and commercialization of our product candidates;
- our ability to obtain and maintain regulatory approval of our product candidates;
- our ability to commercialize our products, if approved;
- the pricing and reimbursement of our product candidates, if approved;
- the implementation of our business model, and strategic plans for our business, product candidates, and technology;
- the scope of protection we are able to establish and maintain for intellectual property rights covering our product candidates and technology;
- estimates of our future expenses, revenues, capital requirements, and our needs for additional financing;
- the potential benefits of strategic collaboration agreements, our ability to enter into strategic collaborations or arrangements, and our ability to attract collaborators with development, regulatory and commercialization expertise;
- future agreements with third parties in connection with the commercialization of product candidates and any other approved product;
- the size and growth potential of the markets for our product candidates, and our ability to serve those markets;
- our financial performance;
- the rate and degree of market acceptance of our product candidates;
- 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;

- our ability to produce our products or product candidates with advantages in turnaround times or manufacturing cost;
- the success of competing therapies that are or may become available;
- our ability to attract and retain key scientific or management personnel;
- the impact of laws and regulations;
- our use of the proceeds from this offering;
- developments relating to our competitors and our industry;
- the effect of the COVID-19 pandemic, including mitigation efforts and economic effects, on any of the foregoing or other aspects of our business operations, including but not limited to our preclinical studies and future clinical trials; and
- other risks and uncertainties, including those listed under the caption “Risk Factors.”

In some cases, forward-looking statements can be identified by terminology such as “may,” “should,” “expects,” “intends,” “plans,” “anticipates,” “believes,” “estimates,” “predicts,” “potential,” “continue,” or the negative of these terms or other comparable terminology. These statements are only predictions. You should not place undue reliance on forward-looking statements because they involve known and unknown risks, uncertainties and other factors, which are, in some cases, beyond our control and which could materially affect results. Factors that may cause actual results to differ materially from current expectations include, among other things, those listed under the section entitled “Risk Factors” and elsewhere in this prospectus. If one or more of these risks or uncertainties occur, or if our underlying assumptions prove to be incorrect, actual events or results may vary significantly from those implied or projected by the forward-looking statements. No forward-looking statement is a guarantee of future performance. You should read this prospectus and the documents that we reference in this prospectus and have filed with the SEC as exhibits to the registration statement, of which this prospectus is a part, completely and with the understanding that our actual future results may be materially different from any future results expressed or implied by these forward-looking statements.

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.

This prospectus includes statistical and other industry and market data that we obtained from industry publications and research, surveys and studies conducted by third parties. Industry publications and third-party research, surveys and studies generally indicate that their information has been obtained from sources believed to be reliable, although they do not guarantee the accuracy or completeness of such information. We are responsible for all of the disclosure contained in this prospectus, and we believe that these sources are reliable; however, we have not independently verified the information contained in such publications.

USE OF PROCEEDS

We estimate that our net proceeds from the sale of shares of our common stock in this offering will be approximately $369.0 million, or $424.8 million if the underwriters exercise in full their option to purchase additional shares, based on the initial public offering price of $20.00 per share, and after deducting underwriting discounts and commissions and estimated offering expenses payable by us.

We currently expect to use our net proceeds from this offering, together with our existing cash, cash equivalents and marketable securities, as follows:

- approximately $100.0 million to $120.0 million to fund the remainder of our Phase 1 and Phase 1b exploratory trials for RLY-1971 and a portion of our confirmatory Phase 2/3 trials;
- approximately $130.0 million to $155.0 million to fund our Phase 1 exploratory trial for RLY-4008 and a portion of our confirmatory Phase 2/3 trials;
- approximately $70.0 million to $85.0 million to identify a lead development candidate and conduct IND-enabling studies for RLY-PI3K1047 and a portion of our Phase 1 and Phase 1b exploratory trials;
- approximately $115.0 million to $135.0 million for the continued development of our discovery programs; and
- the remaining proceeds for general corporate purposes, which may include the hiring of additional personnel, capital expenditures and the costs of operating as a public company.

Our expected use of the net proceeds from this offering represents our intentions based upon our current plans and business conditions. As of the date of this prospectus, we cannot predict with certainty all of the particular uses for the net proceeds to be received upon the completion of this offering or the amounts that we will actually spend on the uses set forth above and we expect that we will require additional funds in order to fully accomplish the specified uses of the proceeds of this offering. We may also use a portion of the net proceeds to in-license, acquire, or invest in complementary businesses or technologies to continue to build our pipeline, research and development capabilities and our intellectual property position, although we currently have no agreements, commitments, or understandings with respect to any such transaction.

Due to the many inherent uncertainties in the development of our product candidates, the amounts and timing of our actual expenditures may vary significantly depending on numerous factors, including the progress of our research and development, the timing of patient enrollment and evolving regulatory requirements, the timing and success of preclinical studies, our ongoing clinical study or clinical studies we may commence in the future, the timing of regulatory submissions, any strategic alliances that we may enter into with third parties for our product candidates or strategic opportunities that become available to us, and any unforeseen cash needs.

Pending our use of the net proceeds from this offering, we intend to invest the net proceeds in a variety of capital preservation instruments, including short-term and long-term interest-bearing instruments, investment-grade securities, and direct or guaranteed obligations of the U.S. government. We cannot predict whether the proceeds invested will yield a favorable return. Our management will retain broad discretion in the application of the net proceeds we receive from our initial public offering, and investors will be relying on the judgment of our management regarding the application of the net proceeds.

DIVIDEND POLICY

We have never declared or paid any cash dividends on our capital stock. We currently intend to retain all available funds and any future earnings to fund the growth and development of our business. We do not intend to pay cash dividends to our stockholders in the foreseeable future. Any future determination to declare dividends will be made at the discretion of our board of directors and will depend on our financial condition, operating results, capital requirements, general business conditions, and other factors that our board of directors may deem relevant. Investors should not purchase our common stock with the expectation of receiving cash dividends.

CAPITALIZATION

The following table sets forth our cash, cash equivalents, restricted cash, and investments and our capitalization as of March 31, 2020:

- on an actual basis;
- on a pro forma basis to give effect to (i) the reduction in the conversion price of the Series C preferred stock from $3.21 to $3.027603, which became effective on July 8, 2020, (ii) the conversion of all outstanding shares of our preferred stock into an aggregate of 61,992,534 shares of common stock immediately prior to the completion of this offering, (iii) the exercise of options to purchase 95,573 shares of common stock at a weighted average exercise price of $3.84 per share from April 1, 2020 through June 30, 2020 under our 2016 Plan as if the exercises had occurred on March 31, 2020, and (iv) the filing and effectiveness of our fourth amended and restated certificate of incorporation, which will occur upon the closing of this offering; and
- on a pro forma as adjusted basis to give further effect to our sale in this offering of 20,000,000 shares of common stock at the initial public offering price of $20.00 per share, after deducting the underwriting discounts and commissions and estimated offering expenses payable by us.

The following table should be read together with "Management's Discussion and Analysis of Financial Condition and Results of Operations," "Description of Capital Stock," and the consolidated financial statements and related notes appearing elsewhere in this prospectus.

	As of March 31, 2020		
	Actual	Pro Forma	Pro Forma As Adjusted
	(in thousands, except share and per share data)		
Cash, cash equivalents, restricted cash, and investments	$ 335,081	$ 335,448	$ 704,448
Convertible preferred stock (Series A, Series B, and Series C), $0.001 par value; 337,272,859 shares authorized; 212,642,857 shares issued and outstanding, actual; no shares authorized, issued or outstanding, pro forma and pro forma as adjusted	537,781	—	—
Stockholders' (deficit) equity:			
Preferred stock, $0.001 par value; no shares authorized, issued or outstanding, actual; 10,000,000 shares authorized, no shares issued or outstanding, pro forma and pro forma as adjusted	—	—	—
Common stock, $0.001 par value; 260,000,000 shares authorized, 4,787,635 shares issued and 4,333,837 shares outstanding, actual; 150,000,000 shares authorized, 66,875,742 shares issued and 66,421,944 shares outstanding, pro forma; 150,000,000 shares authorized, 86,875,742 shares issued and 86,421,944 shares outstanding, pro forma as adjusted	4	66	86
Additional paid-in capital	10,619	548,705	917,685
Accumulated other comprehensive income	1,394	1,394	1,394
Accumulated deficit	(214,368)	(214,368)	(214,368)
Total stockholders' (deficit) equity	(202,351)	335,797	704,797
Total capitalization	$ 335,430	$ 335,797	$ 704,797

The actual, pro forma, and pro forma as adjusted information set forth in the table excludes:

- 7,471,087 shares of common stock issuable upon the exercise of stock options outstanding as of June 30, 2020, at a weighted average exercise price of $5.05 per share;

- 769,354 shares of common stock reserved for future issuance as of June 30, 2020 under our 2016 Plan, which ceased to be available for issuance at the time that our 2020 Stock Plan became effective;
- 8,376,080 shares of our common stock that became available for future issuance under our 2020 Stock Plan, which includes 769,354 shares of common stock available for issuance as of June 30, 2020 under our 2016 Plan and which became effective in connection with the completion of this offering; and
- 1,092,532 shares of our common stock that became available for future issuance under our ESPP, which became effective in connection with the completion of this offering.

DILUTION

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

Our historical net tangible book value (deficit) as of March 31, 2020 was $(202.4) million, or $(42.27) per share of our common stock. Our historical net tangible book value (deficit) is the amount of our total tangible assets less our total liabilities and preferred stock, which is not included within stockholders' equity (deficit). Historical net tangible book value (deficit) per share represents our historical net tangible book value (deficit) divided by the 4,787,635 shares of our common stock, which includes 453,798 shares of non-vested restricted common stock, as of March 31, 2020.

Our pro forma net tangible book value as of March 31, 2020 was $335.8 million, or $5.02 per share of our common stock. Pro forma net tangible book value represents the amount of our total tangible assets less our total liabilities, after giving effect to (i) the automatic conversion of all outstanding shares of our preferred stock into an aggregate of 61,992,534 shares of our common stock immediately prior to the completion of this offering and (ii) the exercise of options to purchase 95,573 shares of common stock at a weighted average exercise price of $3.84 per share from April 1, 2020 through June 30, 2020 under our 2016 Plan as if the exercises had occurred on March 31, 2020. Pro forma net tangible book value per share represents pro forma net tangible book value divided by the total number of shares outstanding as of March 31, 2020, after giving effect to (i) the automatic conversion of all outstanding shares of our preferred stock into common stock immediately prior to the completion of this offering and (ii) the exercise of options to purchase 95,573 shares of common stock at a weighted average exercise price of $3.84 per share from April 1, 2020 through June 30, 2020 under our 2016 Plan as if the exercises had occurred on March 31, 2020.

After giving further effect to our issuance and sale of 20,000,000 shares of our common stock in this offering at the initial public offering price of $20.00 per share, and after deducting underwriting discounts and commissions and estimated offering expenses payable by us, our pro forma as adjusted net tangible book value as of March 31, 2020 would have been $704.8 million, or $8.11 per share. This represents an immediate increase in pro forma as adjusted net tangible book value per share of $3.09 to existing stockholders and immediate dilution of $11.89 in pro forma as adjusted net tangible book value per share to new investors purchasing common stock in this offering. Dilution per share to new investors is determined by subtracting pro forma as adjusted net tangible book value per share after this offering from the initial public offering price per share paid by new investors. The following table illustrates this dilution on a per share basis:

Initial public offering price per share		$20.00
Historical net tangible book value (deficit) per share as of March 31, 2020	$(42.27)	
Increase per share attributable to the automatic conversion of preferred stock upon the closing of this offering	47.29	
Pro forma net tangible book value per share as of March 31, 2020	5.02	
Increase in pro forma as adjusted net tangible book value per share attributable to new investors purchasing shares in this offering	3.09	
Pro forma as adjusted net tangible book value per share after this offering		8.11
Dilution per share to new investors purchasing shares in this offering		$11.89

If the underwriters exercise their option to purchase additional shares in full, our pro forma as adjusted net tangible book value per share after this offering would be $8.46 per share, representing an immediate additional increase in pro forma as adjusted net tangible book value per share of $0.35 to existing stockholders and immediate additional dilution in pro forma as adjusted net tangible book value per share of $0.35 to new

investors purchasing common stock in this offering, based on the initial public offering price of $20.00 per share, and after deducting underwriting discounts and commissions and estimated offering expenses payable by us. If any shares are issued upon exercise of outstanding options, you will experience further dilution.

The following table summarizes, on the pro forma as adjusted basis described above, the differences between the number of shares of common stock purchased from us, the total consideration paid to us and the average price per share paid by existing stockholders and by new investors purchasing shares of common stock in this offering. The calculation below is based on the initial public offering price of $20.00 per share, before deducting underwriting discounts and commissions and estimated offering expenses payable by us:

	Shares Purchased		Total Consideration		Average Price Per Share
	Number	Percent	Amount (in thousands)	Percent	
Existing stockholders	66,875,742	77.0%	$ 522,074	56.6%	$ 7.81
New investors	20,000,000	23.0	$ 400,000	43.4%	$ 20.00
Total	86,875,742	100.0%	$ 922,074	100.0%	

The table above assumes no exercise of the underwriters' option to purchase additional shares in this offering. If the underwriters' option to purchase additional shares is exercised in full, the number of shares of our common stock held by existing stockholders would be reduced to 74.4% of the total number of shares of our common stock outstanding after this offering, and the number of shares of common stock held by new investors participating in the offering would be increased to 25.6% of the total number of shares of our common stock outstanding after this offering.

The number of shares purchased from us by existing stockholders is based on 4,787,635 shares of our common stock, which includes 453,798 shares of non-vested restricted common stock, as of March 31, 2020, after giving effect to the automatic conversion of all outstanding shares of our preferred stock into an aggregate of 61,992,534 shares of common stock immediately prior to the completion of this offering, and excludes:

- 7,471,087 shares of common stock issuable upon the exercise of stock options outstanding as of June 30, 2020, at a weighted average exercise price of $5.05 per share;
- 769,354 shares of common stock reserved for future issuance as of June 30, 2020 under the 2016 Plan, which ceased to be available for issuance at the time that our 2020 Stock Plan became effective;
- 8,376,080 shares of our common stock that became available for future issuance under our 2020 Stock Plan, which includes 769,354 shares of common stock available for issuance as of June 30, 2020 under our 2016 Plan and which became effective in connection with the completion of this offering; and
- 1,092,532 shares of our common stock that became available for future issuance under our ESPP, which became effective in connection with the completion of this offering.

To the extent that outstanding options are exercised or shares are issued under our 2020 Stock Option and Incentive Plan, you will experience further dilution. In addition, we may choose to raise additional capital due to market conditions or strategic considerations even if we believe we have sufficient funds for our current or future operating plans. To the extent that additional capital is raised through the sale of equity or convertible debt securities, the issuance of these securities may result in further dilution to our stockholders.

SELECTED CONSOLIDATED FINANCIAL DATA

You should read the following summary 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 statement of operations data for the years ended December 31, 2018 and 2019 and the balance sheet data as of December 31, 2018 and 2019 from our audited financial statements appearing at the end of this prospectus. The statement of operations data for the three months ended March 31, 2019 and 2020 and the balance sheet data as of March 31, 2020 have been derived from our unaudited financial statements appearing at the end of this prospectus and have been prepared on the same basis as the audited financial statements. In the opinion of management, the unaudited data reflect all adjustments, consisting only of normal recurring adjustments, necessary for a fair statement of the financial information in those statements. Our historical results are not necessarily indicative of results that should be expected in any future period, and our results for any interim period are not necessarily indicative of results that should be expected for any full year.

	Year Ended December 31,		Three Months Ended March 31,	
	2018	2019	2019	2020
	(in thousands, except share and per share data)			
Statement of Operations Data:				
Operating expenses:				
Research and development expenses	$ 41,034	$ 70,306	$ 13,335	$ 21,700
General and administrative expenses	8,855	13,742	3,067	4,758
Total operating expenses	49,889	84,048	16,402	26,458
Loss from operations	(49,889)	(84,048)	(16,402)	(26,458)
Other income (expense), net:				
Interest income	1,113	8,801	2,277	1,572
Other expense	(9)	(58)	(57)	—
Total other income (expense), net	1,104	8,743	2,220	1,572
Net loss	$ (48,785)	$ (75,305)	$ (14,182)	$ (24,886)
Net loss per share, basic and diluted(1)	$ (19.63)	$ (21.82)	$ (4.59)	$ (5.99)
Weighted average shares of common stock, basic and diluted	2,485,163	3,450,500	3,087,779	4,153,791
Pro forma net loss per share, basic and diluted (unaudited)(2)		$ (1.15)		$ (0.38)
Pro forma weighted average shares of common stock, basic and diluted (unaudited)		65,428,521		66,146,325

(1) See Note 11 to our consolidated financial statements appearing at the end of this prospectus for details on the calculation of basic and diluted net loss per share.

(2) See Note 12 to our consolidated financial statements appearing at the end of this prospectus for details on the calculation of basic and diluted pro forma net loss per share.

	As of December 31,		As of March 31,
	2018	2019	2020
		(in thousands)	
Balance Sheet Data:			
Cash, cash equivalents, restricted cash and investments	$ 422,383	$ 356,694	$ 335,081
Working capital(1)	417,237	348,550	327,118
Total assets	428,611	393,068	370,274
Convertible preferred stock	532,120	537,781	537,781
Total stockholders' deficit	(110,927)	(180,438)	(202,351)

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

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

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

Overview

We are a clinical-stage precision medicines company transforming the drug discovery process with an initial focus on enhancing small molecule therapeutic discovery in targeted oncology. Our company is built upon unparalleled insights into protein motion and how this dynamic behavior relates to protein function. We built our Dynamo platform to integrate an array of leading edge experimental and computational approaches, which allows us to apply our understanding of protein structure and motion to drug discovery.

We are advancing our lead product candidates, RLY-1971 and RLY-4008, and a development candidate selection for a PI3Kα selective mutant program (RLY-PI3K1047 program) for the treatment of patients with advanced solid tumors. We initiated a Phase 1 clinical trial for RLY-1971, our inhibitor of Src homology region 2 domain-containing phosphatase-2 (SHP2), in patients with advanced solid tumors in the first quarter of 2020. We have completed Investigational New Drug, or IND, enabling activities for RLY-4008, our inhibitor of fibroblast growth factor receptor 2 (FGFR2) and expect to initiate a Phase 1 clinical trial for RLY-4008 in patients with advanced solid tumors having oncogenic FGFR2 alterations in the second half of 2020. We anticipate the RLY-PI3K1047 program to be in IND-enabling studies in 2021. While our initial focus is on precision oncology, we believe our Dynamo platform may also be broadly applied to other areas of precision medicine, such as genetic disease. Across both precision oncology and genetic disease, we have five additional discovery stage programs. We are focused on using the novel insights derived from our approach to transform the lives of patients suffering from debilitating and life-threatening diseases through the discovery, development and commercialization of our therapies.

We were incorporated in May 2015. We have devoted substantially all of our resources to developing our lead product candidates developing our innovative experimental and computational approaches on protein motion platform, building our intellectual property portfolio, business planning, raising capital and providing general and administrative support for these operations. To date, we have principally financed our operations through private placements of preferred stock and convertible debt. Through December 31, 2019 and March 31, 2020, we had received gross proceeds of approximately $520 million from sales of our preferred stock and our issuance of convertible debt.

Since it was reported to have surfaced in December 2019, COVID-19 has spread across the world and has been declared a pandemic by the World Health Organization. Efforts to contain the spread of COVID-19 have intensified and the United States, Europe and Asia have implemented severe travel restrictions, social distancing requirements, stay-at-home orders and have delayed the commencement of non-COVID-19-related clinical trials, among other restrictions. As a result, the current COVID-19 pandemic has presented a substantial public health and economic challenge around the world and is affecting our employees, patients, communities and business operations, as well as contributing to significant volatility and negative pressure on the U.S. economy and in financial markets.

While we are currently continuing the clinical trials we have underway, we expect that COVID-19 precautions may directly or indirectly impact the timeline for some of our clinical trials. To date, we have been able to

continue to enroll our patients in phase 1 of our clinical trials for RLY-1971 and currently do not anticipate any interruptions of clinical enrollment. However, we are continuing to assess the potential impact of the COVID-19 pandemic on our current and future business and operations, including our expenses and clinical trials, as well as on our industry and the healthcare system.

Since our inception, we have incurred significant operating losses on an aggregate basis. Our ability to generate product revenue sufficient to achieve profitability will depend on the successful development and eventual commercialization of one or more of our current or future product candidates. Our net losses were $48.8 million and $75.3 million for the years ended December 31, 2018 and 2019, respectively, and $14.2 million and $24.9 million for the three months ended March 31, 2019 and 2020, respectively. As of March 31, 2020, we had an accumulated deficit of $214.4 million. These losses have resulted primarily from costs incurred in connection with research and development activities, licensing and patent investment, and general and administrative costs associated with our operations. We expect to continue to incur significant expenses and increasing operating losses for at least the next several years.

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

- conduct our current and future clinical trials of RLY-1971 and RLY-4008, and pre-clinical research of our RLY-PI3K1047 program;
- initiate and continue research and preclinical and clinical development of our other product candidates;
- utilize our platform to seek to identify additional product candidates;
- pursue marketing approvals for any of our product candidates that successfully complete clinical trials, if any;
- establish a sales, marketing and distribution infrastructure to commercialize any products for which we may obtain marketing approval;
- establish agreements with contract research organizations, or CROs, and contract manufacturing organizations, or CMOs, in connection with our preclinical studies and clinical trials;
- require the manufacture of larger quantities of our product candidates for clinical development and potentially commercialization;
- maintain, expand and protect our intellectual property portfolio;
- acquire or in-license other drugs and technologies;
- hire and retain additional clinical, quality control and scientific personnel; and
- commence operating as a public company, which will require us to add operational, financial and management information systems and personnel, including personnel to support our drug development, any future commercialization efforts and our transition to a public company.

In addition, if we obtain marketing approval for any of our lead product candidates, we expect to incur significant commercialization expenses related to product manufacturing, marketing, sales and distribution.

As a result, we will need additional financing to support our continuing operations. Until such time as we can generate significant revenue from product sales, if ever, we expect to finance our operations through a combination of public or private equity or debt financings or other sources, which may include collaborations with third parties. We may be unable to raise additional funds or enter into such other agreements or arrangements when needed on favorable terms, or at all. If we fail to raise capital or enter into such agreements as and when needed, we may have to significantly delay, scale back or discontinue the development or commercialization of one or more of our product candidates.

Because of the numerous risks and uncertainties associated with product development, we are unable to predict the timing or amount of increased expenses or when or if we will be able to achieve or maintain profitability. Even if we are able to generate revenue from product sales, we may not become profitable. If we fail to become profitable or are unable to sustain profitability on a continuing basis, then we may be unable to continue our operations at planned levels and be forced to reduce or terminate our operations.

As of March 31, 2020, we had cash, cash equivalents and investments of $334.2 million. We believe that the anticipated net proceeds from this offering, together with our existing cash, cash equivalents and investments, will enable us to fund our operating expenses and capital expenditure requirements into 2023. We have based this estimate on assumptions that may prove to be wrong, and we could exhaust our available capital resources sooner than we expect. See “Management’s Discussion and Analysis of Financial Condition and Results of Operations—Liquidity and Capital Resources.”

Components of our Results of Operations

Operating Expenses

Our operating expenses since inception have consisted solely of research and development costs and general and administrative costs.

Research and Development Expenses. Research and development expenses include:

- salaries, benefits and other employee related costs, including stock-based compensation expense, for personnel engaged in research and development functions;
- costs of outside consultants, including their fees, stock-based compensation and related travel expenses;
- expenses incurred under agreements with CROs, CMOs, and other vendors that conduct our clinical trials and preclinical activities;
- costs of acquiring, developing, and manufacturing clinical trial materials and lab supplies;
- costs related to compliance with regulatory requirements; and
- facility costs, depreciation, and other expenses, which include direct and allocated expenses for rent and maintenance of facilities, insurance, and other supplies.

We expense research and development costs as the services are performed or the goods are received. We recognize costs for certain development activities, such as clinical trials, based on an evaluation of the progress to completion of specific tasks using data such as patient enrollment, clinical site activations, or information provided to us by our vendors and our clinical investigative sites. Payments for these activities are based on the terms of the individual agreements, which may differ from the pattern of costs incurred, and are reflected in our financial statements as prepaid or accrued research and development expenses.

We began tracking external development costs by program on January 1, 2020 for programs that have entered clinical trials. We do not allocate internal costs, facilities costs, or other overhead costs to specific programs. The following summarizes our costs by program based on their status in development:

	Three Months Ended March 31, 2020
External costs for program in Phase 1 clinical trials	$ 1,030
External costs for all programs in discovery and pre-clinical studies	11,396
External costs for platform research and other research and development activities	3,046
Employee related expenses	6,228
Total research and development expenses	$ 21,700

Our most advanced development program RLY-1971 is in Phase 1 clinical trials. Programs in discovery and pre-clinical are RLY-4008 and RLY-P13K1047 as well as other earlier stage programs. Costs incurred for these programs include costs incurred to support our discovery research and translational science efforts up to the initiation of Phase 1 clinical development. Platform research and other research and development activities include costs that are not specifically allocated to active product candidates, including facilities costs, depreciation expense, and other costs. Employee related expenses includes salary, wages, stock-based compensation and other costs related to our personnel, which are not allocated to specific programs or activities.

We cannot determine with certainty the duration and costs of future clinical trials of RLY-1971 and future development costs of RLY-4008 and our RLY-P13K1047 program, if, when or to what extent we will generate revenue from the commercialization and sale of any our product candidates for which we obtain marketing approval or our other research and development costs. We may never succeed in obtaining marketing approval for any of our product candidates.

The duration, costs and timing of clinical trials and development of our product candidates will depend on a variety of factors, including:

- the scope, rate of progress, expense and results of our preclinical development activities, any future clinical trials of RLY-1971 and RLY-4008, and our RLY-PI3K1047 program or other product candidates and other research and development activities that we may conduct;
- uncertainties in clinical trial design and patient enrollment or drop out or discontinuation rates;
- establishing an appropriate safety and efficacy profile with IND-enabling studies;
- the initiation and completion of future clinical trial results;
- the timing, receipt and terms of any approvals from applicable regulatory authorities including the U.S. Food and Drug Administration, or FDA, and non-U.S. regulators;
- significant and changing government regulation and regulatory guidance;
- potential additional studies requested by regulatory agencies;
- establishing clinical and commercial manufacturing capabilities or making arrangements with third-party manufacturers in order to ensure that we or our third-party manufacturers are able to make product successfully;
- the impact of any business interruptions to our operations, including the timing and enrollment of patients in our planned clinical trials, or to those of our manufacturers, suppliers, or other vendors resulting from the COVID-19 pandemic or similar public health crisis;

- the expense of filing, prosecuting, defending and enforcing any patent claims and other intellectual property rights; and
- maintaining a continued acceptable safety profile of our product candidates following approval, if any, of our product candidates.

Research and development activities are central to our business model. Product candidates in later stages of clinical development generally have higher development costs than those in earlier stages of clinical development, primarily due to the increased size and duration of later-stage clinical trials. We expect that our research and development expenses will continue to increase for the foreseeable future as we continue clinical trials of RLY-1971 and continued development of RLY-4008 our RLY-PI3K1047 program and continue to identify and develop additional product candidates.

A change in the outcome of any of these variables with respect to the development of a product candidate could mean a significant change in the costs and timing associated with the development of that product candidate. For example, if the U.S. Food and Drug Administration, or FDA, or another regulatory authority were to require us to conduct clinical trials beyond those that we anticipate will be required for the completion of clinical development of a product candidate, or if we experience significant trial delays due to patient enrollment or other reasons, we would be required to expend significant additional financial resources and time on the completion of clinical development.

General and Administrative Expenses

General and administrative expenses consist primarily of salaries and other related costs, including stock-based compensation, for personnel in our 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 consulting services; insurance costs; 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 expect that our general and administrative expenses will increase in the future as we increase our general and administrative personnel headcount to support personnel in research and development and to support our operations generally as we increase our research and development activities and activities related to the potential commercialization of our product candidates. We also expect to incur increased expenses associated with operating as a public company, including costs of accounting, audit, legal, regulatory and tax-related services associated with maintaining compliance with exchange listing and Securities and Exchange Commission, or SEC, requirements, director and officer insurance costs, and investor and public relations costs.

Other Income, Net

Other income, net consists of interest income primarily interest earned on our cash, cash equivalents and investments. We anticipate that our interest income will increase in the future as we expect our investment balances to be higher due to anticipated cash proceeds from this offering.

Income Taxes

Since our inception in 2015, we have not recorded any U.S. federal or state income tax benefits for the net losses we have incurred in any year or for our earned research and development tax credits, due to our uncertainty of realizing a benefit from those items. As of December 31, 2019, we had federal NOL carryforwards of $154.3 million available to reduce taxable income, of which $43.2 million expire beginning in 2035 and $111.1 million do not expire. We have state NOL carryforwards of $162.2 million as of December 31, 2019 available to reduce future state taxable income, which expire at various dates beginning in 2035.

As of December 31, 2019, we also had federal and state research and development tax credit carryforwards of $4.8 million and $1.9 million, respectively, which begin to expire in 2035 and 2030, respectively.

Results of Operations

Comparison of the three months ended March 31, 2019 and 2020

The following table summarizes our results of operations for the three months ended March 31, 2019 and 2020:

	Three Months Ended March 31,		
	2019	2020	Change
	(in thousands)		
Operating expenses:			
Research and development	$ 13,335	$ 21,700	$ 8,365
General and administrative	3,067	4,758	1,691
Total operating expenses	16,402	26,458	10,056
Loss from operations	(16,402)	(26,458)	(10,056)
Other income, net	2,220	1,572	(648)
Net loss	$(14,182)	$(24,886)	$(10,704)

Research and Development Expenses

	Three Months Ended March 31,		
	2019	2020	Change
	(in thousands)		
Employee related expenses	$ 4,342	$ 6,228	$1,886
Outside and consulting services	5,933	10,291	4,358
Clinical trial expenses	—	1,030	1,030
Depreciation	572	713	141
Laboratory supplies and other costs	1,282	2,017	735
Facilities and other allocated expenses	1,206	1,421	215
Total research and development expenses	$13,335	$21,700	$8,365

Research and development expenses were $13.3 million for the three months ended March 31, 2019, compared to $21.7 million for the three months ended March 31, 2020. The increase of $8.4 million was primarily due to $4.4 million of outside and consulting services for our pre-clinical candidates due to an increased number of discovery programs and more programs in later stage pre-clinical trials. The increase also includes $1.9 million of additional employee related costs, including stock-based compensation of $0.3 million and $0.7 million for increased laboratory supplies primarily due to higher headcount, as well as $1.0 million of clinical trial expenses as we commenced phase 1 of our clinical study for RLY-1971 during the three months ended March 31, 2020. While we currently do not anticipate any interruptions in our operations due to COVID-19, it is possible that the COVID-19 pandemic and response efforts could delay our development programs and plans and increase our associated costs.

General and Administrative Expenses

General and administrative expenses were $3.1 million for the three months ended March 31, 2019, compared to $4.8 million for the three months ended March 31, 2020. The increase of $1.7 million was due to $0.8 million of increased personnel costs, including an additional $0.3 million of share-based compensation, to support our infrastructure, $0.4 million of additional professional fees and $0.5 million of increased facilities related and other expenses primarily attributed to our new corporate and laboratory space in 2019.

Other Income, Net

Other income, net, decreased from $2.2 million for the three months ended March 31, 2019 to $1.6 million for the three months ended March 31, 2020 due primarily to lower amounts of cash equivalents and investments as well as a decrease in interest.

Comparison of years ended December 31, 2018 and 2019

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

	Year Ended December 31,		
	2018	2019	Change
	(in thousands)		
Operating expenses:			
Research and development	$ 41,034	$ 70,306	$ 29,272
General and administrative	8,855	13,742	4,887
Total operating expenses	49,889	84,048	34,159
Loss from operations	(49,889)	(84,048)	(34,159)
Interest income and other expense	1,104	8,743	7,639
Net loss	$(48,785)	$(75,305)	$(26,520)

Research and Development Expenses

	Year Ended December 31,		
	2018	2019	Change
	(in thousands)		
Employee related expenses	$11,829	$19,914	$ 8,085
Outside and consulting services	21,753	34,585	12,832
Depreciation of laboratory equipment	1,705	2,410	705
Laboratory supplies and other costs	3,881	7,289	3,408
Facilities and other allocated expenses	1,866	6,108	4,242
Total research and development expenses	$41,034	$70,306	$29,272

Research and development expenses were $41.0 million for the year ended December 31, 2018, compared to $70.3 million for the year ended December 31, 2019. The increase of $29.3 million was primarily due to an increase of $12.8 million in outside and consulting research expenses associated with our pre-clinical candidates, $8.1 million of increased personnel related costs, primarily due to increased headcount, including $0.8 million of additional stock-based compensation, $4.2 million of increased facilities related and other expenses primarily attributable to our new corporate and laboratory space in 2019 and $3.4 million of laboratory supplies and other costs.

General and Administrative Expenses

General and administrative expenses were $8.9 million for the year ended December 31, 2018 compared to $13.7 million for the year ended December 31, 2019. The increase of $4.9 million was primarily due to $2.7 million in increased personnel related costs, including $0.7 million of additional share-based compensation expense, primarily due to increased general and administrative headcount to support the growth of our research and development organization, $1.1 million in increased professional fees, which were primarily legal and outside consultant costs, and $1.0 million in increased facilities related and other expenses attributed to our new corporate and laboratory space in 2019.

Other Income (Expense), Net

Other income, net, increased from $1.1 million for the year ended December 31, 2018 to $8.8 million for the year ended December 31, 2019 due primarily to interest income generated from proceeds from the issuance of Series C convertible preferred stock in December 2018 and in January 2019.

Liquidity and Capital Resources

Since our inception, we have not generated any revenue from product sales or any other sources, and have incurred significant operating losses. We have not yet commercialized any products and we do not expect to generate revenue from sales of any product candidates for several years, if ever. To date, we have financed our operations through private placements of preferred stock and convertible debt. Through March 31, 2020, we had received gross proceeds of $519.8 million from sales of our preferred stock and our issuance of convertible debt. As of March 31, 2020, we had cash, cash equivalents and investments of $334.2 million.

Cash Flows

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

	Year Ended December 31,		Three Months Ended March 31,	
	2018	2019	2019	2020
	(in thousands)			
Cash used in operating activities	$ (44,135)	$ (66,133)	$(10,816)	$ (22,334)
Cash provided by (used in) investing activities	(1,680)	(319,024)	(3,144)	50,371
Cash provided by financing activities	394,972	5,606	5,047	351
Net increase (decrease) in cash, cash equivalents and restricted cash	$349,157	$(379,551)	$ (8,913)	$ 28,388

Operating Activities.

During the three months ended March 31, 2020, operating activities used $22.3 million of cash, primarily resulting from our net loss of $24.9 million, partially offset by non-cash charges of $2.0 million and cash provided by changes in our operating assets and liabilities of $0.6 million. Net cash provided by changes in our operating assets and liabilities of $0.6 million during the three months ended March 31, 2020 consisted of an increase of $0.2 million in accounts payable, accrued expenses and other liabilities as well as a decrease of $0.3 million in prepaid expenses and other current assets, and $0.1 million of operating lease assets, net. The increase in accounts payable, accrued expenses and other current liabilities was largely due to the timing of payments related to research and development costs.

During the three months ended March 31, 2019, operating activities used $10.8 million of cash, primarily resulting from our net loss of $14.2 million, partially offset by non-cash charges of $1.5 million and cash provided by changes in our operating assets and liabilities of $1.9 million. Net cash provided by changes in our operating assets and liabilities of $1.9 million during the three months ended March 31, 2019 consisted of an increase of $1.5 million in accounts payable, accrued expenses and other liabilities as well as a decrease of $0.6 million of operating lease assets, net, partially offset by an increase of $0.2 million in prepaid expenses and other current assets. The increase in accounts payable, accrued expenses and other liabilities was largely due to an increase in external research and development costs. The increase in prepaid expenses and other current assets was due to an increase in external research and development costs.

During the year ended December 31, 2019, operating activities used $66.1 million of cash, primarily resulting from our net loss of $75.3 million, partially offset by non-cash charges of $4.9 million and cash provided by changes in our operating assets and liabilities of $4.3 million. Net cash provided by changes in our operating

assets and liabilities of $4.3 million during the year ended December 31, 2019 consisted of an increase of $5.2 million in accounts payable, accrued expense and other current liabilities as well as a decrease of $1.2 million of operating lease assets, net, partially offset by an increase of $2.1 million in prepaid expenses and other current assets. The increase in accounts payable, accrued expenses and other current liabilities was largely due to an increase in external research and development costs. The increase in prepaid expenses and other current assets was due to an increase in external research and development costs.

During the year ended December 31, 2018, operating activities used $44.1 million of cash, primarily resulting from our net loss of $48.8 million and $0.4 million of cash used from changes in our operating assets, partially offset by non-cash charges of $5.1 million. Net cash used from changes in operating assets and liabilities of $0.4 million during the year ended December 31, 2018 consisted of an increase in prepaid expenses and other current assets of $1.2 million and an increase in operating leases assets, net, of $0.5 million, partially offset by an increase in accounts payable, accrued expenses and other current liabilities of $1.3 million. The increase in prepaid expenses and other current assets was due to an increase in external research and development costs. The increase in accounts payable, accrued expenses and other current liabilities was largely due to an increase in external research and development costs and to a lesser extent an increase in professional fees associated with the Series C convertible preferred stock financing in December 2018.

Investing Activities.

During the three months ended March 31, 2020, investing activities provided $50.4 million, consisting of $51.4 million of net investment maturities, partially offset by $1.0 million for the acquisition of property and equipment.

During the three months ended March 31, 2019, investing activities used $3.1 million, consisting of purchase of property and equipment.

During the year ended December 31, 2019, investing activities used $319.0 million, consisting primarily of $311.0 million of net investment purchases and $8.0 million for the purchase of property and equipment.

During the year ended December 31, 2018, investing activities used $1.7 million of cash, consisting primarily of purchases of property and equipment.

Financing Activities.

During the three months ended March 31, 2020, net cash provided by financing activities was $0.4 million, consisting primarily of net proceeds from the exercise of stock options.

During the three months ended March 31, 2019, net cash provided by financing activities was $5.0 million, consisting of net proceeds from our sales of Series C convertible preferred stock.

During the year ended December 31, 2019, net cash provided by financing activities was $5.6 million, consisting of net proceeds from our sales of Series C convertible preferred stock of $5.0 million and proceeds from the exercise of stock options of $0.6 million.

During the year ended December 31, 2018, net cash provided by financing activities was $395.0 million, consisting primarily of net proceeds from our sales of Series C convertible preferred stock of $394.3 million and proceeds from the issuance of restricted stock of $0.7 million, net of repurchases.

Funding Requirements

We expect our expenses to increase substantially in connection with our ongoing clinical development activities related to RLY-1971, which is still in the early stages of clinical trials, the potential clinical development

activities of RLY-4008 and the ongoing pre-clinical development activities of our RLY-PI3K1047 program. In addition, commencing upon the closing of this offering, we expect to incur additional costs associated with operating as a public company. We expect that our expenses will increase substantially if and as we:

- conduct our current and future clinical trials of RLY-1971 and RLY-4008, and additional preclinical research and development of our RLY-PI3K1047 program, and other early-stage programs;
- initiate and continue research and preclinical and clinical development of our other product candidates;
- seek to identify additional product candidates;
- pursue marketing approvals for any of our product candidates that successfully complete clinical trials, if any;
- establish a sales, marketing and distribution infrastructure to commercialize any products for which we may obtain marketing approval;
- require the manufacture of larger quantities of our product candidates for clinical development and potentially commercialization;
- obtain, maintain, expand and protect our intellectual property portfolio;
- acquire or in-license other drugs and technologies;
- hire and retain additional clinical, quality control and scientific personnel;
- build out new facilities or expand existing facilities to support our ongoing development activity; and
- add operational, financial and management information systems and personnel, including personnel to support our drug development, any future commercialization efforts and our transition to a public company.

As of March 31, 2020, we had cash, cash equivalents and investments of $334.2 million. We believe that the anticipated net proceeds from this offering, together with our existing cash, cash equivalents and investments, will enable us to fund our operating expenses and capital expenditure requirements into 2023. We have based this estimate on assumptions that may prove to be wrong, and we could exhaust our available capital resources sooner than we expect.

Because of the numerous risks and uncertainties associated with the development of RLY-1971, RLY-4008, and our RLY-PI3K1047 programs and other product candidates and programs and because the extent to which we may enter into collaborations with third parties for development of our product candidates is unknown, we are unable to estimate the timing and amounts of increased capital outlays and operating expenses associated with completing the research and development of our product candidates. Our future capital requirements will depend on many factors, including:

- the impact of any business interruptions to our operations, including the timing and enrollment of patients in our planned clinical trials, or to those of our manufacturers, suppliers, or other vendors resulting from the COVID-19 pandemic or similar public health crisis;
- the scope, progress, results and costs of our current and future clinical trials of RLY-1971 and RLY-4008 and additional preclinical research of our RLY-PI3K1047 program;
- the scope, progress, results and costs of our current and future clinical trials of RLY-1971 and additional preclinical research of RLY-4008 and RLY-PI3K1047;
- the scope, progress, results and costs of drug discovery, preclinical research and clinical trials for our other product candidates;
- the number of future product candidates that we pursue and their development requirements;
- the costs, timing and outcome of regulatory review of our product candidates;

- our ability to establish and maintain collaborations on favorable terms, if at all;
- the success of any collaborations that we may enter into with third parties;
- the extent to which we acquire or invest in businesses, products and technologies, including entering into licensing or collaboration arrangements for product candidates, although we currently have no commitments or agreements to complete any such transactions;
- the costs and timing of future commercialization activities, including drug sales, marketing, manufacturing and distribution, for any of our product candidates for which we receive marketing approval, to the extent that such sales, marketing, manufacturing and distribution are not the responsibility of any collaborator that we may have at such time;
- the amount of revenue, if any, received from commercial sales of our product candidates, should any of our product candidates receive marketing approval;
- the costs of preparing, filing and prosecuting patent applications, maintaining and enforcing our intellectual property rights and defending intellectual property-related claims;
- our headcount growth and associated costs as we expand our business operations and our research and development activities; and
- the costs of operating as a public company.

Developing pharmaceutical products, including conducting preclinical studies and clinical trials, is a time-consuming, expensive and uncertain process that takes years to complete, and we may never generate the necessary data or results required to obtain marketing approval for any product candidates or generate revenue from the sale of any product candidate for which we may obtain marketing approval. In addition, our product candidates, if approved, may not achieve commercial success. Our commercial revenues, if any, will be derived from sales of drugs that we do not expect to be commercially available for many years, if ever. Accordingly, we will need to obtain substantial additional funds to achieve our business objectives.

Adequate additional funds may not be available to us on acceptable terms, or at all. We do not currently have any committed external source of funds. To the extent that we raise additional capital through the sale of equity or convertible debt securities, your ownership interest may be diluted, and the terms of these securities may include liquidation or other preferences and anti-dilution protections that could adversely affect your rights as a common stockholder. Additional debt or preferred equity financing, if available, may involve agreements that include restrictive covenants that may limit our ability to take specific actions, such as incurring debt, making capital expenditures or declaring dividends, which could adversely impact our ability to conduct our business, and may require the issuance of warrants, which could potentially dilute your ownership interest.

If we raise additional funds through collaborations, strategic alliances or licensing arrangements with third parties, we may have to relinquish valuable rights to our technology, future revenue streams, research programs, or product 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 collaborations, strategic alliances or licensing arrangements with third parties when needed, we may be required to delay, limit, reduce and/or terminate our product development programs or any future commercialization efforts or grant rights to develop and market product candidates that we would otherwise prefer to develop and market ourselves.

Contractual Obligations and Commitments

The following table summarizes our contractual obligations at December 31, 2019, and the effect that such obligations are expected to have on our liquidity and cash flows in future periods:

	Payments Due by Period				
	Total	Less Than 1 Year	1 - 3 Years	3 - 5 Years	More Than 5 Years
	(in thousands)				
Operating lease commitments(1)	$39,685	$ 3,767	$7,862	$8,323	$ 19,733
Research and license agreement obligations(2)}	3,800	1,800	2,000	—	—
Letter of credit	878	—	—	—	878
Total	$44,363	$ 5,567	$9,862	$8,323	$ 20,611

(1) Represents minimum payments due for our lease of office and laboratory space in Cambridge, Massachusetts under an operating lease agreement that expires in April 2029.

(2) Represents the aggregate license maintenance fees payable under our existing research and licensing agreements with third parties.

We have an Amended and Restated Collaboration and License Agreement with D. E. Shaw Research, LLC, or the DESRES Agreement, which provides that the parties will jointly conduct research efforts with the goal of identifying and developing product candidates. On a product-by-product basis, we have agreed to pay D. E. Shaw Research milestone payments upon the achievement of certain development and regulatory milestone events for products we develop under the DESRES Agreement that are directed to a Category 1 Target or any target that was a Category 1 Target. Such payments for achievement of development and regulatory milestones total up to $7.25 million in the aggregate for each of the first three products we develop, and up to $6.25 million in the aggregate for each product we develop after the first three. In addition, we are obligated to pay D. E. Shaw Research, LLC royalty payments as defined in the agreement.

We also have certain research and license arrangements with other third parties, which provide us with research services with the goal of identifying and developing product candidates until all payment obligations by the Company to the third party have expired. The Company has the right to terminate these agreements with a reasonable period of notice. We are also obligated to pay development milestone payments for up to four targets, each in the range of $4.0 million to $7.0 million, upon the achievement of certain specified contingent events. The Company assessed the milestones at December 31, 2018 and 2019 and March 31, 2020 (unaudited) and concluded no such milestone payments were due.

We enter into contracts in the normal course of business with CROs and CMOs for clinical trials, preclinical research studies and testing, manufacturing and other services and products for operating purposes. These contracts do not contain any minimum purchase commitments and are cancelable by us upon prior notice of 30 days and, as a result, are not included in the table of contractual obligations above. Payments due upon cancelation consist only of payments for services provided and expenses incurred up to the date of cancelation.

Critical Accounting Policies and Use of Estimates

Our management’s discussion and analysis of financial condition and results of operations is based on our financial statements, which have been prepared in accordance with generally accepted accounting principles in the United States, or GAAP. The preparation of our consolidated financial statements and related disclosures requires us to make estimates and assumptions that affect the reported amounts of assets and liabilities, costs and expenses and the disclosure of contingent assets and liabilities in our financial statements. We base our estimates on historical experience, known trends and events and various other factors that we believe are reasonable under the circumstances, the results of which form the basis for making judgments about the carrying values of assets and liabilities that are not readily apparent from other sources. We evaluate our estimates and assumptions on an ongoing basis. Our actual results may differ from these estimates under different assumptions or conditions.

The full extent to which the COVID-19 pandemic will directly or indirectly impact our business, results of operations and financial condition, including expenses, clinical trials and research and development costs, will depend on future developments that are highly uncertain, including as a result of new information that may emerge concerning COVID-19 and the actions taken to contain or treat COVID-19, as well as the economic impact on local, regional, national and international markets. We have made estimates of the impact of COVID-19 within our financial statements and there may be changes to those estimates in future periods. Actual results could differ from our estimates.

While our significant accounting policies are described in more detail in the notes to our consolidated financial statements appearing at the end of 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 Expenses

As part of the process of preparing our consolidated financial statements, we are required to estimate our accrued research and development and manufacturing expenses. This process involves reviewing open contract and purchase orders, communicating with our personnel to identify services that have been performed on our behalf and estimating the level of service performed and the associated costs incurred for the services when we have not yet been invoiced or otherwise notified of the actual costs. The majority of our service providers invoice us in arrears for services performed on a pre-determined schedule or when contractual milestones are met; however, some require advanced payments. We make estimates of our accrued expenses as of each balance sheet date in our financial statements based on facts and circumstances known to us at that time. Examples of estimated accrued research and development expenses include fees paid to:

- CROs in connection with performing research activities on our behalf and conducting preclinical studies and clinical trials on our behalf;
- investigative sites or other service providers in connection with clinical trials;
- vendors in connection with preclinical and clinical development activities; and
- vendors related to product manufacturing and development and distribution of preclinical and clinical supplies.

We base our expenses related to preclinical studies and clinical trials on our estimates of the services received and efforts expended pursuant to quotes and contracts with multiple CROs that conduct and manage preclinical studies and clinical trials on our behalf. The financial terms of these agreements are subject to negotiation and vary from contract to contract, which may result in uneven payment flows. There may be instances in which payments made to our vendors will exceed the level of services provided and result in a prepayment of the expense. Payments under some of these contracts depend on factors such as the successful enrollment of patients and the completion of clinical trial milestones. In accruing fees, we estimate the time period over which services will be performed, enrollment of patients, number of sites activated and the level of effort to be expended in each period. If the actual timing of the performance of services or the level of effort varies from our estimate, we adjust the accrual or amount of prepaid expense accordingly. 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 relative to the actual status and timing of services performed may vary and may result in us reporting amounts that are too high or too low in any particular period. To date, we have not made any material adjustments to our prior estimates of accrued research and development expenses.

Stock-Based Compensation

We measure stock options and other stock-based awards granted to employees, directors and non-employees based on their fair value on the date of grant and recognize compensation expense of those awards over the requisite service period, which is generally the vesting period of the respective award. We recognize the impact

of forfeitures on stock-based compensation expense as forfeitures occur. We apply the straight-line method of expense recognition to all awards with only service-based vesting conditions. For awards with performance-based vesting conditions, we assess the probability that the performance conditions will be achieved at each reporting period. We use the accelerated attribution method to expense the awards over the requisite service period when the performance conditions are deemed probable of achievement.

We have certain options with performance-based vesting conditions whereby the service inception date precedes the accounting grant date and therefore we apply variable accounting such that the stock-based compensation expense to be recognized for the options will ultimately be based on the fair value of the awards on the accounting grant date. Expense is recognized over the implied service period when achievement of the performance based milestones is deemed probable. We use judgement to determine whether and, if so, how many awards are deemed probable of vesting at each reporting period.

We estimate the fair value of each stock option grant on the date of grant using the Black-Scholes option-pricing model, which uses as inputs the fair value of our common stock and assumptions we make for the volatility of our common stock, the expected term of our stock options, the risk-free interest rate for a period that approximates the expected term of our stock options and our expected dividend yield.

Determination of Fair Value of Common Stock

As there has been 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, or compensation committee thereof as of the date of each option grant, with input from management, considering our most recently available 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. Historically, these independent third party valuations of our equity instruments were performed contemporaneously with identified value inflection points.

These 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 or the Practice Aid*. The Practice Aid identifies various available methods for allocating the enterprise value across classes of series of capital stock in determining the fair value of our common stock at each valuation date.

In accordance with the Practice Aid, the probability-weighed expected return method, or PWERM and the Option Pricing Method or OPM were the most appropriate methods for determining the fair value of our common stock based on our stage of development and other relevant factors. Our valuation as of May 2020 contemplated the hybrid method which is a combination of the PWERM and the OPM to allocate the value to the securities. Our valuations in November 2018 and November 2019 were based on the OPM utilizing either the Recent Transactions Method utilizing a Backsolve methodology or Guideline Merger and Acquisition Transaction Method from the Practice Aid.

In addition to considering the results of these third-party valuations, our board of directors considered various objective and subjective factors to determine the fair value of our common stock as of each grant date, including:

- The prices of our convertible preferred stock sold to or exchanged between outside investors in arm's length transactions and the rights, preferences, and privileges or our redeemable preferred securities as compared to those of our common stock, including liquidation preferences of our preferred stock;
- the progress of our research and development programs, including the status and results of preclinical studies and clinical trials for our product candidates
- our stage of development and commercialization of our product candidates and our business strategy;

- external market conditions affecting the biopharmaceutical industry and trends within the biopharmaceutical industry;
- our financial position, including cash on hand, and our historical and forecasted performance and operating results;
- the lack of an active public market for our common stock and our preferred stock;
- the likelihood of achieving a liquidity event, such as an initial public offering, or IPO, or sale of our company in light of prevailing market conditions; and
- the analysis of IPOs and the market performance of similar companies in the biopharmaceutical industry.

Our valuations were performed using the OPM or hybrid method. The method selected was based on availability and the quality of information to develop the assumptions for the methodology.

OPM – The OPM treats common stock and preferred stock 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 stock has value on if the funds available for distribution to stockholders exceed the value of the liquidation preferences at the time of a liquidity event, such as a strategic sale or merger. The common stock is modeled as a call option on the underlying equity value at a predetermined exercise price. In the model, the exercise price is based on a comparison with the total equity value rather than, as in the case of a regular option, a comparison with a per share stock price. Thus, common stock is considered to be a call option with a claim on the enterprise at an exercise price equal to the remaining value immediately after the preferred stock liquidation preference is paid. The OPM uses the Black-Scholes option pricing model to price the call options. This model defines the fair value of securities as functions of the current fair value of a company and uses assumptions such as the anticipated timing of a potential liquidity event and the estimated volatility of the equity securities. The OPM method was used for our November 2018 and November 2019 valuations.

PWERM – Under the PWERM methodology, the fair value of the common stock is estimated based upon an analysis of future values for the company, assuming various outcomes. The common stock value is based on the probability weighted present value of expected future investment returns considering each of the possible outcomes available as well as the rights of each class of stock. The future value of the common stock under each outcome is discounted back to the valuation date at an appropriate risk adjusted discount rate and probability to arrive at an indication of the value for common stock.

Hybrid Method – The Hybrid method is a PWERM where the equity value in one of the scenarios is calculated using an OPM. In the hybrid method used by us for our May 2020 valuation, two types of future event scenarios were considered: an IPO and a trade sale. The enterprise value for the IPO scenario was determined using a market approach, the Guideline IPO Transactions Method. The IPO scenario assumes all of our then outstanding preferred stock would convert into common stock as of the IPO effective date. The enterprise value for the Trade Sale scenario is determined based on the Guideline Merger and Acquisitions Transaction Method and OPM allocation method. The relative probability of each type of future-event scenario was determined by our board of directors based on an analysis of performance and market conditions at the time, including then current IPO valuations of similarly situated companies and expectations as to the timing and likely prospects of future event scenarios.

The assumptions underlying these valuations represented management's best estimates, which involved inherent uncertainties and the application of management's judgment. As a result, if we had used significantly different assumptions or estimates, the fair value of our common stock and our stock-based compensation expense could have been materially different.

Once a public trading market for our common stock has been established in connection with the closing of this offering, it will no longer be necessary for our board of directors to estimate the fair value of our common stock in connection with our accounting for granted stock options and other such awards we may grant, as the fair value of our common stock will be determined based on the quoted market price of our common stock.

Grant date	Number of shares subject to option grants	Per share exercise price of options	Fair value of common stock per share on date of option grant
March 15, 2019 – November 18, 2019	2,923,246	$ 5.04	$ 5.04
December 2, 2019 – May 11, 2020	515,500	5.22	5.22
March 2, 2020	1,960,547	5.22	(1)
June 23, 2020	188,683	14.06	14.06

(1) Represents options to purchase 1,960,547 shares of common stock at a per share exercise price of $5.22, which were authorized on March 2, 2020, for which the commencement of vesting is based on the achievement of certain scientific and operational milestones during a two-year period. The achievement of these milestones is discretionary and subject to approval by our board of directors. As a result, the grant date for accounting purposes will not be determined until the board of directors approves the achievement of the specified milestones. The Company will therefore apply variable accounting for these awards and the stock-based compensation expense to be recognized for the options will ultimately be based on the fair value of the awards on the accounting grant date. The Company determined that the awards were not probable of vesting at March 31, 2020, and therefore no stock-based compensation expense was recorded in the three months ended March 31, 2020.

On June 23, 2020, the Company's board of directors, in its discretion, determined that the performance milestones related to 25% of the performance-based awards, as discussed above, had been achieved. The four year vesting term of awards to purchase 490,136 shares of common stock therefore commenced on June 23, 2020.

Emerging growth company and smaller reporting company status

In April 2012, the Jumpstart Our Business Startups Act of 2012, or the JOBS Act, was enacted. Section 107 of the JOBS Act provides that an "emerging growth company," or an EGC, can take advantage of the extended transition period provided in Section 7(a)(2)(B) of the Securities Act of 1933, as amended, or the Securities Act, for complying with new or revised accounting standards. Thus, an EGC can delay the adoption of certain accounting standards until those standards would otherwise apply to private companies. We have elected to use the extended transition period for new or revised accounting standards during the period in which we remain an emerging growth company; however, we may adopt certain new or revised accounting standards early.

We will remain an emerging growth company until the earliest to occur of: (1) the last day of the fiscal year in which we have more than $1.07 billion in annual revenue; (2) the date we qualify as a "large accelerated filer," with at least $700.0 million of equity securities held by non-affiliates; (3) the date on which we have issued more than $1.0 billion in non-convertible debt securities during the prior three-year period; and (4) the last day of the fiscal year ending after the fifth anniversary of our initial public offering.

We are also a "smaller reporting company" meaning that the market value of our stock held by non-affiliates plus the proposed aggregate amount of gross proceeds to us as a result of this offering is less than $700 million and our annual revenue was less than $100 million during the most recently completed fiscal year. We may continue to be a smaller reporting company after this offering if either (i) the market value of our stock held by non-affiliates is less than $250 million or (ii) our annual revenue was less than $100 million during the most recently completed fiscal year and the market value of our stock held by non-affiliates is less than $700 million. If we are a smaller reporting company at the time we cease to be an emerging growth company, we may continue

to rely on exemptions from certain disclosure requirements that are available to smaller reporting companies. Specifically, as a smaller reporting company we may choose to present only the two most recent fiscal years of audited financial statements in our Annual Report on Form 10-K and, similar to emerging growth companies, smaller reporting companies have reduced disclosure obligations regarding executive compensation.

Off-Balance Sheet Arrangements

We did not have during the periods presented, and we do not currently have, any off-balance sheet arrangements, as defined in the rules and regulations of the Securities and Exchange Commission.

Recently Issued and Adopted Accounting Pronouncements

A description of recently issued accounting pronouncements that may potentially impact our financial position and results of operations is disclosed in Note 2 to our consolidated financial statements appearing at the end of this prospectus.

Quantitative and Qualitative Disclosures about Market Risks

Interest rate risk

We are exposed to market risk related to changes in interest rates of our investment portfolio of cash equivalents and short-term investments. As of March 31, 2020, our cash equivalents consisted of money market funds. As of December 31, 2020, our investments consisted of investments in U.S. Treasury Bills, United States Treasury Bonds, and agency bonds that have contractual maturities of less than one year. Our primary exposure to market risk is interest income sensitivity, which is affected by changes in the general level of U.S. interest rates. The fair value of our marketable securities is subject to change as a result of potential changes in market interest rates, including changes resulting from the impact of the COVID-19 pandemic. The potential change in fair value for interest rate sensitive instruments has been assessed on a hypothetical 100 basis point adverse movement across all maturities. As of March 31, 2020 and December 31, 2019, we estimate that such hypothetical 100 basis point adverse movement would not result in a material impact on our consolidated results of operations.

As of March 31, 2020, we had no debt outstanding and are therefore not exposed to interest rate risk with respect to debt.

Foreign currency exchange risk

All of our employees and our operations are currently located in the United States and our expenses are generally denominated in U.S. dollars. However, we have entered into a limited number of contracts with vendors for research and development services that permit us to satisfy our payment obligations in U.S. dollars (at prevailing exchange rates) but have underlying payment obligations denominated in foreign currencies, including the Euro. We are subject to foreign currency transaction gains or losses on our contracts denominated in foreign currencies. To date, foreign currency transaction gains and losses have not been material to our financial statements, and we have not had a formal hedging program with respect to foreign currency. A 10% increase or decrease in current exchange rates would not have a material effect on our financial results for the years ended December 31, 2019 and 2018 and the three months ended March 31, 2019 and 2020.

BUSINESS

Overview

We are a clinical-stage precision medicines company transforming the drug discovery process with an initial focus on enhancing small molecule therapeutic discovery in targeted oncology. Our company is built upon unparalleled insights into protein motion and how this dynamic behavior relates to protein function. These insights may enable us to more effectively drug protein targets that previously have been intractable (i.e. inadequately drugged or undruggable). We believe we have a differentiated approach to drug these protein targets based on their motion, which enables us to select and advance unique product candidates. We built our Dynamo platform to integrate an array of leading edge experimental and computational approaches, which allows us to apply our understanding of protein structure and motion to drug discovery.

We are advancing a pipeline of medicines to address targets in precision oncology, including our lead product candidates, RLY-1971 and RLY-4008, as well as our PI3Kα mutant selective program (RLY-PI3K1047 program). To date, we have not entered into partnerships to clinically develop or commercialize any of these programs. We initiated a Phase 1 clinical trial for RLY-1971, our inhibitor of Src homology region 2 domain-containing phosphatase-2 (SHP2), in patients with advanced solid tumors in the first quarter of 2020. We have completed Investigational New Drug, or IND, enabling activities for RLY-4008, our inhibitor of fibroblast growth factor receptor 2 (FGFR2) and expect to initiate a Phase 1 clinical trial for RLY-4008 in patients with advanced solid tumors having oncogenic FGFR2 alterations in the second half of 2020. We anticipate the RLY-PI3K1047 program, our program for molecules targeting cancer-associated mutant variants of phosphoinostide 3-kinase alpha (PI3Kα), to be in IND enabling studies in 2021. While our initial focus is on precision oncology, we believe our Dynamo platform may also be broadly applied to other areas of precision medicine, such as genetic disease. In addition to the three product candidates described above, we have five discovery stage programs across precision oncology and genetic disease. We are focused on using the novel insights derived from our approach to transform the lives of patients suffering from debilitating and life-threatening diseases through the discovery, development and commercialization of our therapies.

Precision medicine emerged as an approach for disease treatment as the understanding of the link between genetic alterations, protein dysfunction and diseases evolved. Precision medicine aims to specifically and potently drug genetically validated target proteins (i.e., genetic variants potentially implicated in biology of disease). However, some target proteins thus far have been intractable using conventional drug discovery tools, such as structure-based drug design (SBDD). While SBDD is well-suited to solving some drug discovery problems such as orthosteric site kinase inhibitors, its reliance on static images of protein fragments limits its ability to gain accurate insights into the dynamic behavior of proteins in their natural state, which in turn limits its ability to discover medicines with exquisite specificity. Our approach pivots the understanding of protein targets from the industry-standard, static view, to a novel paradigm based on fundamental insights into protein motion. We then apply these novel insights into protein motion to drug discovery and design, which we term Motion Based Drug Design (MBDD).

The confluence of three forces - the proliferation of readily available genomic data, the evolution of experimental techniques, and advancements in computational power and speed - led to the founding of Relay Therapeutics. We believe we are uniquely situated in our ability to consolidate these advances and, when combined with our world-class team of both experimental and computational experts, integrate these solutions into MBDD to create medicines that will make a transformative difference for patients.

Key drug discovery steps of Our Dynamo Platform

Our Dynamo platform puts protein motion at the center of drug discovery and design, integrating a broad and tailored array of leading-edge experimental and computational approaches, including deploying the Anton 2 supercomputer, which was custom-built by D. E. Shaw Research, LLC, or D. E. Shaw Research, to perform

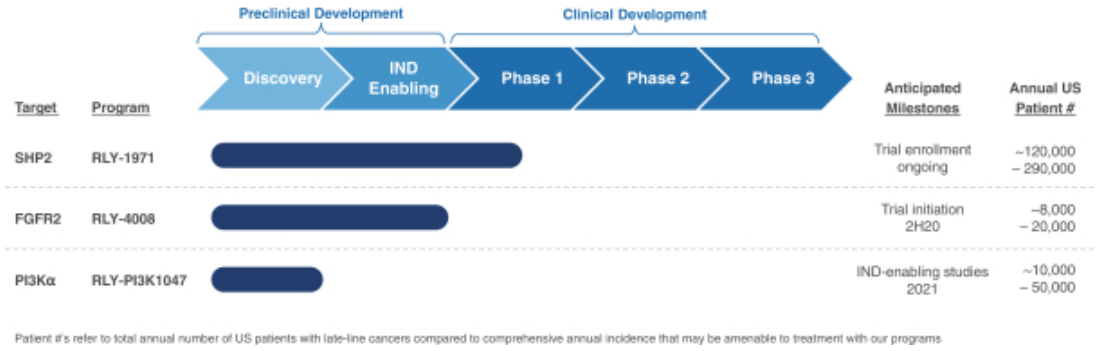
molecular dynamic simulations of proteins. We have access to the Anton 2 supercomputer, which we believe to be the only resource of computational power of its caliber, through our collaboration with D. E. Shaw Research, LLC, or D.E. Shaw Research, pursuant to which we collaborate with D. E. Shaw Research to rapidly develop various protein models. Our use of the Anton 2 supercomputer and our collaboration with D.E. Shaw Research is subject to the terms and conditions of the Amended and Restated Collaboration and License Agreement with D. E. Shaw Research, or the DESRES Agreement. See "—Collaboration and License Agreement with D. E. Shaw Research, LLC." We deploy the power of the platform in three key phases of MBDD discovery:

- **Target Modulation Hypothesis.** By generating fundamental insights into the structure and conformational dynamics of full-length proteins, our Dynamo platform enables us to model a target protein's function, to develop unique motion-based hypotheses for how to modulate the protein's behavior, and to identify potential novel binding sites for new therapeutic agents.
- **Hit Finding and Lead Generation.** The integration of our computational and experimental platforms affords a deeper functional understanding of our targets and enables the design of physiologically relevant activity-based, ligand-centric and computational screens. These highly differentiated screens have the ability to yield a larger number of chemical series and potential therapies to proceed into lead optimization than conventional experimental techniques alone.
- **Lead Optimization.** Our Dynamo platform uses advanced computational models in tight integration with our medicinal chemistry, structural biology, enzymology and biophysics capabilities to predict, design and experimentally evaluate compounds that will achieve the most desirable characteristics, including potency, selectivity, bioavailability, and drug-like properties. We believe our approach enables us to converge on optimized compounds with much greater efficiency than conventional approaches, which are typically highly iterative over an extended timeframe.

Our Dynamo platform has the potential to address a diverse range of disease targets, including those proteins that have not been addressed selectively and potently with existing therapies. While we have initially focused our Dynamo platform on small molecule drug discovery in the area of precision oncology, we believe it could be readily deployed across broader precision and genetic medicine areas as well as other therapeutic modalities, such as protein therapeutics and antibody design.

Our Programs

We have deployed our technology platform to build a pipeline of product candidates to address targets in precision oncology, where there is clear evidence linking target proteins to disease and where molecular diagnostics can unambiguously identify relevant patients for treatment. We believe this approach will increase the likelihood of successfully translating a specific pharmacological mechanism into clinical benefit. The targets associated with all of our current programs are Category 1 Targets under our Amended and Restated Collaboration and License Agreement with D. E. Shaw Research. See "Business—Collaboration and License Agreement with D. E. Shaw Research, LLC."



RLY-1971

RLY-1971 binds and stabilizes SHP2 in its inactive conformation. SHP2 promotes cancer cell survival and growth through the RAS pathway by transducing signals downstream from receptor tyrosine kinases (RTKs). Additionally, activating SHP2 mutations causes enhanced signaling in the absence of ligand stimulation and has been identified as an oncogenic driver in a range of tumors. As a critical signaling node and regulator, SHP2 drives cancer cell proliferation and plays a key role in the way cancer cells develop resistance to targeted therapies. We believe that inhibition of SHP2 could be effective as a monotherapy in cancers with specific alterations and could block a common path that cancer cells exploit to resist other antitumor agents, thus overcoming or delaying the onset of resistance to those therapies.

We are currently evaluating the safety and tolerability of RLY-1971 in a Phase 1 dose escalation study in patients with advanced or metastatic solid tumors. We have dosed 10 patients as of July 8, 2020 and plan to enroll approximately 52 patients in this study. We anticipate providing an update on clinical data and the clinical development plan in 2021. Given the range of cancers that are related to SHP2 dependence, in addition to its potential use in monotherapy settings, we believe RLY-1971 could serve as a backbone for compelling combination therapies. We believe SHP2-mediated cancers affect approximately 125,000 late-line patients annually in both monotherapy and combination therapy settings in the U.S. In the future, if RLY-1971 advances to earlier lines of treatment, we believe it could potentially have applicability to approximately 290,000 patients annually in the U.S.

RLY-4008

RLY-4008 is designed to be an oral, small molecule, selective inhibitor of fibroblast growth factor receptor 2, or FGFR2, a receptor tyrosine kinase that is frequently altered in certain cancers. FGFR2 is one of four members of the FGFR family, a set of closely related proteins with highly similar protein sequences and properties. RLY-4008 demonstrates FGFR2-dependent killing in cancer cell lines, while showing minimal inhibition of other targets, including other members of the FGFR family. We plan to initiate a Phase 1 clinical trial for RLY-4008 in patients with solid tumors having oncogenic FGFR2 alterations in the second half of 2020. We believe FGFR2-mediated cancers affect approximately 8,000 late-line patients annually in the U.S. In the future, if RLY-4008 advances to earlier lines of treatment, we believe it could potentially address approximately 20,000 patients annually in the U.S.

Mutant-PI3Kα Inhibitor Program

RLY-PI3K1047 is a lead compound in our franchise of programs targeting cancer-associated mutant variants of phosphoinositide 3-kinase alpha, or PI3Kα. RLY-PI3K1047 is a small molecule inhibitor of PI3Kα that we designed specifically to target PI3Kα H1047X mutants via a previously undescribed allosteric mechanism. Oral dosing of RLY-PI3K1047 resulted in tumor growth inhibition in mouse xenograft models of PI3Kα H1047R mutant carcinoma. We expect to begin IND-enabling studies for a differentiated PI3Kα H1047X mutant-selective inhibitor in 2021. We believe PI3Kα H1047X mutant cancers affect approximately 10,000 late-line patients annually in the U.S. In the future, if RLY-PI3K1047 advances to earlier lines of treatment, we believe it could potentially be suitable for use in approximately 50,000 patients annually in the U.S.

Two additional mutations of interest for our PI3Kα franchise are E542X and E545X. We estimate there are approximately 15,000 late-line and 60,000 total patients annually in the United States who might benefit from a PI3Kα targeted inhibitor that targets the mutations at E542 and E545.

Discovery Programs

We are deploying our Dynamo platform and MBDD approach to advance multiple discovery-stage precision oncology programs. As with our lead programs, these programs leverage insights into protein conformational dynamics to address high-value, genetically validated oncogenes that previously have been intractable to

conventional drug-discovery approaches. Our Dynamo platform's protein visualization capabilities can be applied to multiple therapeutic areas beyond precision oncology. To further diversify our pipeline, we are leveraging our Dynamo platform to address validated targets in monogenic diseases, where genetic alterations lead to disease-causing defects in protein motion.

Our Strategy

Our mission is to leverage unique insights into protein motion to transform the lives of patients suffering from debilitating and life-threatening diseases through the discovery, development and commercialization of small molecule therapies. We believe that, by placing protein motion at the heart of MBDD discovery, our unique Dynamo platform has the potential to address previously intractable precision medicine targets. To accomplish this, we intend to continue building a team that shares our commitment to patients, to continue to enhance our platform, and to rapidly advance our precision medicine pipeline of product candidates. The key elements of our strategy are to:

Rapidly advance our lead precision oncology programs, RLY-1971, RLY-4008, RLY-PI3K1047, through clinical development and regulatory approval. We believe our lead precision oncology programs have the potential to treat a wide variety of cancers either as monotherapy or in combination regimens. In the first quarter of 2020, we initiated a Phase 1 clinical trial of RLY-1971 and expect to initiate a Phase 1 clinical trial for RLY-4008 in the second half of 2020. In 2021, we expect to have early safety and efficacy data for RLY-4008, to have additional clinical data for RLY-1971 informing future development plans and to be in IND-enabling studies for our RLY-PI3K1047 program. We plan to conduct our clinical studies in genetically-defined patient populations. To potentially mitigate development risks, we will leverage learnings from recently approved precision oncology drugs to inform the clinical and regulatory pathways for our lead oncology programs. If we are successful in achieving clinically meaningful anti-tumor activity across solid tumor types, we plan to meet with regulatory authorities to discuss expedited regulatory approval strategies.

Continue to enhance our unique drug-discovery platform. Our Dynamo platform uniquely integrates a broad range of leading-edge experimental and computational technologies and tools, providing us with fundamental insights into the conformational dynamics of target proteins. We are committed to continuously integrating new computational and experimental tools, technologies and capabilities to enhance the power of our Dynamo platform.

Harness the insights and data generated from our platform against intractable targets in oncology and other therapeutic areas. We have built a drug discovery process that leverages our collaboration with D. E. Shaw Research and their access to the Anton 2 supercomputer and our proprietary computational workflows. We are committed to deploying our Dynamo platform against targets in additional therapeutic areas beyond oncology. Our next focus, outside of oncology, is on rare genetic diseases where protein targets are genetically validated, where defects in protein conformational dynamics are abundant, and where we believe our approach is well-suited to identify therapies with the potential to have transformative impact for patients.

Selectively enter into strategic collaborations to maximize the value of our platform and pipeline. We retain full development and commercialization rights to our pipeline of precision medicine programs. We intend to build a fully integrated biopharmaceutical company and independently pursue the development and commercialization of our key product candidates. Given our potential to generate novel product candidates addressing a wide variety of therapeutic indications, we may enter into strategic partnerships around certain targets, product candidates, disease areas or geographies, if we believe these collaborations could accelerate the development and commercialization of our product candidates, and allow us to realize additional potential in our product candidates and our platform.

Our Team

Our company was founded and continues to be supported by world-class scientific advisors, including Dr. Matt Jacobson, Dr. Mark Murcko and Dr. Dorothee Kern, as well as by D. E. Shaw Research, led by chief scientist

Dr. David E. Shaw. We are leaders in leveraging insights into the dynamic behavior of proteins in drug discovery. We have assembled a scientific team with extensive expertise in leading-edge experimental and computational drug discovery approaches, as well as a development team with extensive experience in the pre-clinical development, translational medicine and clinical development of precision oncology medicines. In aggregate, our team has previously submitted over 70 INDs and 20 NDAs and contributed to the development of more than 20 approved products. Our President and Chief Executive Officer, Dr. Sanjiv K. Patel, has more than 15 years of experience in the biopharmaceutical industry, and has led our key business operations and strategic corporate planning activities since 2017. Dr. Don Bergstrom, our Head of Research and Development has more than 15 years of experience in the biopharmaceutical industry and has held various leadership positions at other companies in oncology drug discovery, development, and translational medicine. Members of our management team have held leadership positions at companies that have successfully discovered, developed and commercialized therapies for various cancers and devastating rare diseases. These companies include Allergan, Algeta, Blueprint Medicines, Eli Lilly, Merck, Novartis, Sanofi, and Vertex. Through March 31, 2020, we have raised approximately $520 million supported by a leading syndicate of investors, including SoftBank Vision Fund, Third Rock Ventures, an affiliate of D. E. Shaw Research, BVF Partners, Casdin Capital, EcoR1 Capital, Foresite Capital, GV, Perceptive Advisors, Alexandria Equities, Tavistock, and Section 32.

Background of Precision Medicine

For most of the past 50 years, the study of the link between genes and disease was focused predominantly on rare, single-gene, inherited diseases. This was primarily due to the limitations of the available tools to interrogate the genome. The completion of the Human Genome Project in 2003, however, began to transform our understanding of genetic alterations, protein dysfunction and disease pathobiology, thereby marking the advent of precision medicine.

The successful sequencing of the human genome relied upon critical advances in computing power and experimental techniques. The constant evolution of these foundational computational and experimental capabilities has led to exponential growth in the molecular understanding of disease, that is, the ability to elucidate a disease's underlying biological dysfunction on a genetic level. For example, over 125 specific genetic alterations across 10 key cellular signaling pathways have been identified across 89% of solid tumors. In addition, we now know that over 4,000 individual genetic alterations, and their associated protein defects, cause over 7,000 rare inherited diseases.

The ever-deeper insights into the molecular basis of disease have ushered in the current era of precision medicine and, more specifically, precision oncology. The pioneering success in precision oncology was the approval of Gleevec, which is used to treat a rare type of leukemia called chronic myelogenous leukemia (CML). In the late 2000's and early 2010's, clinical evidence began to emerge implicating specific target proteins such as ALK, EGFR, RET, ROS, TRK and others in causing cancer. When the industry progressed from first-generation multi-kinase inhibitors of these target proteins to subsequent generation inhibitors, we learned another important lesson: the ability of a drug to specifically and deeply inhibit the protein target of interest while minimizing the inhibition of other closely related protein targets can result in a profound difference in outcome.

We believe the slow progress against the large list of genetically validated targets is fundamentally due to the reliance on conventional drug discovery tools, such as structure-based drug design (SBDD). While SBDD is well-suited to solving some drug discovery problems such as orthosteric site kinase inhibitors, its reliance on static images of protein fragments limits its ability to gain accurate insights into the dynamic behavior of proteins in their natural state, which in turn limits its ability to discover medicines with exquisite specificity.

Protein Motion in Disease

The human genome encodes tens of thousands of different proteins. Proteins are molecular machines that control our most vital cellular functions and to adopt unique structures as determined by their amino acid sequence.

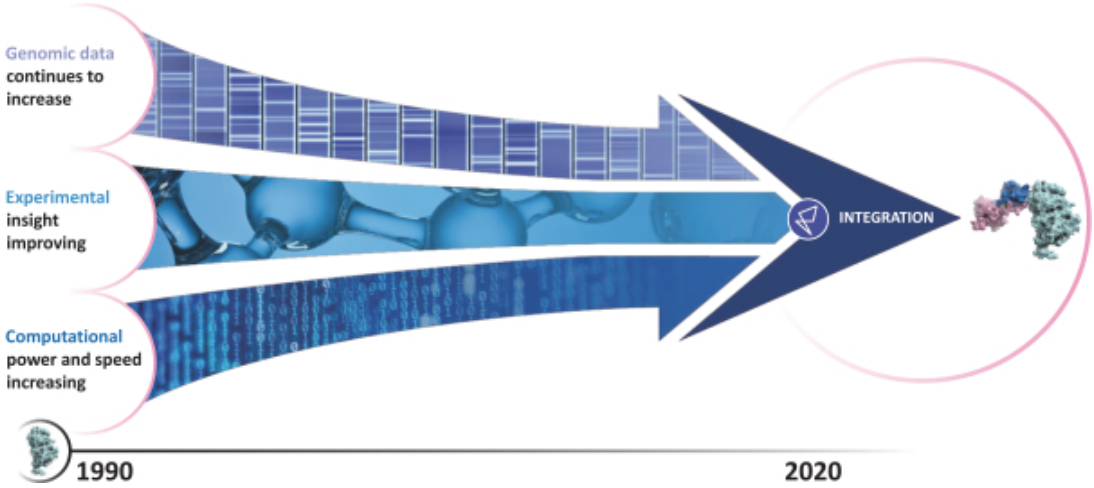
However, proteins are not static objects. They are in constant motion, dynamically adopting ensembles of different conformations. The concept that appropriate protein conformational dynamics, or protein motion, are essential to healthy biological function dates to the 1960s with the understanding that certain proteins have to adopt multiple conformations to carry out their function within the body. For example, in the case of hemoglobin, a well-studied oxygen carrier protein, it was observed that binding of an oxygen molecule modulated hemoglobin's conformation to increase its affinity for additional oxygen molecules. The transition between protein conformations can either occur at relatively short timescales (nanoseconds) or long timescales (seconds) and across varying scales of distance (angstroms to micrometers). Importantly, subtle differences in protein conformational dynamics (on the order of a few angstroms) have been observed in otherwise structurally similar proteins. In addition to these small-scale changes, global motion of proteins can create on and off-states that can be dynamically regulated.

Defects in the conformational dynamics of proteins have been implicated in up to 40% of all diseases. For example, in oncology, gene fusions of receptor tyrosine kinases can result in aberrant protein conformations, such as stable dimerization, which then lead to elevated kinase activity and cancer cell growth. Protein conformational defects can also decrease the activity of proteins. Despite the well-accepted importance of protein conformational dynamics in health and disease, tools to study dynamics have only recently matured. Typical efforts to understand protein structure rely on studying proteins in highly ordered crystals with structural data collected at cryogenic temperatures (-173 °C), resulting in the observation of proteins as static, rigid molecules. However, because proteins can adopt a multitude of conformational states, their biologically active conformations may be poorly represented by a crystal structure. Therefore, these rigid structures do not accurately represent the dynamic nature of a protein in its biological context, which could impede drug design.

Our Dynamo Platform

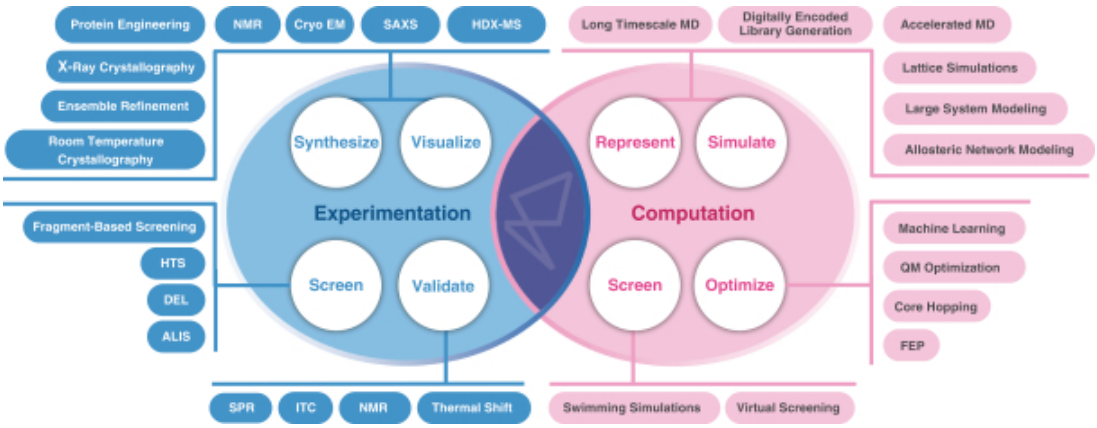
The continued and rapid development of new experimental techniques, such as room-temperature crystallography, and computational techniques, such as molecular dynamics and machine learning, is now enabling the deep understanding of protein motion to discover new therapeutic agents. Dynamo was built to capitalize on these recent advances to develop medicines against protein targets with greater specificity and potency. Using our Dynamo platform, we pivot from industry standard SBDD, which is based on static structures and often relies on incomplete protein fragments, to a novel drug-discovery paradigm based on fundamental insights into protein motion, which we term Motion Based Drug Design (MBDD). We leverage insights from our platform to develop novel, motion-based hypotheses for how to drug target proteins. We can then more rapidly identify and optimize effective lead compounds by integrating powerful experimental and computational tools to sample a much broader range of chemical space than is possible using conventional approaches, which are labor intensive and require significant experimental effort.

In 2016, the confluence of three forces - the proliferation of readily available genomic data, the evolution of experimental techniques, and advances in computational power and speed - led to the founding of Relay Therapeutics. We believe we are uniquely positioned to consolidate these advances and, when combined with our world-class team of experimental and computational experts, integrate these solutions in motion-based drug discovery.



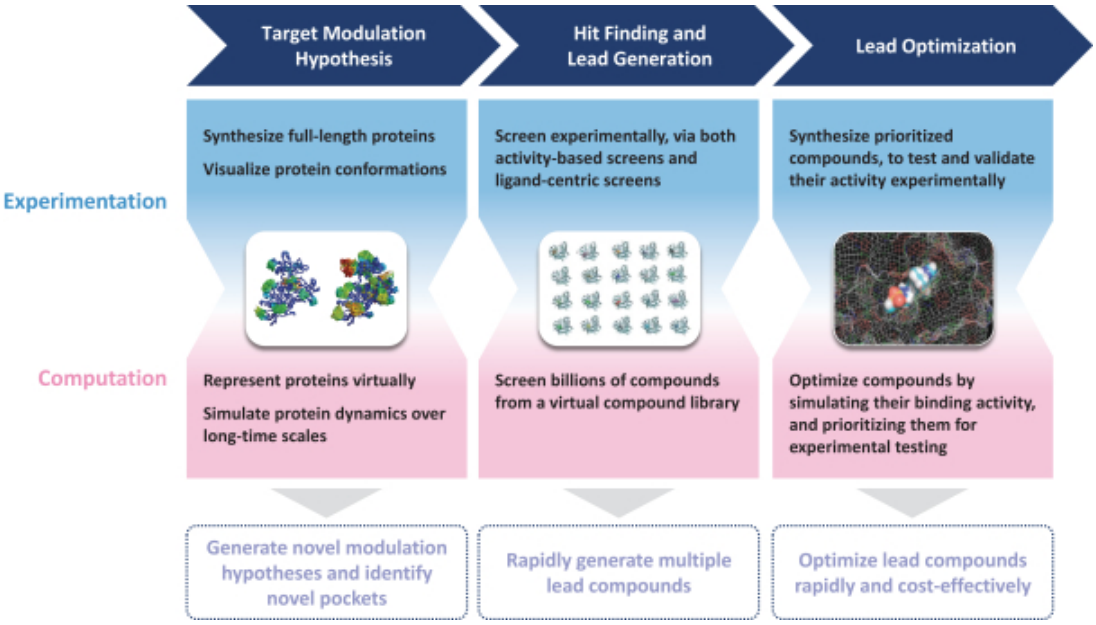
Our platform integrates a broad and tailored array of leading-edge experimental and computational approaches to gain fundamental insights into protein function (**Figure 1**).

Figure 1: Dynamo drug-discovery platform integrates leading-edge experimental and computational tools.



We deploy the power of our Dynamo platform in three key phases of MBDD discovery (**Figure 2**). We first generate a target modulation hypothesis by developing a detailed mechanistic understanding of the dynamic behavior of the target protein and by identifying pockets where binding of a small molecule can impact protein function. Our platform then aids in the efficient generation of lead compounds through an integrated system of experimental and virtual screens. This enables rapid lead optimization by computationally prioritizing compounds for experimental evaluation. And, because each cycle generates new learnings for both our team and our underlying machine learning models, our successful iteration of this process continuously improves our understanding of protein motion which leads to a more effective and efficient drug discovery process.

Figure 2: Dynamo can be deployed across the various stages of drug discovery to provide novel insights and accelerate drug discovery.



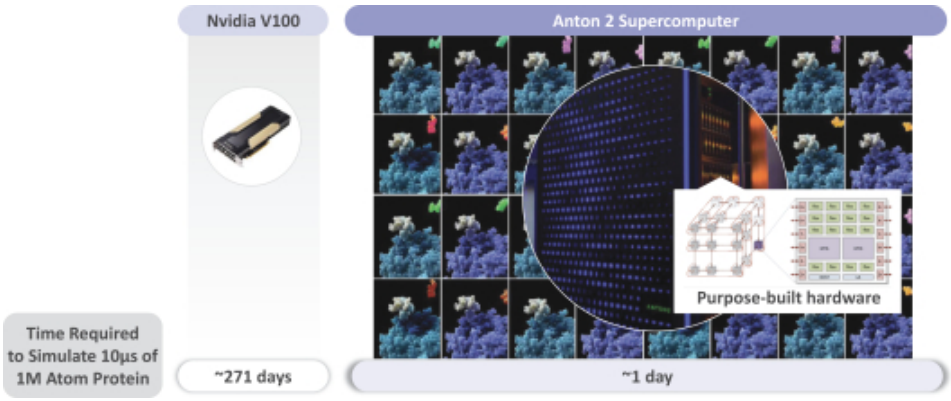
Target Modulation Hypothesis

Our first step is to establish a *target modulation hypothesis* for our protein target of interest.

For each target, the initial goal is to better understand the structure and conformational dynamics of all domains of a protein to generate the target modulation hypothesis. The process typically begins by expressing full-length proteins so we can fully understand the roles of specific domains and accurately capture the differences between the wild-type and mutant forms of the protein (or of different isoforms, etc.). We use a range of leading-edge structural biology techniques (e.g., room temperature X-ray crystallography, Cryo-EM) to visualize these protein conformations in the most physiologically representative context possible. The resulting data allow us to better visualize full-length proteins at atomic resolution. This comprehensive and dynamic visualization enables us to identify potential areas of interest in a protein target that can be exploited in the drug discovery process.

Using a range of protein visualization methods, we can generate a rich experimental understanding of the dynamic conformations of the target protein of interest. We can deploy these experimental data sets in an industry-leading computational platform to generate virtual simulations (molecular dynamics) of the full-length protein moving over long timescales. Long timescale molecular dynamics simulations informed by the experimentally derived protein structural data help us better understand how proteins move and change shape over time. Our collaboration with D. E. Shaw Research, provides us with access to Anton 2, their proprietary supercomputer that was custom-built for performing molecular dynamics simulations – a technique that calculates the forces between each atom and every other atom in a given system at discrete time points in order to model behavior over time. We use MD simulations to predict the behavior of a given protein system, and with our collaborators we have simulated systems of up to 1 million atoms at time slices of 2.5 x10^{-15} seconds. The individual time slices are then stitched together to create a high definition movie of the target protein over biologically relevant timescales, typically tens of microseconds. Other drug discovery approaches may use molecular dynamics, but they are limited to less than 1/100th of the timescale of our simulations. A 10 microsecond simulation of a 1 million atom benchmark protein (satellite tobacco mosaic virus), which requires one day of processing on the Anton 2, would require 271 days on conventional hardware (Nvidia V100) (**Figure 3**).

Figure 3: The Anton 2 supercomputer enables Relay Therapeutics to simulate the motion of significantly larger biomolecules in far shorter periods of time compared to conventional forms of computation (e.g., GPUs and cloud computing).



After understanding the dynamics of the target protein, we focus on identifying mechanisms to modulate the protein with a small molecule drug. There are multiple ways that a small molecule drug may bind to a target protein to impact its function. Molecules bind to a protein by interacting with amino acids which are often situated in a cavity on the protein's surface, called a pocket. Most small molecule drugs modulate the function of the target protein by binding to the pocket that directly mediates the protein's activity ("active" site). We leverage our platform to identify novel pockets that are not the active site but do impact protein function, so called "allosteric" sites. These binding sites are often part of an allosteric regulatory network that we can elucidate through a combination of computationally derived hypotheses and laboratory experiments on full-length proteins. Our ability to identify novel druggable pockets that have not previously been observed provides new handles for gaining isoform or mutant selectivity.

Our understanding of protein motion and modulation from our Dynamo platform informs the strategy and tools we employ for hit finding and lead generation phases.

Hit Finding and Lead Generation

Once we have identified potential binding pockets and established a target modulation hypothesis, we then transition into hit finding and lead generation, where the goal is to identify a molecule that can serve as the starting point for a new drug.

Our Dynamo platform leverages our motion-based functional understanding of target proteins to enable the design of physiologically relevant activity-based and ligand-centric screens. These experimental measurements of biochemical or biophysical activity are then used to identify molecules to modulate our protein targets. Our Dynamo platform encompasses a variety of screening techniques to identify chemical starting points.

In parallel to our experimental screening efforts, we have made investments in our infrastructure that enables us to use cloud-computing to screen billions of molecules from a virtual compound library in days. The vast number of virtual molecules enables us to sample a much wider diversity of chemical space than would be possible through conventional methods.

Given the powerful hit finding approaches we utilize, we are able to generate a broad diversity of novel small molecules that act via our motion-based target modulation hypothesis and are ready to progress into lead optimization.

Lead Optimization

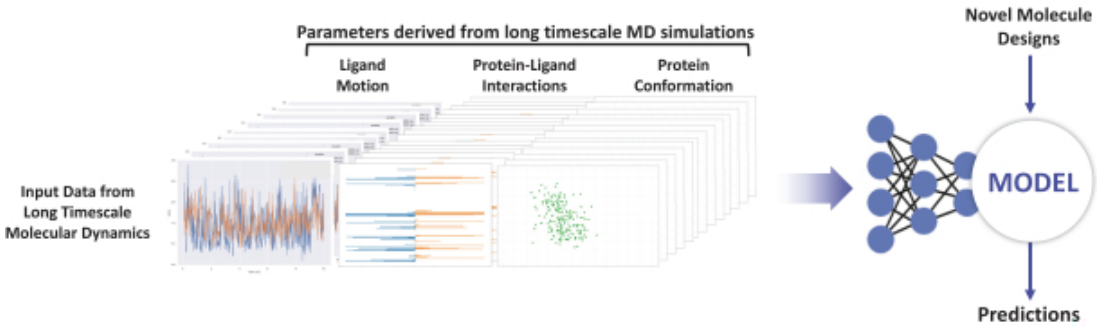
Once we have identified a chemical starting point and generated a lead compound, optimization is necessary to obtain a molecule that has the desired characteristics. Our Dynamo platform uses advanced computational models in tight integration with our medicinal chemistry, structural biology, enzymology and biophysics capabilities to predict and design the compounds that will achieve the most desirable characteristics, including potency, selectivity, bioavailability, and drug-like properties. Conventional optimization of small molecule lead compounds involves a highly iterative process that includes designing and synthesizing thousands of closely related compounds and experimentally testing them in the lab. This process is time consuming and requires significant experimental effort and expense.

During optimization, we leverage long timescale MD simulations to study binding pocket dynamics and to test analogs of our lead compound to prioritize which ones to synthesize and test experimentally.

Once we have made and tested compounds in the lab, we can compare them to our computational predictions. Over time we can improve our computational predictions using the data that we generate experimentally. We believe that this integration of our long timescale molecular dynamics simulations with experimental data accelerates our lead optimization process.

The Anton 2 supercomputer, that we access through our collaboration with D. E. Shaw Research, makes it possible to run thousands of simulations, which generate vast datasets. To take maximum advantage of this data, we use machine learning algorithms to establish relationships between molecular interactions observed in the simulations and biological activity observed in experiments. In **Figure 4** we show how a machine learning model can be trained based on multiple parameters, including ligand motion, protein-ligand interactions and protein conformation, collected during long timescale MD simulations of molecules interacting with our target protein. This model can then be used to make predictions to prioritize the synthesis of new molecules.

Figure 4: Data from long timescale molecular dynamics simulations are used to train machine learning models that can prioritize the next set of molecules to test.



Benefits of Dynamo Platform

Our Dynamo platform was built with the belief that integrating leading-edge computational and experimental approaches would unlock new insight about protein dynamics and ultimately the drug discovery process. We have shown multiple times that we can use this approach to develop novel target modulation hypotheses, generate a broad range of molecular starting points, and rapidly optimize potential drugs. **Figure 5** illustrates the timelines for our first two programs relative to conventional drug discovery. In general, it takes 3 to 5+ years to advance from a validated hit to a development candidate (DC). For our programs, however, we were able to advance from hit to DC in 2 years for RLY-1971 and 18 months for RLY-4008. In addition to the advantage of speed, as compared to conventional SBDD, our platform enables us to explore a greater diversity of chemical

space, as illustrated by the number of chemical series. This breadth increases the intellectual property landscape that we cover and improves our ability to identify development candidates with optimal drug-like properties.

Figure 5: The Relay Therapeutics Dynamo platform compared to conventional drug discovery approaches.

Our Therapeutic Opportunity

While our Dynamo platform could potentially be applied to a wide range of disease-associated protein targets, we currently focus on precision medicine targets, for which alterations in specific genes are known to cause disease. The genetic diseases we pursue include cancers with clear genetic driver alterations in the tumor genome, as well as monogenic diseases where the causal mutations are present at birth.

Precision Oncology

Our initial focus is in the area of precision oncology where we have seen initial proof of platform in our leading precision oncology pipeline. Over 125 genetic driver alterations across 10 canonical cellular signaling pathways have been identified in 89% of tumors. Targeting these genetic drivers could lead to clinically meaningful responses in patients. However, most of these targets have been intractable to conventional drug discovery approaches or are inadequately drugged by approved therapies. We believe our platform has the potential to address many of these targets by leveraging novel insights into protein dynamics.

Monogenic Diseases

Thousands of monogenic (change in a single gene) diseases exist and affect millions of individuals worldwide. Over 4,000 individual genetic drivers, and their associated protein defects, cause over 7,000 rare monogenic phenotypes. However, since 1996, the FDA has approved fewer than 70 therapies to specifically treat these conditions, presenting a vast unmet therapeutic need. We believe our Dynamo platform has the potential to address many of these targets.

Other Precision Medicines Opportunities

The decreasing cost and increasing resolution of genomic data have identified hundreds of additional actionable genetic targets beyond precision oncology and monogenic disease. These include genetically-defined

subpopulations of more common diseases in neurology, immunology and other therapeutic areas. We believe that there are multiple genetically-validated targets in these disease areas that are unaddressed by approved therapies, representing an area of significant unmet need. We believe our Dynamo platform has the potential to address many of these targets.

Our focus on addressing the genetic drivers of disease, also referred to as genetically validated targets, confers several advantages, including:

Clear causal link to disease: Genetic diseases offer an unambiguous causal link between the mutational alteration in a specific gene, disease biology, and a patient's symptoms, such that the translational medicine hypothesis is well-validated at the beginning of a drug discovery program.

Precision medicine opportunity: Because of the strong link between specific genetic alterations and disease symptoms, it is possible to precisely target therapy to genetically identifiable patients who are most likely to respond favorably to a precision medicine.

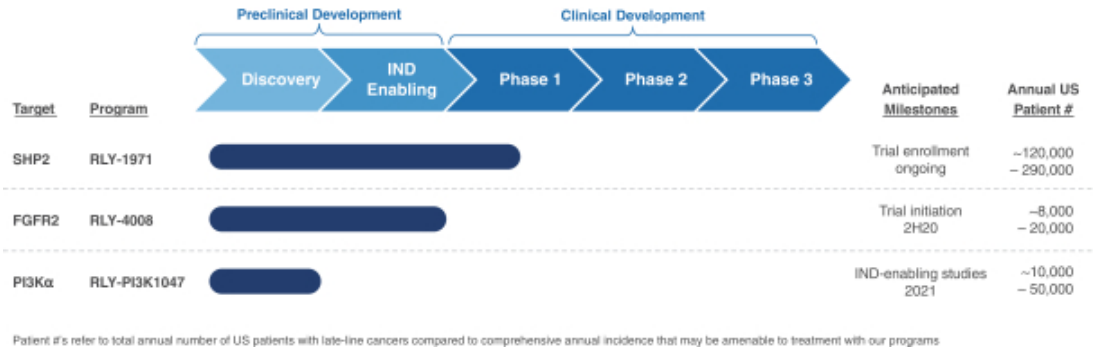
Increased translational success: We believe that the ability to precisely target therapy to patients who are most likely to respond favorably to treatment will, in turn, increase the likelihood of successfully translating a specific pharmacological mechanism into clinical benefit.

While we have initially focused our efforts on small molecule therapies, our Dynamo platform could also be readily deployed towards the discovery of other therapy types, such as large molecules including peptide or protein therapeutics.

Our Product Pipeline and Programs

We have deployed our Dynamo platform to initially focus on the area of precision oncology. To date, we have generated several promising precision oncology, orally available, small molecule product candidates that address previously intractable oncogenic targets. Our lead programs are targeting a range of driver alterations to treat various cancers that we believe can have a greater probability of translational success because they are genetically or clinically validated. The targets associated with all of our current programs are Category 1 Targets under our Amended and Restated Collaboration and License Agreement with D. E. Shaw Research. See "Business—Collaboration and License Agreement with D. E. Shaw Research, LLC." In addition, we are also advancing several early programs focused on other precision oncology and rare genetic disease targets. We retain worldwide development and commercialization rights to all our programs.

The following table summarizes our current portfolio of product candidates and programs.



Patient #'s refer to total annual number of US patients with late-line cancers compared to comprehensive annual incidence that may be amenable to treatment with our programs

Our Programs

RLY-1971, an inhibitor of SHP2

Overview

RLY-1971 is designed to be an oral, small molecule inhibitor of the protein tyrosine phosphatase SHP2 that binds and stabilizes SHP2 in its inactive conformation. SHP2 promotes cancer cell survival and growth through the RAS pathway by transducing signals downstream from receptor tyrosine kinases (RTKs). Additionally, activating SHP2 mutations result in enhanced signaling in the absence of ligand stimulation and has been identified as oncogenic drivers in a range of tumors. As a critical signaling node and regulator, SHP2 drives cancer cell proliferation and plays a key role in the way cancer cells develop resistance to targeted therapies. We believe that inhibition of SHP2 could be effective as a monotherapy in cancers with specific alterations and could block a common path that cancer cells exploit to avoid killing by other antitumor agents, thus overcoming or delaying the onset of resistance to those therapies. We are currently evaluating the safety and tolerability of RLY-1971 in a Phase 1 dose escalation study in patients with advanced or metastatic solid tumors. We anticipate providing an update on clinical data and the clinical development plan in 2021. Given the range of cancers that are related to SHP2 dependence, we believe, in addition to its use in monotherapy settings, our therapy has the potential to serve as a combination backbone therapy.

We estimate that, across all solid tumors, there are approximately 68,000 late-line patients annually in the U.S. who might benefit from a SHP2 targeted inhibitor as a monotherapy. Additionally, we estimate there are more than 56,000 late-line patients annually in the U.S. with advanced lung cancer who might benefit from a combination of RLY-1971 with another targeted inhibitor. This results in approximately 120,000 late-line cancer patients annually in the U.S. that may benefit from RLY-1971. In the future, if RLY-1971 advances to earlier lines of treatment, we believe it could be applied in the treatment of approximately 290,000 patients annually in the U.S.

Figure 6: SHP2 monotherapy and combination therapy addressable patient populations

SHP2 Monotherapy in Advanced Solid Tumors						
Genetic Alteration % Biomarker Frequency [1]	KRAS Amplifications 3.0%	$KRAS^{G12C}$ mutant 3.4%	$KRAS^{G12A}$ mutant 1.0%	$BRAF^{Class\ 3}$ mutant 0.8%	NF1 LOF 4.4%	Total
Late Line Incidence in Advanced Solid Tumors [2]	16,000	19,000	5,000	4,000	24,000	68,000
Comprehensive Incidence in Advanced Solid Tumors [3]	47,000	53,000	16,000	13,000	69,000	198,000

SHP2 Combination in Advanced Lung Cancer							
Genetic Alteration % Biomarker Frequency [1]	$KRAS^{G12C}$ mutant 11.2%	EGFR mutant 14.1%	ALK Translocated 2.9%	MET mutant 2.5%	HER2 mutant 2.3%	PI3Kα mutant 6.4%	Total
Late Line Incidence in Advanced Lung Cancer [2]	16,000	20,000	4,000	4,000	3,000	9,000	56,000
Comprehensive Incidence in Advanced Lung Cancer [3]	26,000	32,000	7,000	6,000	5,000	15,000	91,000

1) Data reflects our estimate of biomarker frequency in advanced solid tumors (monotherapy) and advanced lung cancer (combination). Estimated frequency percentages are based on counts of known/likely functional alterations in the Foundation Medicine Insights database. 2) Based on projected cancer deaths in all solid tumors from the National Cancer Society's SEER database as a proxy for late-line cancer patient incidence. 3) These data are based on projections from the National Cancer Society's SEER program for estimated new cases of advanced solid tumors and advanced lung cancer.

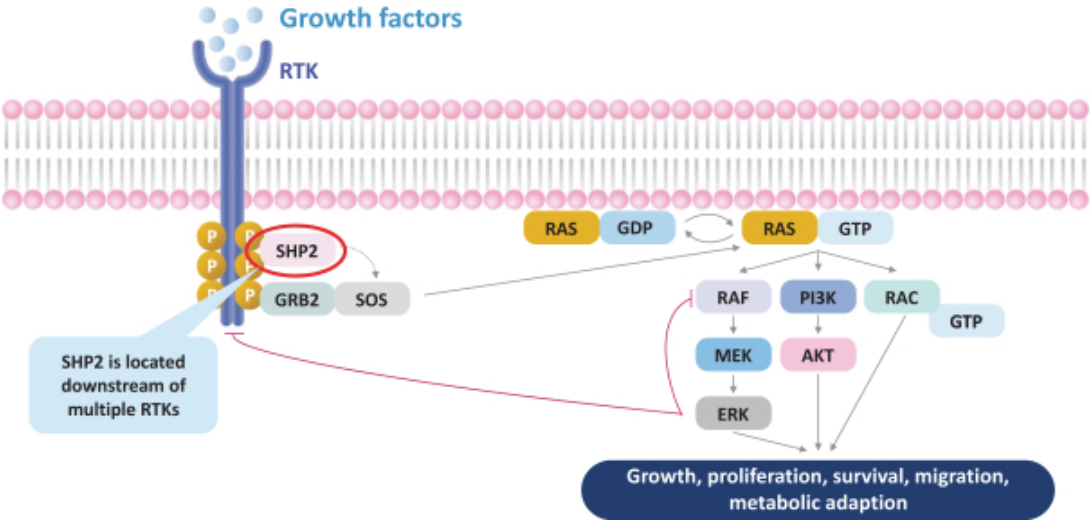
SHP2: a central regulator of cell signaling

SHP2 is a protein tyrosine phosphatase that plays a critical role in the transduction of intracellular signals downstream from receptor tyrosine kinases (RTKs), promoting cell survival and growth through the RAS

pathway. SHP2 was the first phosphatase identified as a recurrently mutated oncogene, providing genetic support for the importance of SHP2 activation in promoting cancer. In addition to the central role of SHP2 in RTK signaling, some alterations in the RAS signaling pathway amplify signals transmitted by SHP2 and can therefore be suppressed by SHP2 inhibition. These include specific mutant forms of RAS (KRAS G12C and KRAS G12A), genomic amplification of wild-type KRAS, loss-of-function mutations in NF1, and class 3 mutations in BRAF. Consequently, there are multiple cancer genetic contexts where SHP2 inhibition could be beneficial as a monotherapy.

A key feature of SHP2 as an oncology target is its ability to regulate cell signaling that arises from multiple RTKs (**Figure 7**). Therapies targeted to these RTKs, and therapies targeting downstream nodes such as PI3K, KRAS and MEK, are often unable to durably inhibit tumor growth because these tumors are able to bypass the targeted RTK and shift growth factor signaling to an alternate RTK, rendering them less sensitive to the targeted therapy. This is generally referred to as bypass resistance. Because SHP2 regulates the activity of multiple RTKs, inhibition of SHP2 is an effective way to overcome bypass resistance as confirmed by cellular and animal model experiments. Indeed, added benefit of SHP2 inhibition has been demonstrated pre-clinically in combination with multiple agents, such as those targeting MEK, $KRAS^{G12C}$, EGFR, and ALK. We believe our SHP2 inhibitor has the potential to become a commonly used combination partner with multiple targeted therapies including those in our own pipeline.

Figure 7: SHP2 regulates the activity of multiple receptor tyrosine kinases (RTKs).



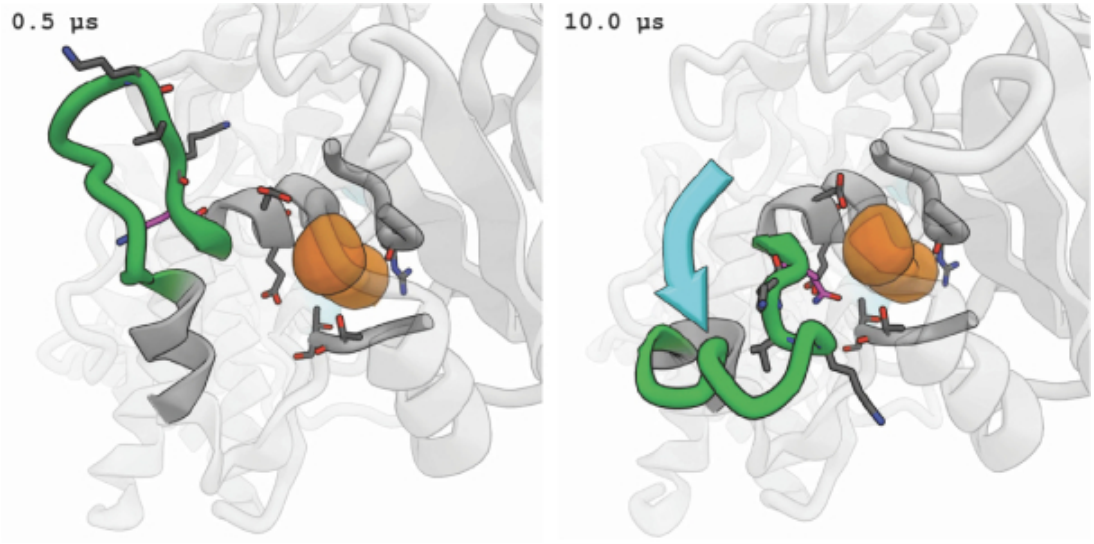
Our solution, RLY-1971

RLY-1971 is a small molecule inhibitor of SHP2 that binds and stabilizes SHP2 in its inactive conformation.

We utilized a combination of experimental and computational techniques to identify unique inhibitors. For example, using long timescale MD simulations we were able to understand changes in the dynamics of the binding pocket over time that would not have been appreciated with shorter timescale simulations (**Figure 8**). Informed by high-resolution room-temperature x-ray crystallographic data, we created a virtual representation of our lead molecule bound to the SHP2 protein. We then simulated this system over long timescales. As shown in Figure 20, we observed that a loop (green) to the left of the small molecule (orange) moves down towards the molecule over the course of the simulation. Our medicinal chemists were then able to leverage this understanding in their designs to create an inhibitor of SHP2. Importantly, this loop cannot be resolved using conventional x-ray

crystallography. Therefore, relying on standard techniques could deprive medicinal chemists of a critical insight as they attempt to design improved compounds.

Figure 8: We depict a small molecule docked in a representation of the SHP2 protein where there is a green loop visible to the left of the small molecule (orange). A 500 ns MD simulation (0.5 µs) shows that the green loop is far away from the small molecule (left). A longer simulation (10.0 µs), reveals that the loop flips downwards, close to where the small molecule binds (right).



We then prioritized compounds with the best predicted binding to SHP2 over a 10 µs molecular dynamics simulation and tested the most stable compounds in our biochemical assay. This enabled filtering and prioritization of candidate molecules, resulting in the identification of RLY-1971, our clinical-stage compound. RLY-1971 inhibits SHP2 phosphatase activity (750 pM IC_{50}) in a biochemical assay designed to monitor dephosphorylation of a probe substrate. RLY-1971 also inhibits SHP2 in cellular assays, as measured by inhibition of ERK1/2 phosphorylation at Thr202/Tyr204 (1.3 nM IC_{50} in KYSE-520, an EGFR amplified gastric cancer cell line), and by inhibition of cancer cell proliferation (70 nM IC_{50} in KYSE-520 and 11 nM IC50 in NCI-H358, a $KRAS^{G12C}$ mutant NSCLC cell line) (**Figure 9**).

Figure 9: RLY-1971 potently inhibits SHP2 in biochemical and cellular assays.

Biochemical IC_{50}*	Cellular PD (pERK)**	Cellular Proliferation IC_{50}	
		NSCLC NCI-H358***	Gastric KYSE-520****
WT SHP2	KYSE-520	$KRAS^{G12C}$	EGFR amplification
0.75 nM	1.3 nM	11.0 nM	70.0 nM

**The biochemical potency of RLY-1971 was assessed in duplicate by determining activity of SHP2 in prompt fluorescence assay format. The inhibition of SHP2 by RLY-1971 was monitored using an assay in which SHP2 was incubated with a SHP2-activating peptide. After a 60 minute incubation period, the surrogate SHP2 substrate DiFMUP was added to the reaction. The conversion of DiFMUP to DiFMU was monitored continuously for 10 minutes using an EnVision Reader microplate reader (Perkin Elmer).*

***KYSE-520 cells were plated at a density of 5000 cells/well of 384-well flat-bottom plate (Corning) and allowed to adhere at 37°C, 5% CO2 incubator. After overnight incubation, compound was added to cells and returned to*

incubator for two hours. After incubation, cells were washed, lysed, and abundance of pERK was determined using the AlphaLISA SureFire Ultra p-ERK1/2 Assay Kit (Perkin Elmer) and read on an EnVision Reader (Perkin Elmer) using standard settings. Compound was tested in duplicate in three independent assays.

**** NCI-H358 cells were plated at a density of 2000 cells/well of 384-well round bottom ultra-low attachment plate (Corning) and cells were allowed to form three-dimensional structures at 37°C, 5% CO2 incubator for 48 hours. Compounds were added to plates and cells are returned to incubator for 120 hours. After incubation, CellTiter-Glo 3D reagent (Promega) was added into each well and incubated at room temperature for 30 minutes followed by reading on an EnVision Reader (Perkin Elmer) using standard conditions. Assay data was normalized to untreated (DMSO) values, and dose response curve fitting and IC50 values were determined using Genedata analyzer. All doses were tested in triplicate.*

***** KYSE-520 cells were plated at 250 cells per well of 384-well plate and cells were allowed to adhere at 37°C, 5% CO2 incubator. After overnight incubation, cells were then treated in triplicate with serial 3-fold dilutions of inhibitor in complete growth media and cells were returned to incubator for an additional 120 hours. CellTiter-Glo 3D reagent (Promega) was added into each well and incubated at room temperature for 30 minutes followed by reading on an EnVision Reader (Perkin Elmer) using standard conditions. Assay data was normalized to untreated controls, and dose response curve fitting and IC50 values were determined using Genedata analyzer.*

RLY-1971 shows minimal inhibition of targets other than SHP2. RLY-1971 has bioavailability suitable for oral dosing, is metabolically stable, and demonstrates favorable pharmacokinetic properties in preclinical *in vivo* models. We do not predict that RLY-1971 will have significant drug-drug interactions based on weak inhibition of drug metabolizing enzymes. It is readily synthesized in bulk, can be formulated for oral delivery, and was well-tolerated in animal models.

We believe the key differentiating features of RLY-1971 from other SHP2 inhibitors in clinical development are:

- Chemical distinctiveness: it is chemically distinct from other SHP2 inhibitors in clinical development
- Potency: demonstrated 750 pM IC_{50} inhibition of SHP2 phosphatase in biochemical assays
- Dosing potential: projections of human pharmacokinetics suggest RLY-1971 will be amenable to continuous once daily dosing at relatively low active doses

RLY-1971 as a monotherapy

Given the known cancer mutations in SHP2 and previous studies using SHP2 inhibitors, SHP2 inhibition may be active as a monotherapy in certain genetic alterations. SHP2 inhibition has been shown in third party studies to result in tumor stasis or regression in preclinical xenograft models of tumors harboring KRAS genomic amplification, $KRAS^{G12C}$ mutations , $NF1^{LOF}$ mutations, or $BRAF^{Class3}$ mutations. Consistent with these findings, in our internal pre-clinical studies, RLY-1971 inhibited the proliferation of a panel of cancer cell lines driven by KRAS mutations that require signals transmitted by SHP2 ($KRAS^{G12C}$ and $KRAS^{G12A}$) but was inactive in cancer cell lines driven by other KRAS mutations that do not require SHP2 signals ($KRAS^{G12D}$) (**Figure 10**).

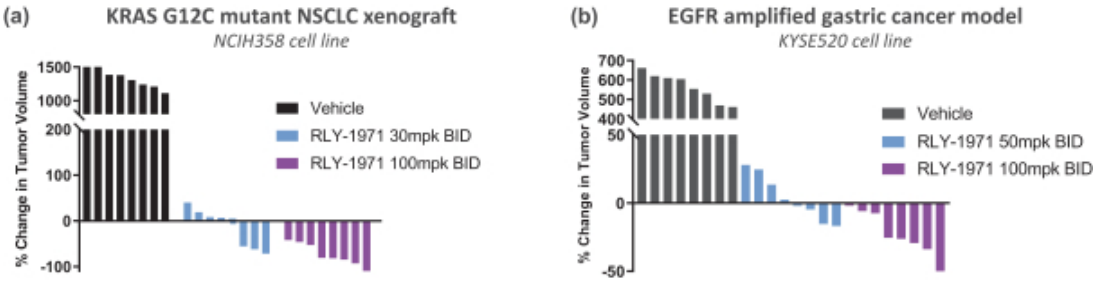
Figure 10: Inhibition of proliferation by RLY-1971 in cancer cell lines driven by KRAS mutations. Mutations that require SHP2 signals are potently inhibited by RLY-1971, whereas mutations that do not require SHP2 signals are insensitive to RLY-1971.

	Cell Line		Indication	RLY-1971 IC50 (nM)
SHP2 dependent	KRAS G12C	MIAPACA2	PDAC	3
		NCIH358	Lung	11
		SW1573	Lung	18
		NCIH23	Lung	43
		SW1463	Colon	15
		SW837	Colon	19
	KRAS G12A	NCIH1573	Lung	14
		RERFLCAD1	Lung	14
Non-SHP2 dependent	KRAS G12D	A427	Lung	1230
		SKLU1	Lung	10000
		HCC1588	Lung	10000

A panel of KRAS-G12 mutant cancer cell lines were grown in 3D spheroids and treated with RLY-1971 in a proliferation assay. KRAS-G12C and G12A mutations retain intrinsic GTPase activity and therefore require SHP2 signaling, whereas the KRAS-G12D mutation does not. For cell lines indicated, cells were plated at a density of 2000 cells/well in round bottom ultra-low attachment 384-well plates (Corning) in growth media and cells are allowed to form three-dimensional structures at 37°C, 5% CO2 incubator for 48 hours. After a 48 hour incubation period, cells were then treated in triplicate with serial 3-fold dilutions of inhibitor in complete growth media and cells were returned to incubator for an additional 120 hours. CellTiter-Glo 3D reagent (Promega) was then added into each well and incubated are room temperature for 30 minutes followed by reading on an EnVision Reader (Perkin Elmer) using standard conditions. Assay data was normalized to DMSO control wells. Dose response curve fitting and IC50 values were determined using Genedata analyzer.

To demonstrate activity of RLY-1971 as a single agent *in vivo*, we tested it in multiple cancer xenograft mouse models. Consistent with our *in vitro* data and the role of SHP2 as a critical mediator of RTK signaling, we observed that RLY-1971 induced regression in cancer xenograft models harboring a $KRAS^{G12C}$ mutation or genomic amplification of EGFR when administered on a continuous dosing schedule (**Figure 11**).

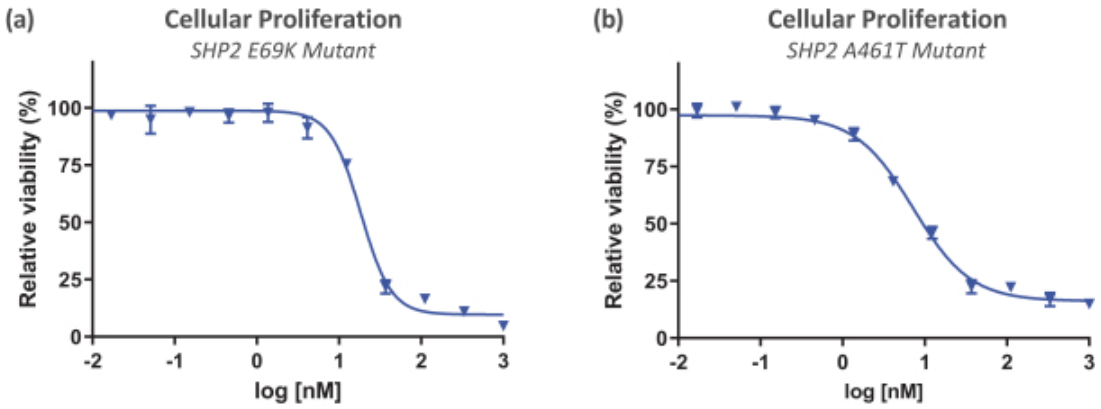
Figure 11: RLY-1971 induces regression in KRAS G12C mutant and EGFR amplified cancer xenograft models.



*Anti-tumor activity of the SHP2 inhibitor RLY-1971 dosed twice daily by oral administration (PO BID) in **(a)** the KRAS G12C mutant NSCLC xenograft model NCIH358 after 28 days on treatment and **(b)** the EGFR amplified gastric cancer xenograft model KYSE-520 after 21 days on treatment. Treatment with RLY-1971 resulted in dose-dependent anti-tumor activity and regression in both models. Data represent waterfall plots of individual end of study tumors, with tumor volume expressed as percentage change relative to initial tumor volume. Each animal is represented as a separate bar (number of mice per group = 8). For each of the studies the statistical difference between the vehicle treated and RLY-1971 treated groups was assessed by one-way analysis of variance (ANOVA). In both studies the RLY-1971 treated groups were determined to be significantly different than the vehicle treated group with a P value < 0.001.*

In addition, RLY-1971 inhibited the proliferation of cancer cell lines engineered to express known cancer mutations in SHP2 (**Figure 12**). These mutations bias SHP2 towards an open, active conformation in direct opposition to the allosteric inhibition effected by RLY-1971. RLY-1971 retains nanomolar potency against activating mutations of SHP2. This could facilitate development of RLY-1971 in rare patient populations carrying SHP2 mutations. We also anticipate, based on experience with other precision oncology small molecule agents, that emergence of on-target mutations can be a method of acquired drug resistance in the clinic. We hypothesize that the activity of RLY-1971 against activating mutations of SHP2 could result in more durable benefit by suppressing the emergence of resistant cell populations with SHP2 resistance mutations.

Figure 12: RLY-1971 inhibits the proliferation of cells expressing known SHP2 activating mutations.



Inhibition of proliferation by RLY-1971 in TF1 cancer cells expressing known cancer mutations in SHP2. TF1 cells were engineered to express the SHP2 mutations ***(a)*** *E69K (IC50 = 18.4 nM) or* ***(b)*** *A461T (IC50 = 7 nM) and treated with RLY-1971 in a proliferation assay. 500 cells/well were seeded in round bottom ultra-low attachment 384-well plates (Corning) in growth media and incubated for 48 hours at 37°C in 5% CO2. Cells were then treated in triplicate with serial 3-fold dilutions of inhibitor in growth media. Following incubation in the presence of compound for an additional 120 hours, cell viability was determined using the CellTiter-Glo 3D assay kit (Promega) following the manufacturer's instructions. Luminescence was read in an EnVision Multimode Plate Reader (Perkin Elmer). Assay data was normalized to DMSO values, and dose response curve fitting was performed using Genedata analyzer.*

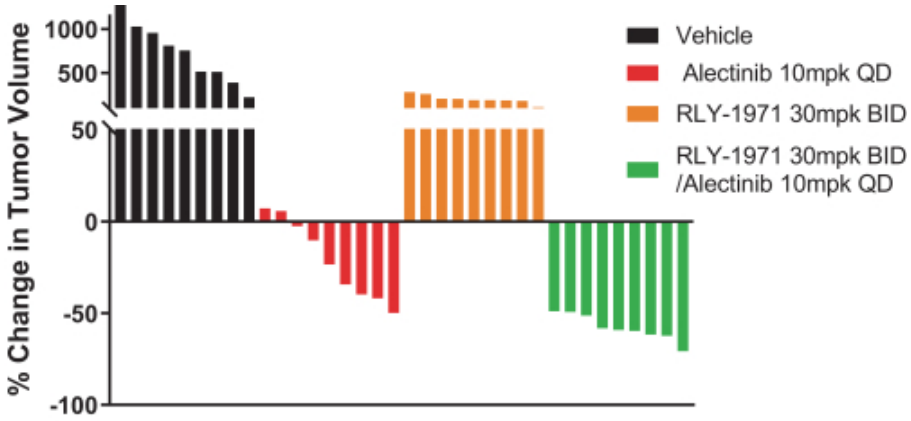
RLY-1971 as a combination therapy

Given the role of SHP2 in mediating bypass resistance, we believe that SHP2 inhibitors have significant therapeutic potential when given in combination with other targeted therapies. Due to the increased potency and broader mutational coverage of next-generation targeted therapies, lower rates of on-target resistance have been observed in the clinic, with a greater number of patients progressing due to bypass resistance. An example of this is seen with EGFR inhibitors, where first-generation inhibitors (erlotinib and gefinitib) have greater on-target resistance compared to a third-generation inhibitor (osimertinib). As SHP2 is involved in signaling for numerous oncogenes, including EGFR, $KRAS^{G12C}$, ALK and MET, combination therapy with RLY-1971 represents a potential significant therapeutic opportunity.

Consistent with the role of SHP2 in RTK signaling in NSCLC, in our pre-clinical experiments, RLY-1971 demonstrated combination benefit in cell culture experiments when co-administered with inhibitors of MEK, ALK, or EGFR.

To demonstrate combination benefit with our SHP2 inhibitor *in vivo*, we combined RLY-1971 with the ALK inhibitor alectinib in an ALK-translocated NSCLC xenograft mouse model (NCIH3122) that was derived *in vitro* to have reduced sensitivity to ALK inhibition (**Figure 13**). DNA sequencing did not reveal new ALK mutations in the cell line. Therefore, these cells likely have reduced sensitivity due to a bypass mechanism. The combination of RLY-1971 with alectinib resulted in tumor regressions in all treated animals.

Figure 13: Anti-tumor activity of RLY-1971 and the ALK inhibitor alectinib as single agents or in combination in an ALK translocated NSCLC xenograft model (NCI-H3122) derived *in vitro* to have reduced sensitivity to ALK inhibition.

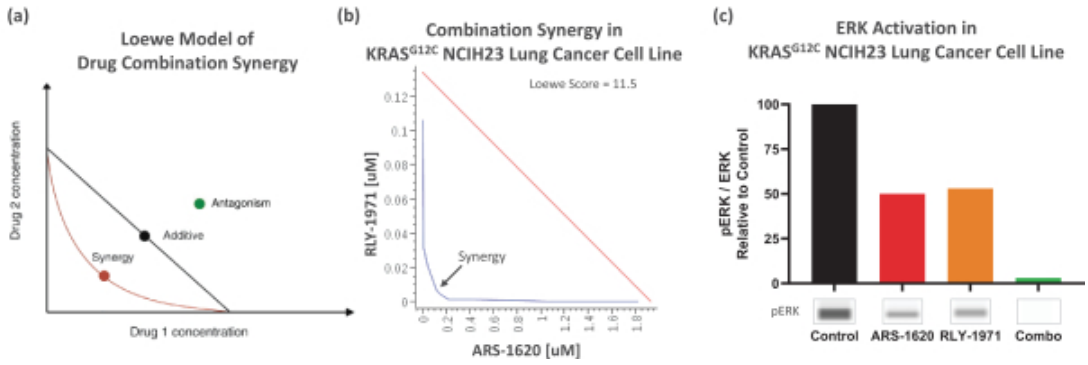


Daily oral administration of RLY-1971 at 30mpk BID in combination with alectinib at 10mpk QD (green) resulted in increased efficacy compared to alectinib at 10mpk QD (red) or RLY-1971 at 30mpk BID (orange) alone in an ALK translocated NSCLC xenograft model (NCI-H3122) derived in vitro to be less sensitive to ALK inhibition. Data represent waterfall plots of individual tumors after 27 days of treatment with compounds, with tumor volume expressed as percentage change relative to initial tumor volume. Each animal is represented as a separate bar (number of mice per group = 9). The statistical difference between the combination treated group and the RLY-1971 or alectinib single agent groups was assessed using an unpaired t-test. The combination treated group with significant with P-value <0.001 compared to either single agent group.

In addition to RTK inhibitors, combination benefit for SHP2 inhibition has been demonstrated with other targeted agents including MEK inhibitors and $KRAS^{G12C}$ inhibitors in cancer xenograft models harboring $KRAS^{G12C}$ mutations or KRAS amplifications. The efficacy of direct $KRAS^{G12C}$ inhibition may be limited by adaptive feedback reactivation of the RAS-MAPK pathway through upregulation of multiple RTKs. Activation of these RTKs leads to compensatory activation of wild-type RAS isoforms, which cannot be inhibited by $KRAS^{G12C}$-specific inhibitors, thus leading to resistance. SHP2 is unique in that it transmits signals from multiple RTKs and is therefore critical in mediating feedback reactivation of the RAS pathway during $KRAS^{G12C}$ inhibition.

Consistent with these observations, RLY-1971 demonstrated synergistic inhibition with the $KRAS^{G12C}$ specific inhibitor ARS-1620 in a $KRAS^{G12C}$ lung cancer model (**Figure 14**). Specifically, the inhibitory effect of both compounds was greater than the additive effect of each compound individually, suggesting SHP2 inhibition abrogates compensatory RAS-MAPK pathway activation during $KRAS^{G12C}$ inhibition. Molecular characterization of phosphorylated-ERK (pERK), a downstream marker of RAS-MAPK pathway activity, supports this conclusion. The combination of RLY-1971 and the $KRAS^{G12C}$-specific inhibitor ARS-1620 was able to fully suppress pERK in this model, while each inhibitor individually only partially suppressed pERK. Based on these data, we believe that the combination of RLY-1971 with $KRAS^{G12C}$-specific inhibitors warrants clinical studies in patients with tumors harboring $KRAS^{G12C}$ mutations.

Figure 14: RLY-1971 and the KRAS^{G12C}-specific inhibitor ARS-1620 demonstrate synergy when used in combination in the KRAS^{G12C} NCIH23 lung cancer cell line.



Synergy of RLY-1971 and the KRAS^{G12C}-specific inhibitor ARS-1620.

(a) *The Loewe model of drug combination synergy uses cellular potency data to calculate the additive nature of drug combinations. Higher synergy is represented graphically when the isobologram line (red) approaches the origin and quantified numerically by the Loewe score (higher Loewe score means more synergy).*

(b) *Combining RLY-1971 with the KRAS^{G12C}-specific inhibitor ARS-1620 in a cellular proliferation assay in the KRAS^{G12C} mutant NCIH23 lung cancer cell line shows the relationship is synergistic based on the isobologram line (blue) and high Loewe score (11.5). Cells were plated at a density of 2000 cells per well in ultra-low attachment 384-well plates (Corning) and allowed to form three-dimensional structures at 37°C, 5% CO2 incubator for 48 hours. After a 48 hour incubation period, cells were then treated in triplicate with serial 3-fold dilutions of a matrix of both compounds in complete growth media and cells were returned to incubator for an additional 120 hours. CellTiter-Glo 3D reagent (Promega) was then added into each well and incubated are room temperature for 30 minutes followed by reading on EnVision Reader (Perkin Elmer) using standard conditions. Assay data was normalized to DMSO values, and dose response curve fitting and Loewe synergy score were determined using Genedata analyzer.*

(c) *The synergistic effect of both compounds (1uM of ARS-1620 and 100nM of RLY-1971) can be observed by measuring the impact on ERK signaling (pERK) after 24 hours. To treat cells with compound and collect lysates for characterization, 2000 cells were plated per well in ultralow attachment 384-well plates (Corning) and allowed to form three-dimensional structures at 37°C, 5% CO2 incubator for 48 hours. After incubation and growth of three-dimensional structures compounds were added to the cells either as single compounds or in combination with the final concentrations for test compounds are 1uM ARS-1620 and 0.1uM RLY-1971. Cells were returned to 37°C, 5% CO2 incubator for 24 hours. Cells are collected, lysed, and run on WES (Protein Simple) with antibodies directed toward the antigens of interest. Data was analyzed using Compass software (Protein Simple).*

In addition to the therapeutic opportunity associated with combining with other targeted therapies, we believe RLY-1971 has the potential to be a combination partner with the product candidates in our own precision oncology portfolio (RLY-4008 and RLY-PI3K1047).

Our clinical development plan

Our clinical development plan aims to advance RLY-1971 as a monotherapy in SHP2-dependent tumors and in combination with other targeted agents to prevent and overcome adaptive resistance mechanisms in order to achieve more durable clinical benefit. First, we will look to rapidly define the optimal dose and schedule of RLY-1971 as a monotherapy and then we will pursue rational studies including combinations.

In the first quarter of 2020, we began evaluating the safety and tolerability of RLY-1971 in a first-in-human dose escalation study in patients with advanced or metastatic solid tumors. We have dosed 10 patients as of July 8, 2020 and plan to enroll approximately 52 patients in this study. The primary objectives are to determine the maximum tolerated dose (MTD)/recommended phase 2 dose (RP2D), and to define the overall safety profile of RLY-1971. Secondary objectives are to assess the pharmacokinetics, pharmacodynamics, and to explore preliminary anti-tumor activity of RLY-1971. Patients will receive RLY-1971 administered orally, once daily. Once daily oral dosing was selected based on projected human pharmacokinetics and exposures calculated from multi-species pharmacokinetics and allometric scaling.

The first-in-human monotherapy data will facilitate subsequent clinical evaluation and development of RLY-1971 as a monotherapy for patients with SHP2-dependent tumors or in combination with other targeted therapies in indications where SHP2 inhibition may exert synergistic antitumor effects. This may include combinations with selected approved receptor tyrosine kinase inhibitors (e.g., inhibitors of ALK, EGFR or HER2), MAPK/RAS pathway inhibitors (including KRAS G12C inhibitors) and/or combinations with investigational agents being developed by Relay Therapeutics, including RLY-4008 and RLY-PI3K1047.

Development of RLY-1971 in monotherapy and combination therapy indications will require identification of appropriate patients for treatment using molecular diagnostic tests. In early phase clinical trials, patients will be identified using local testing performed at clinical trial sites, with retrospective centralized testing to confirm the tumor genetic status. In later phase trials, we will likely collaborate with a diagnostic partner to identify patients for clinical trial enrollment using an analytically validated investigational molecular diagnostic. The tumor genetic contexts that we are considering for development of RLY-1971 can currently be detected using FDA-approved next generation sequencing based panel diagnostics (e.g. Foundation One, Guardant 360).

RLY-4008, a selective inhibitor of FGFR2

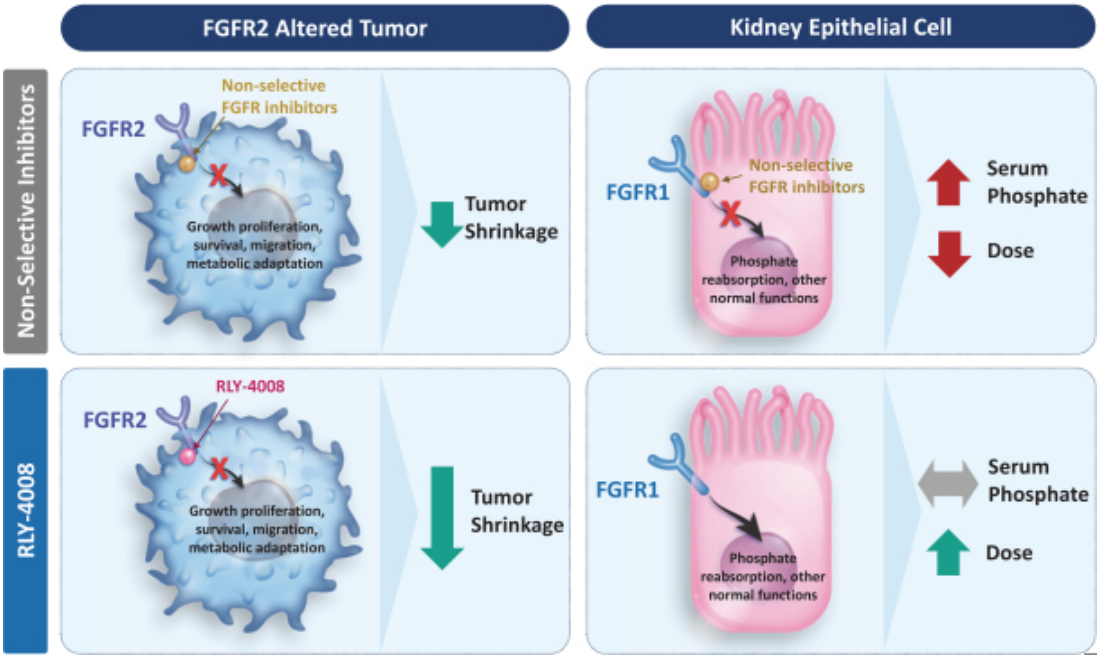
Overview

RLY-4008 is designed to be an oral, small molecule, selective inhibitor of fibroblast growth factor receptor 2, or FGFR2, a receptor tyrosine kinase that is frequently altered in cancer. FGFR2 is one of four members of the FGFR family, a set of closely related proteins with highly similar protein sequences and properties. RLY-4008 minimally inhibits targets other than FGFR2 and demonstrates FGFR2-dependent cell-killing in cancer cell lines. We plan to initiate a Phase 1 clinical trial for RLY-4008 in patients having solid tumors with oncogenic FGFR2 alterations in the second half of 2020. We believe FGFR2-mediated cancers affect approximately 8,000 late-line patients annually in the U.S., of which fusions represent approximately 2,700, amplifications approximately 1,600, and other mutations approximately 3,800. In the future, if RLY-4008 advances to earlier lines of treatment, we believe it could potentially address approximately 20,000 patients annually in the U.S.

Role of FGFR in cellular proliferation and differentiation

Each of the FGFRs has an important role in normal physiology and the inhibition of FGFR2 is a well-validated pathway in disrupting cancer proliferation and growth. Two non-selective FGFR inhibitors have been approved (erdafitinib and pemigatinib) and several are in clinical development. However, these inhibitors as a class cause several dose-limiting, FGFR2-unrelated toxicities in patients leading to dose reductions and altered dosing schedules. One of the most common dose limiting toxicities of these agents is hyperphosphatemia (buildup of excess phosphate in the bloodstream), which causes soft tissue mineralization and requires active management. Hyperphosphatemia has been shown to be driven by inhibition of another member of the FGFR family known as FGFR1 (**Figure 15**).

Figure 15: RLY-4008 is a selective inhibitor of FGFR2. FGFR1 is required for phosphate resorption in the kidney. Inhibition of FGFR1 by non-selective FGFR inhibitors results in increased serum phosphate and toxicity. This results in decreased efficacy by requiring dose reductions.



We believe that the toxicity attributable to inhibition of other FGFR family members, and other closely related kinases, limits the ability of the non-selective FGFR inhibitors to achieve optimal and durable inhibition of FGFR2, limiting the efficacy of these agents in patients with FGFR2-altered tumors. In addition to the lack of selectivity, these inhibitors are unable to overcome on-target resistance, which has been observed in patients treated with non-selective FGFR inhibitors. Our belief is that a selective inhibitor of FGFR2 that retains activity against resistance mutations will enable improved clinical efficacy.

Limitations of current FGFR inhibitors

Non-selective FGFR inhibitors produced by other companies have demonstrated clinical proof-of-concept in patients with intrahepatic cholangiocarcinoma, or ICC, bearing FGFR2 gene fusions. These gene fusions result in a constitutively active FGFR2, which promotes oncogenic transformation. Genetic alterations in FGFR2, including gene fusions, amplifications, and point mutations, are also found in other solid tumor indications.

Patients with genetic alterations in FGFR2, primarily gene fusions in ICC, have been treated with FGFR inhibitors in investigational clinical trials. To date, these trials provide support for the critical role of FGFR2 for tumor survival with a response rate of up to 36% (**Figure 16)**. A key limiting factor for existing FGFR therapies is that, as a class, they are associated with a dose-limiting side effect, hyperphosphatemia, which has been shown to be caused by FGFR1 inhibition.

Figure 16: Hyperphosphatemia is a dose-limiting adverse event associated with non-selective FGFR inhibitors.

Compound	Company	Stage	FGFR2 selective	Response Rate	Dosing Schedule	% of Patients with Hyperphosphatemia	% of Patients Discontinued or Dose Reduced
Pemigatinib	Incyte	Approved	No	36% (ICC)	2 weeks on, 1 week off	94%	23%
Infigratinib	QED	Phase 2/3	No	27% (ICC)	3 weeks on, 1 week off	62%	61%
TAS-120	Taiho	Phase 2/3	No	37% (ICC)	Once daily dosing	88%	52%
Erdafitinib	Janssen	Approved	No	32% (Urothelial Carcinoma)	Personalized dosing*	76%	66%

*Initial dose (8mg QD) adjusted to 9mg QD only in absence of hyperphosphatemia
Data references: Pemigatinib – ESMO 2019; Infigratinib – BridgeBio S-1; TAS-120 – ASCO 2020 Presentation of Interim Analysis; Erdafitinib – Prescribing information; N.R. = not reported

ICC disease background

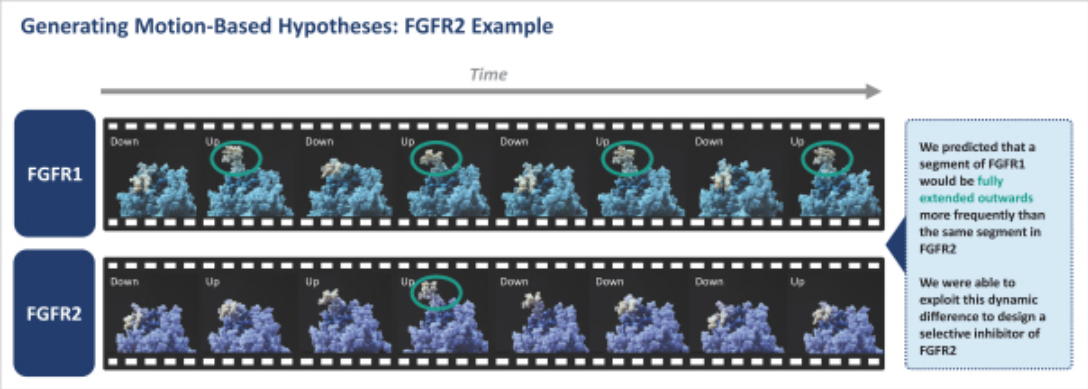
Intrahepatic Cholangiocarcinoma (ICC) is a form of cancer that originates in the bile ducts of the liver. ICC is a rare tumor, accounting for 3% of worldwide gastrointestinal malignancies. Patients diagnosed with ICC are routinely treated off-label with chemotherapeutic agents such as gemcitabine and cisplatin. There are no approved therapies for ICC. Complete surgical resection remains the only potential curative option but is associated with a substantial risk of post-operative morbidity and mortality, and recurrence is common. The median overall survival for all patients diagnosed with ICC is reported to be 16.1 months. The median overall survival for patients diagnosed with late stage disease is less than one year.

Our solution, RLY-4008

RLY-4008 is an oral, small molecule inhibitor of FGFR2 designed to inhibit FGFR2 with high potency while minimizing inhibition of other FGFR family members. In our initial assessment of the challenge of obtaining a highly selective inhibitor of FGFR2, we determined that there is a high degree of structural similarity between FGFR1 and FGFR2 when comparing static X-ray crystal structures. This similarity precluded the development of a structure-based selectivity hypothesis using conventional approaches.

We therefore set out to identify motion-based differences between FGFR2 and other FGFR family members by applying our expertise in computational modeling and experimental structural analyses. We discovered that there were segments of FGFR2 which displayed differential dynamics compared to the corresponding segments of FGFR1 (**Figure 17**). We predicted these dynamic differences could be exploited to achieve selective inhibition of FGFR2.

Figure 17: Using MD simulations, we predicted that a segment in FGFR1 was more dynamic than FGFR2, as represented by the schematic below where the segment opens "Up" more frequently in FGFR1 compared to FGFR2.



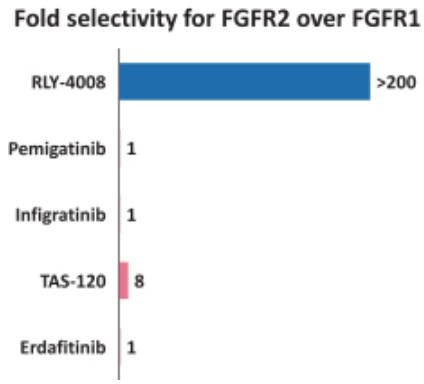
We embarked on a process using computational methods such as long timescale molecular dynamics simulations, virtual docking and specialized experimental techniques to design, select, synthesize, and evaluate inhibitors. Our discovery process culminated with the selection of RLY-4008 as a product candidate based on its ability to meet our predetermined criteria for potency, selectivity and activity in animal models.

As described below, we have conducted a number of head-to-head preclinical experiments utilizing cellular *in vitro* assays and mouse models using equivalent methods on all compounds tested. We compared RLY-4008 across a number of parameters against two approved molecules as well as three molecules in clinical development. We believe that the results of these preclinical experiments have demonstrated that RLY-4008 could potentially be a differentiated molecule warranting testing in clinical studies. However, RLY-4008 is only in preclinical development and has neither been subjected to the extensive testing in clinical trials nor the scrutiny of FDA review to which the two approved molecules and the three molecules in clinical development we used as comparators have been subject. Ultimately, extensive clinical studies of RLY-4008 will be required to determine if the differentiation we observed in the preclinical studies described below translates into clinical benefit for patients. The clinical data that we expect to generate in any such clinical studies will constitute the bulk of the data needed to support an application for marketing approval of RLY-4008. Unless we conduct head-to-head studies of RLY-4008 against other molecules as part of our future clinical trials, we would not expect to rely upon RLY-4008's potential differentiation from any other molecules in connection with submissions to the FDA or other regulatory agencies, as applicable, for approval or otherwise.

In addition, in our head-to head preclinical experiments utilizing cellular *in vitro* assays and mouse models, we selected dose levels for the other molecules to match human exposure of the approved dose or the dose being used in its clinical studies, as applicable, and we used the proportional dose levels of RLY-4008 that we believe are comparable to what we expect to utilize in our future clinical studies. The differences in these dose levels may have had an impact on the differentiation in the preclinical results we observed.

We demonstrated in enzymatic and cellular assays that RLY-4008 was over 200-fold more potent at inhibiting FGFR2 compared to FGFR1 (**Figure 18**). In addition to selectivity over FGFR1, RLY-4008 is also selective over the other members of the FGFR family, FGFR3 (>80-fold) and FGFR4 (>4,000 fold) in biochemical assays.

Figure 18: RLY-4008 is selective for FGFR2 over FGFR1.



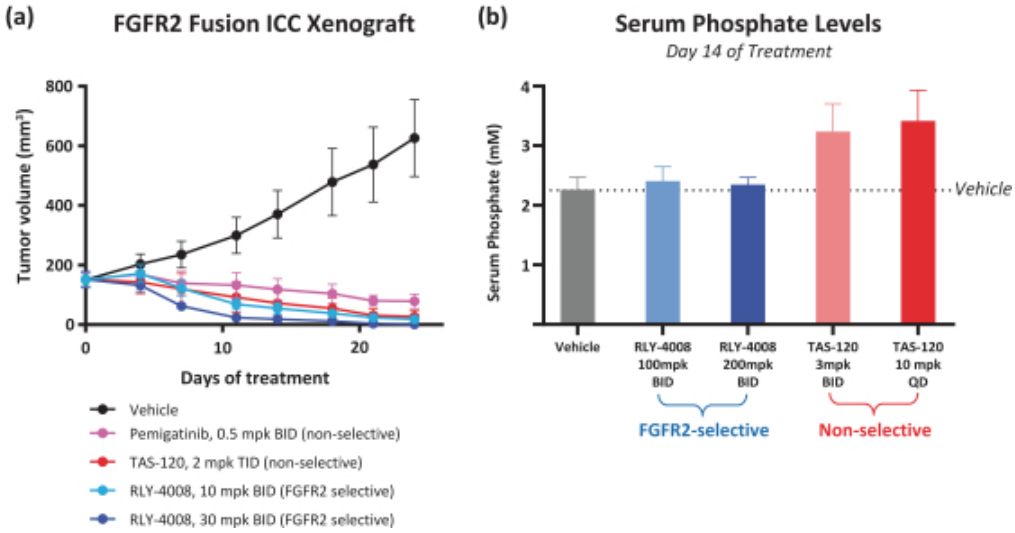
The selectivity of RLY-4008 for FGFR2 over FGFR1 was determined by comparing the potency (IC50) of RLY-4008 and other clinical non-selective FGFR inhibitors in biochemical assays using Caliper technology (PerkinElmer). Human FGFR1 and FGFR2 (Carna Biosciences) were incubated with a peptide substrate (PerkinElmer) in the presence of varying concentrations of the indicated inhibitor for 30 minutes. Reactions were carried out in the presence of 100 mM ATP and 10 mM MgCl2 for 90 minutes. Non-selective FGFR inhibitors were obtained from vendors that provide compounds based on chemical structures published in the patent literature (Cayman Chemical, MedChemExpress, Selleckchem). Fold change in potency was calculated using the average IC50 obtained for each inhibitor in three independent experiments. RLY-4008 showed greater than 200-fold selectivity for FGFR2 over FGFR1.

RLY-4008 has minimal inhibition of targets other than FGFR2 and demonstrates FGFR2-dependent cell-killing in cancer cell lines. It has bioavailability suitable for oral dosing, is metabolically stable, and has demonstrated good pharmacokinetics in preclinical *in vivo* models. Human pharmacokinetic projections are consistent with once or twice daily oral dosing. RLY-4008 is predicted to have low risk of drug-drug interactions based on weak inhibition of drug metabolizing enzymes. It is readily synthesized in bulk, can be formulated for oral delivery, and exposures at the highest non-severely toxic dose were several fold in excess of the predicted human efficacious exposures.

In a patient-derived xenograft (PDX) mouse model of ICC harboring a FGFR2 fusion, treatment with RLY-4008 led to tumor regression at doses as low as 10 mg/kg delivered twice a day (**Figure 19**). Non-selective inhibitors, pemigatinib and TAS-120, also resulted in tumor volume reductions in this model when dosed at levels selected to match their human exposure in clinical studies.

To preclinically validate our effort to engineer selectivity for FGFR2 as a means of reducing the risk of hyperphosphatemia, we examined the effect of RLY-4008 in an industry standard rat model of hyperphosphatemia. No evidence of hyperphosphatemia was seen with doses of RLY-4008 that resulted in exposures leading to tumor regression in our FGFR2 gene fusion ICC PDX mouse model (**Figure 19**). By contrast, when dosed at levels selected to match human exposure in clinical studies, TAS-120 led to increased hyperphosphatemia. Additionally, in 28-day GLP toxicology studies in rats and dogs, neither hyperphosphatemia nor tissue mineralization were observed with RLY-4008 at exposures in the animal corresponding to the predicted human efficacious exposures.

Figure 19: RLY-4008 leads to tumor regression in an FGFR2 fusion positive ICC PDX model and does not cause hyperphosphatemia.

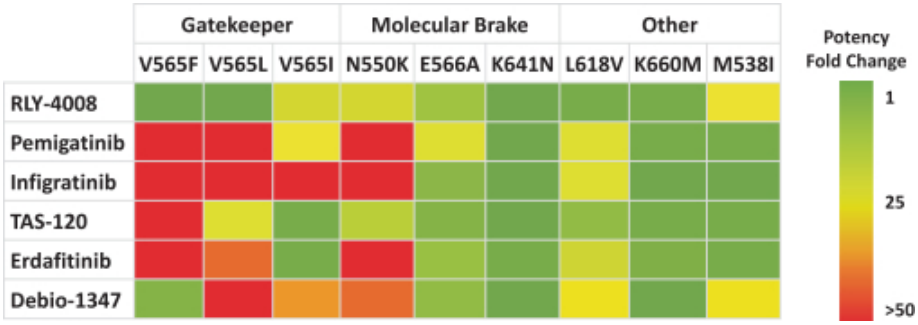


(a) *Anti-tumor activity of RLY-4008 dosed twice daily (BID) by oral administration in an FGFR2 fusion-positive ICC PDX model. RLY-4008 induced dose-dependent regression when administered at 10 or 30 mpk BID. TAS-120 at 2 mpk TID (red) and pemigatinib at 0.5 mpk BID (pink) were dosed at levels selected to match their clinical exposures. Data points indicate mean tumor volume (n=6 per group) and error bars represent standard error of the mean. All treatment groups are statistically significant when compared to vehicle with p<0.001 as determined by two-sided t-test.*

(b) *Serum phosphate measurements in rats dosed twice daily with RLY-4008 (blue) or TAS-120 (red) by oral administration. Doses of RLY-4008 (100 and 200 mpk BID) resulting in exposures leading to tumor regression in our FGFR2 gene fusion ICC PDX model do not cause significant hyperphosphatemia. Doses of TAS-120 (3 mpk BID and 10 mpk QD) selected to match human exposures in clinical studies cause significant hyperphosphatemia. Data indicate the mean serum phosphate level (n=5 per group), and error bars represent standard deviation. TAS-120 treatment groups are statistically significant when compared to vehicle with p<0.01 as determined by one-way ANOVA.*

Another predicted advantage of RLY-4008 concerns resistance mutations. These new mutations in FGFR2 arise during treatment, reducing the potency of non-selective FGFR inhibitors and making tumors resistant to treatment. In the limited resistance studies to date, multiple FGFR2 resistance mutations have been reported, with gatekeeper mutations at position V565 being most common. Gatekeeper mutations sterically block access to the binding site of non-selective FGFR inhibitors. Among gatekeeper mutations, V565F is the most prevalent. In preclinical experiments, we have shown that RLY-4008 retains activity against a broad panel of mutations known to be associated with resistance to non-selective FGFR inhibitors (**Figure 20)**. For example, while the V565F or V565L gatekeeper mutations are resistant to all non-selective FGFR inhibitors we tested, RLY-4008 retains activity against these resistance mutations with no loss in potency.

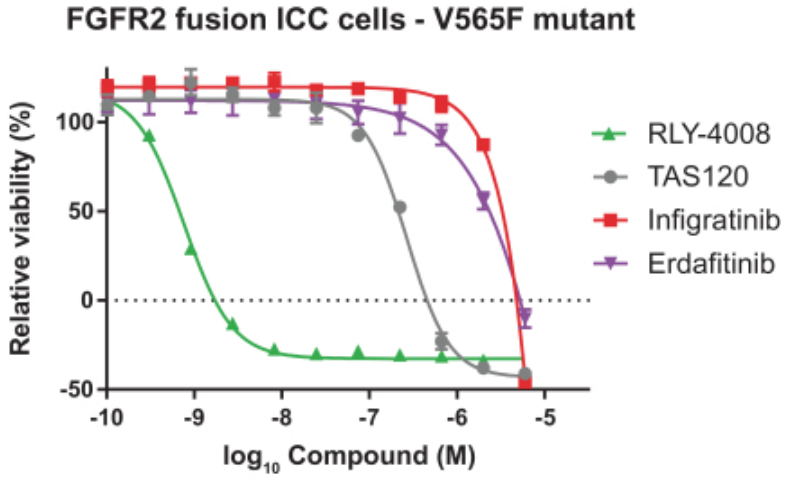
Figure 20: RLY-4008 retains potency against common FGFR2 resistance mutations.



Heatmap showing fold change in potency (IC50) on FGFR2 mutations compared to FGFR2 WT. Human FGFR2 cDNA (NCBI Reference Sequence: NM_022970.3) was cloned into pLenti-P2A-Puro vector, site-directed mutagenesis was performed for the indicated mutations, and plasmid purification was conducted at GenScript. Lentivirus for each vector was prepared using Lenti-vpak Lentiviral Packaging Kit, and FGFR2 WT or FGFR2 mutants were expressed in HEK-293 cells via lentiviral transduction. Cells were incubated with various concentrations of the indicated inhibitors for 2 hours and potency of FGFR2 was determined using a pFGFR2 (Tyr 653/654) HTRF assay (Cisbio) per the manufacter's protocol. Colors indicate the fold loss in potency for the mutant FGFR2 vs WT. Gatekeeper mutations block access to the binding site of non-selective inhibitors. Molecular brake mutations disrupt an autoinhibitory conformation of FGFR2, resulting in kinase activation. Other mutations listed have various reported mechanisms of kinase activation.

Further supporting the activity of RLY-4008 against FGFR2 resistance mutations, we used genetic engineering to introduce the V565F gatekeeper mutation in FGFR2 fusion positive ICC cells. The ability of non-selective FGFR inhibitors or RLY-4008 to inhibit the proliferation of these cells was then tested. RLY-4008 was more potent in V565F mutant cells compared to non-selective FGFR inhibitors, with an IC50 of 760 pM (**Figure 21**).

Figure 21: RLY-4008 retains potency on the FGFR2 gatekeeper mutation V565F in a cellular proliferation assay.

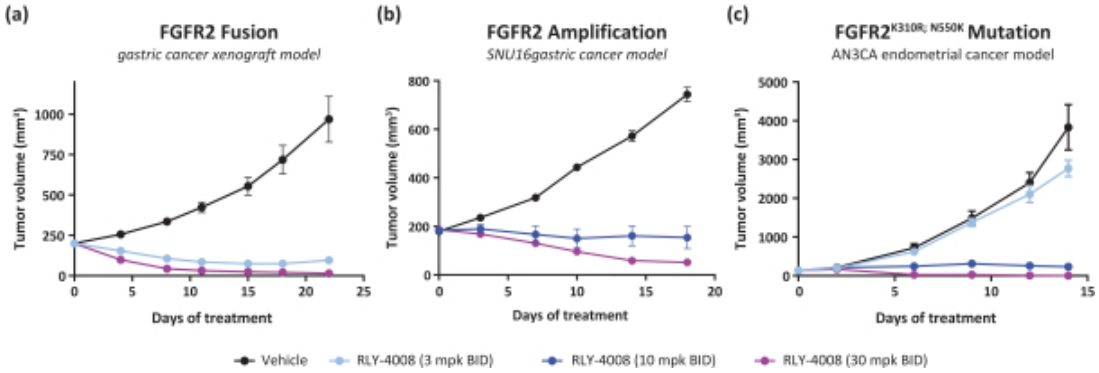


Anti-proliferative effect of RLY-4008 and non-selective FGFR inhibitors in V565F mutant FGFR2 fusion-positive ICC cells tested in a 2D proliferation assay. The FGFR2 V565F mutation was introduced into an FGFR2 fusion-

positive ICC cell line via CRISPR-mediated gene editing and confirmed by sequencing. Cells were incubated in the presence of the indicated concentrations of inhibitors for 120 h and assayed for viability with CellTiter-Glo (Promega). The hill slope sigmoidal four-parameter logistic curve (4PL) in GraphPad Prism was used to generate dose-response curves from normalized measurements of viability. Data points indicate the average of duplicate samples and error bars represent standard deviation. RLY-4008 dose-response curve is statistically significant when compared to pan-FGFRi dose-response curves with p<0.001 as determined by two-way ANOVA.

RLY-4008 was able to achieve *in vivo* efficacy in mouse models of FGFR2-fusion gastric cancer, FGFR2-amplified gastric cancer, and FGFR2-mutant endometrial cancer. Treatment with RLY-4008 led to tumor regression at 3 mg/kg delivered twice a day in a FGFR2 gene fusion gastric cancer model, and at 10 mg/kg delivered twice a day in a FGFR2-amplified gastric cancer or FGFR2-mutant endometrial cancer models (**Figure 22**). All of these doses result in exposures that do not cause hyperphosphatemia in an industry standard rat model. Importantly, RLY-4008 achieved complete regression in an FGFR2-mutant endometrial cancer model (AN3CA) harboring the N550K mutation that reduced the potency of pemigatinib by 185-fold.

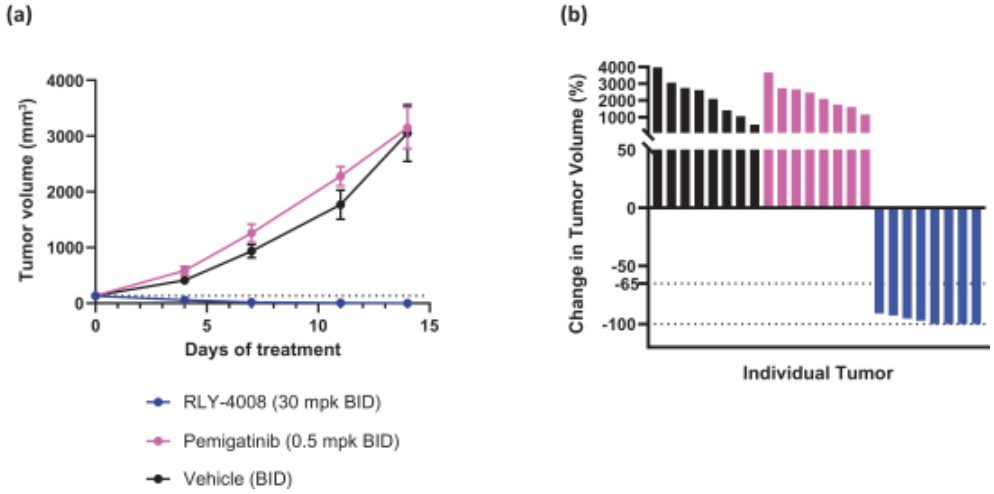
Figure 22: RLY-4008 leads to tumor regression in an FGFR2-fusion gastric cancer PDX, the FGFR2-amplified gastric cancer SNU16 xenograft model, and the FGFR2 N550K-mutant endometrial cancer AN3CA xenograft model.



Anti-tumor activity of RLY-4008 dosed twice daily (BID) by oral administration in **(a)** *an FGFR2 fusion gastric cancer PDX model,* **(b)** *the FGFR2-amplified SNU16 gastric cancer xenograft model, and* **(c)** *the FGFR2 K310R; N550K mutant AN3CA endometrial cancer xenograft model. Data points indicate mean tumor volume and error bars represent standard error of the mean. Statistical analyses were performed using one-way ANOVA. (a) n=8 per group; treatment groups are statistically significant when compared to vehicle with p<0.001. (b) n=7 per group; treatment groups are statistically significant when compared to vehicle with p=0.001 for 10 mpk BID group and p<0.001 for 30 mpk BID group. (c) n=8 per group; two high-dose groups are statistically significant when compared to vehicle with p=0.003 for 30 mpk BID group and p=0.005 for 10 mpk BID group. p=0.627 for 3 mpk BID group.*

To further evaluate the activity of RLY-4008 against FGFR2 resistance mutations, the *in vivo* activity of RLY-4008 was compared to pemigatinib in the AN3CA endometrial cancer model. As described above, this model harbors the FGFR2 N550K mutation, which reduces the potency of pemigatinib by 185-fold. RLY-4008 was able to achieve complete regression in this model at doses resulting in exposures that do not cause hyperphosphatemia in an industry standard rat model. By contrast, when dosed at levels selected to match human exposure in clinical studies, pemigatinib showed no anti-tumor activity (**Figure 23**).

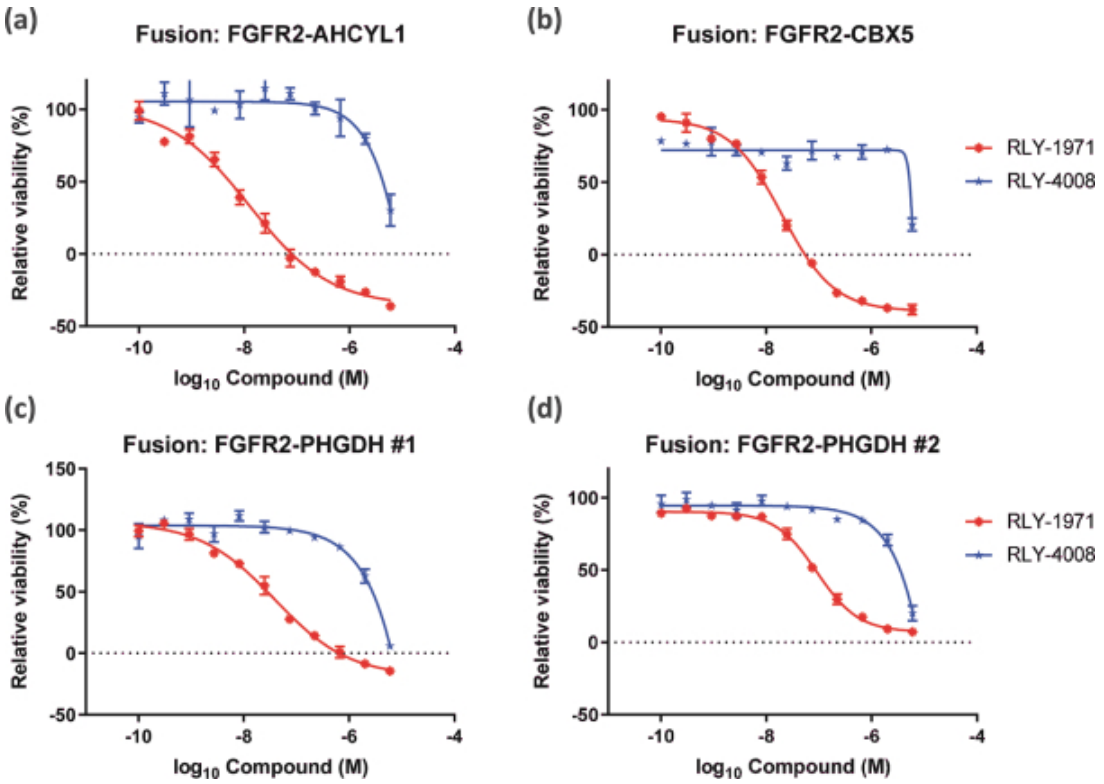
Figure 23: RLY-4008 leads to complete tumor regression in the FGFR2 N550K-mutant endometrial cancer AN3CA xenograft model, while pemigatinib is inactive.



Anti-tumor activity of RLY-4008 and pemigatinib dosed twice daily (BID) by oral administration in the FGFR2 K310R;N550K mutant AN3CA endometrial cancer xenograft model. RLY-4008 induced complete regression when administered at 30 mpk BID. Pemigatinib was dosed at 0.5 mpk BID, a dose selected to match clinical exposure. (a) Data points indicate mean tumor volume (n=8 per group) and error bars represent standard error of the mean. RLY-4008 cohort is statistically significant when compared to vehicle with p=0.009 as determined by one-way ANOVA. (b) Waterfall plot of individual end-of-study (Day 14) tumors; each bar represents one animal. Tumor volume is expressed as percentage change relative to tumor volume on Day 0.

Although RLY-4008 retains activity preclinically against common FGFR2 resistance mutations, tumors may develop bypass resistance by shifting growth factor signaling to an alternate receptor, rendering them less sensitive to the targeted therapy. SHP2, a protein tyrosine phosphatase, regulates the activity of multiple RTKs, and may be an effective way to overcome bypass resistance to RLY-4008. To demonstrate the potential for RLY-1971 as a combination partner for RLY-4008 we tested a population of four patient-derived FGFR2-fusion positive ICC cell lines. These cells were derived from patients that initially responded to non-selective FGFR inhibitors, but then acquired bypass resistance to FGFR inhibition during their treatment. While these cell lines were resistant to treatment with our FGFR2 inhibitor RLY-4008, all resistant cells were sensitive to RLY-1971 with IC50s of less than 100 nM (**Figure 24**). Given the role of SHP2 in mediating bypass resistance to multiple targeted therapies, we intend to investigate the clinical potential of the combination of RLY-1971 with RLY-4008.

Figure 24: RLY-1971 overcomes bypass resistance to FGFR2 inhibition in patient-derived FGFR2 fusion positive ICC cell lines.



Anti-proliferative effect of RLY-1971 in patient-derived FGFR2 fusion positive ICC cells tested in a 2D proliferation assay. These cell models were derived from patients that initially responded to non-selective FGFR inhibitors, but then progressed during their treatment (the specific FGFR2 fusion present in the cells is indicated). These cells are resistant to treatment with our FGFR2 inhibitor RLY-4008 (blue lines), whereas RLY-1971 demonstrates anti-proliferative and cytotoxic activity (red lines), with IC50s as follows: **(a)** 13 nM, **(b)** 20 nM, **(c)** 39 nM, and **(d)** 91 nM. The dotted line at 0 indicates complete growth suppression, with values below 0 indicating cytotoxicity.

Our clinical development plan

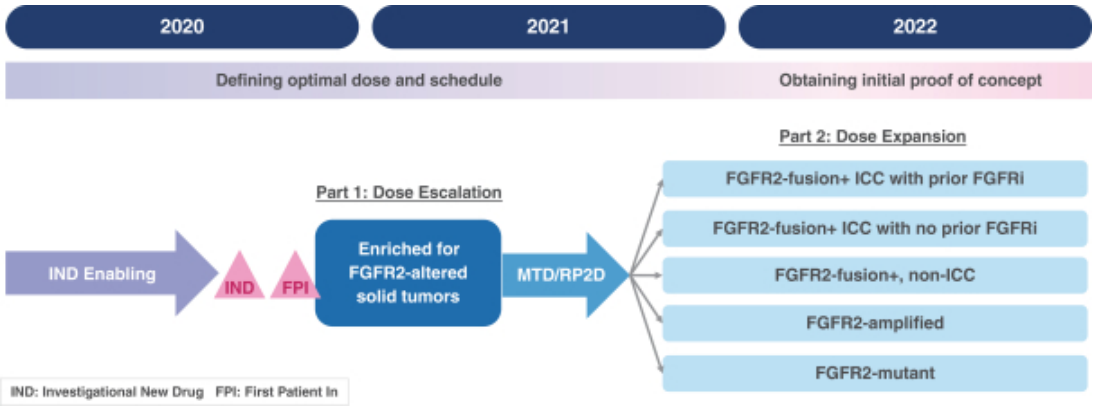
The RLY-4008 clinical development plan seeks to leverage the unique potential for enhanced tolerability and broad FGFR2 mutational coverage to rapidly generate proof-of-concept in molecularly defined patient subsets.

We plan to initiate a first-in-human clinical trial for RLY-4008 in solid tumor patients enriched for oncogenic FGFR2 alterations in the second half of 2020. The primary objectives are to determine the maximum tolerated dose (MTD)/recommended phase 2 dose (RP2D) and to define the overall safety profile of RLY-4008. Secondary objectives are to assess the pharmacokinetics, pharmacodynamics and to explore anti-tumor activity of RLY-4008. Patients will initially receive RLY-4008 administered orally, twice daily.

The first trial will employ a 2-part dose escalation/dose-expansion design. Given RLY-4008's strong preclinical activity against both primary oncogenic alterations and acquired pan-FGFR inhibitor resistance mutations, the

trial will include patients that are naïve to pan-FGFR inhibitors, as well as those that have progressed on pan-FGFR inhibitors. Observation of significant clinical activity in one or more patient populations in this exploratory first-in-human trial would support further trials to confirm the risk-benefit profile of RLY-4008 in patients with oncogenic FGFR2 alterations. These trials may include continued evaluation of RLY-4008 as a monotherapy in single arm trials in patient populations without an established standard-of-care therapy available, which could be used to support filings for marketing authorization for RLY-4008. The development program for RLY-4008 may also include randomized trials of RLY-4008 compared to a relevant standard-of-care therapy.

Figure 25: Planned first-in-human clinical trial for RLY-4008



Development of RLY-4008 will require identification of appropriate patients for treatment with FGFR2 alterations using molecular diagnostic tests. In early phase clinical trials, patients will be identified using local testing performed at clinical trial sites, with retrospective centralized testing to confirm the tumor genetic status. In later phase trials, we will likely collaborate with a diagnostic partner to identify patients for clinical trial enrollment using an analytically validated investigational molecular diagnostic. The tumor genetic contexts that we are considering for development of RLY-4008 (FGFR2 fusions, amplifications and mutations) can currently be detected using FDA-approved next generation sequencing based panel diagnostics (e.g. Foundation One, Guardant 360).

Mutant-PI3Kα Inhibitor Programs

Overview

RLY-PI3K1047 is the lead compound in our franchise of programs targeting cancer-associated mutant variants of phosphoinositide 3-kinase alpha, or PI3Kα. RLY-PI3K1047 is a small molecule inhibitor of PI3Kα that we designed to specifically target PI3Kα H1047X mutant via a previously undescribed allosteric mechanism. Oral dosing of RLY-PI3K1047 resulted in tumor growth inhibition in a mouse xenograft model of PI3Kα H1047R mutant carcinoma. We expect to begin IND-enabling studies for a differentiated PI3Kα H1047X mutant-selective inhibitor in 2021. We believe PI3Kα H1047X mutant cancers affect approximately 10,000 late-line patients annually in the U.S. In the future, if RLY-PI3K1047 advances to earlier lines of treatment, it could potentially address approximately 48,000 patients annually in the U.S.

Two additional mutations of interest for our PI3Kα franchise are E542X and E545X. We estimate there are approximately 15,000 late-line and 57,000 total patients annually in the United States who might benefit from a PI3Kα targeted inhibitor that targets the mutations at E542 and E545.

Figure 26: PI3Kα addressable patient populations

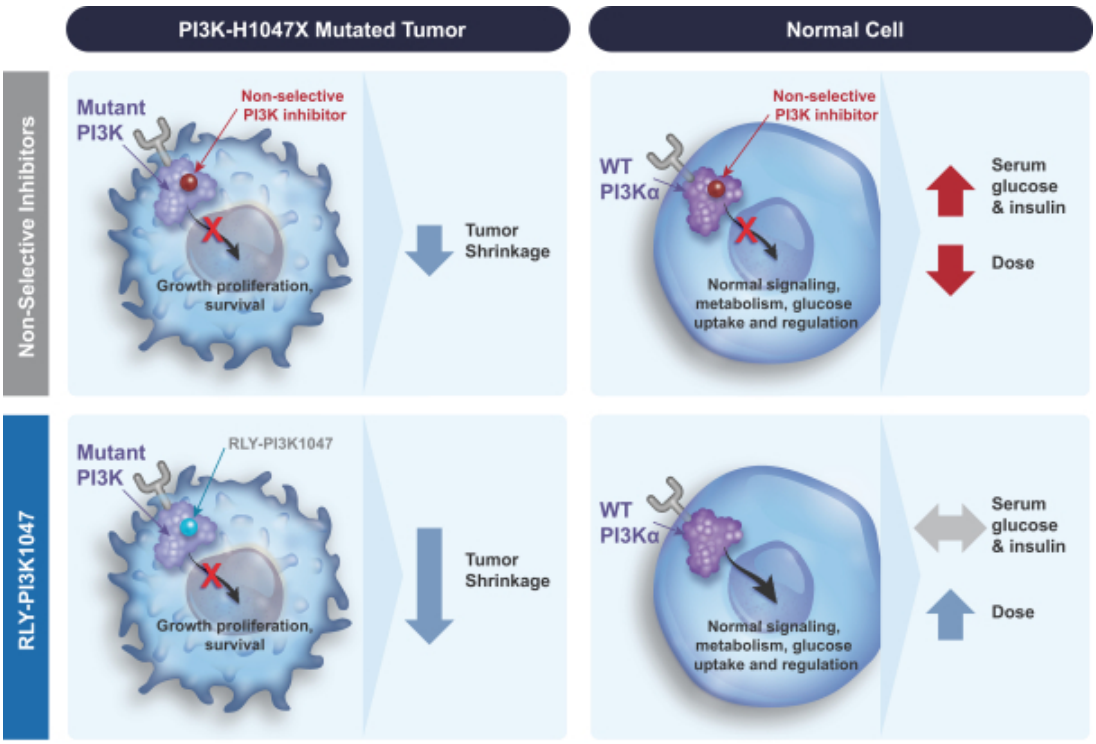
PI3Kα					
H1047X Mutations					
Indication Biomarker Frequency [1]	Breast Cancer 13.9%	Colorectal Cancer 3.0%	Endometrial Cancer 8.2%	Lung Cancer 0.9%	Total
Biomarker Positive Late Line Incidence [2]	6,000	2,000	1,000	1,000	10,000
Biomarker Positive Comprehensive Incidence [3]	37,000	4,000	5,000	2,000	48,000
E542X/E545X Mutations					
Indication Biomarker Frequency [1]	Breast Cancer 11.6%	Colorectal Cancer 8.3%	Endometrial Cancer 9.4%	Lung Cancer 3.6%	Total
Biomarker Positive Late Line Incidence [2]	5,000	4,000	1,000	5,000	15,000
Biomarker Positive Comprehensive Incidence [3]	31,000	12,000	6,000	8,000	57,000

1) Estimated frequency percentages are based on counts of known/likely functional alterations in the Foundation Medicine Insights database. 2) Based on projected cancer deaths in all solid tumors from the National Cancer Society's SEER database as a proxy for late-line cancer patient incidence. 3) These data are based on projections from the National Cancer Society's SEER program for estimated new cases of advanced solid tumors.

Role of PI3Kα in cellular proliferation and differentiation

Mutations at amino acid H1047 of PI3Kα are among the most common kinase mutations in cancer and are believed to be a primary driver of carcinogenesis. There are no approved therapies that selectively target mutant versions of PI3Kα. Inhibitors that are not mutant-selective are associated with dose-limiting toxicities resulting in frequent discontinuations that restrict their therapeutic potential. Additionally, these inhibitors also can inhibit other isoforms of PI3K, including PI3Kd, which can further result in toxicity. Our belief is that selectively targeting mutant PI3Kα could result in improved target inhibition and increased clinical efficacy (**Figure 27**).

Figure 27: RLY-PI3K1047 is a selective inhibitor of H1047X mutant PI3Kα. WT PI3Kα plays a critical role in normal cellular signaling and function, including glucose uptake and insulin regulation. Inhibition of WT PI3Kα by non-mutant selective PI3K inhibitors results in hyperglycemia, hyperinsulinemia and other toxicities. This results in decreased efficacy by requiring dose reductions.

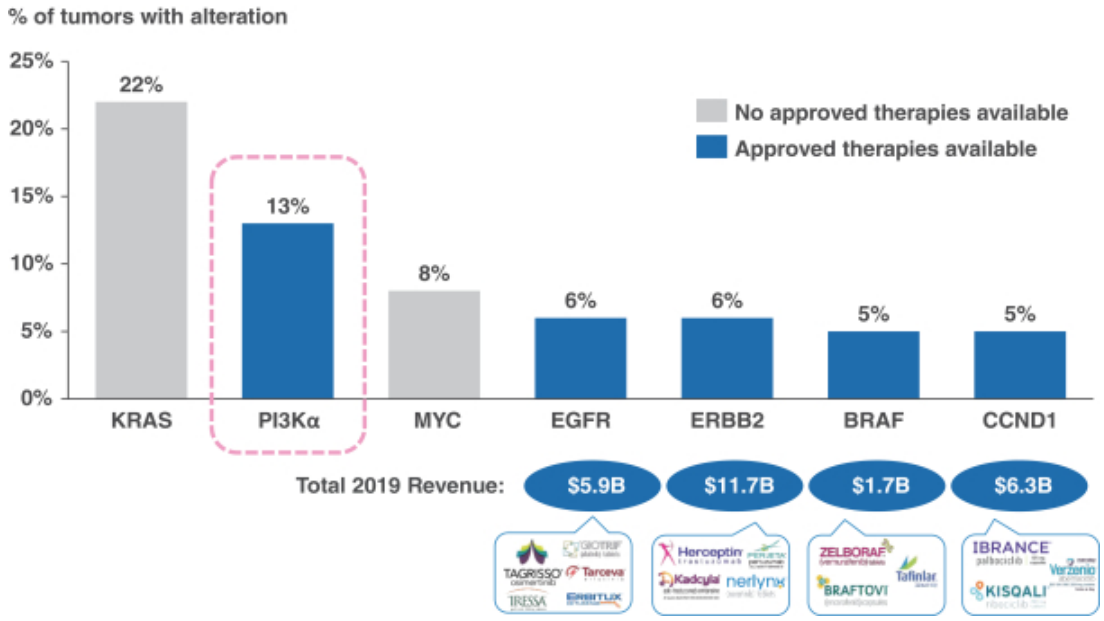


Leveraging our structural biology capabilities, we solved what we believe to be the first full-length structure of PI3Kα using cyrogenic electron microscopy (Cryo-EM) and utilized a range of experimental techniques to understand both H1047R mutant and wild-type conformations. We used this rich experimental data set to power molecular dynamics simulations of H1047R mutant PI3Kα to identify a series of dynamic structural changes caused by the mutation, which were not elucidated by prior structural studies of either H1047R mutant or wild-type PI3Kα. The lead compound in this program, which we refer to as RLY-PI3K1047, was designed to exploit these dynamic differences and bind to a novel allosteric site to achieve heightened mutant selectivity. We intend to initiate IND-enabling studies for our first PI3Kα mutant selective inhibitor, which is focused on H1047X, in 2021.

PI3Kα mutations drive the development of cancer

PI3Kα is the central regulator of a cellular signaling pathway that has been linked to a diverse group of cellular functions related to cancer including cell growth, proliferation and survival. Data collected as a part of Foundation Medicine Insights and other data sources identifies PI3Kα as the most frequently mutated kinase in cancer., (**Figure 28**).

Figure 28: PI3Kα is a common mutation in cancer.



Approximately 80% of the mutations in PI3Kα cluster at three amino acids, or locations. These are E542 and E545 in the helical domain, and H1047 in the kinase domain. The most common mutation at amino acid H1047 is H1047R, but other H1047 mutations (such as H1047L, H1047Y, and others) are also observed across cancers. The abbreviation "H1047X" is used to refer to any H1047 mutation. Similarly, the most common mutations in the helical domain are E542K and E545K, but other mutations (such as E542Q, E545A, and others) are also observed across cancers. The abbreviation "E542/E545X" is used to refer to any helical domain mutation. The H1047R mutation has been shown to induce extensive and diverse cellular changes in pre-clinical models of breast cancer, demonstrating how a single mutation at amino acid H1047 can have large consequences and induce a cancer phenotype. The E5452K and E545K mutations have also been shown to increase PI3Kα activity, promote cell growth and invasion in vitro, and induce tumorigenesis in vivo. While H1047X and E542/E545X mutations have been shown to result in aberrant PI3Kα activity, they do so through distinct biological mechanisms.

Limitations of current PI3Kα inhibitors

Given the large number of patients with PI3Kα mutations, several small-molecule inhibitors of PI3Kα are in development for oncology indications. However, these inhibitors have to our knowledge been largely ineffective when used as monotherapy in cancer. All of these inhibitors target the catalytic (orthosteric) site of PI3Kα. One challenge faced by these inhibitors has been drug intolerance, especially at the high doses routinely used in cancer trials. Alpelisib, marketed as Piqray® by Novartis, is the only FDA-approved inhibitor for cancers with mutated PI3Kα. However, alpelisib is not a selective inhibitor for mutant forms of PI3Kα; it is a potent inhibitor of both the wild-type form of PI3Kα as well as the mutant form. Nonetheless, alpelisib is approved to be used in combination with fulvestrant, an estrogen receptor degrader, in PI3Kα-mutated breast cancer. When used in combination with fulvestrant, alpelisib was associated with significant adverse events, including severe hypersensitivity, diarrhea and severe pneumonitis. Hyperglycemia was reported in 64% of patients and over 36% of patients experienced Grade 3 or Grade 4 hyperglycemia. To manage hyperglycemia, insulin along with other anti-diabetic medication was used in 87% of patients. Gastrointestinal toxicity was reported in 93% of patients, with 9% experiencing Grade 3 gastrointestinal toxicity. Additionally, 36% of patients experienced rash, with

10% experiencing Grade 3 rash. The combination of these adverse events resulted in 64% of patients requiring dose reductions and 25% of patients discontinuing treatment. Despite 11 month progression-free survival (PFS) in the SOLAR-1 Phase 3 trial of alpelisib, the median duration of dosing in the alpelisib arm was 5.5 months, indicating the majority of patients discontinued dosing prior to disease progression. The observed hyperglycemia is believed to be caused by inhibition of wild-type PI3Kα and are therefore is considered an on-target toxicity for alpelisib. In addition to causing dose-limiting toxicity, systemic glucose-insulin feedback caused by inhibiting wild-type PI3K results in elevated insulin that can activate PI3K signaling and subsequently limit the efficacy of PI3K inhibitors. While these factors limit the clinical utility of alpelisib, these data nonetheless establish mutant PI3Kα as a clinically validated target in breast cancer. Because these toxicities result in suboptimal doses and dosing schedules that result in incomplete PI3Kα inhibition, we believe that a H1047X or E542/E545K mutant selective inhibitor will enable improved target inhibition, and therefore improved clinical efficacy. Additionally, overcoming hyperinsulinemia and hyperglycemia could increase efficacy by preventing insulin feedback that activates PI3K signaling.

Our solution, mutant selective inhibition of PI3Kα

Given the existence of mutations in PI3Kα with different biological mechanisms underlying aberrant activity, we believe there are multiple opportunities to develop distinct mutant selective inhibitors of PI3Kα. Addressing the challenge of mutant selectivity required us to express and then solve the structure of the full-length PI3Kα protein. This structure, which to our knowledge had previously not been solved, represented a technical challenge because PI3Kα is a membrane-bound protein. This type of protein is typically difficult both to purify in large quantities and to crystallize. Nonetheless, we were able to obtain the structure of full-length PI3Kα using Cryo-EM. The three-dimensional structure of PI3Kα was determined by collecting data from two-dimensional electron microscopic projections of thin layers of protein. The resulting three-dimensional protein structure provided us with fundamental insights into the mechanism of activation of PI3Kα and the impact of mutations on its function. Through the integration of these structural insights with a combination of experimental and computational techniques, our aim is to develop a franchise of mutant selective PI3Kα inhibitors. The first lead molecule derived from these efforts, which is focused on H1047X, is described below.

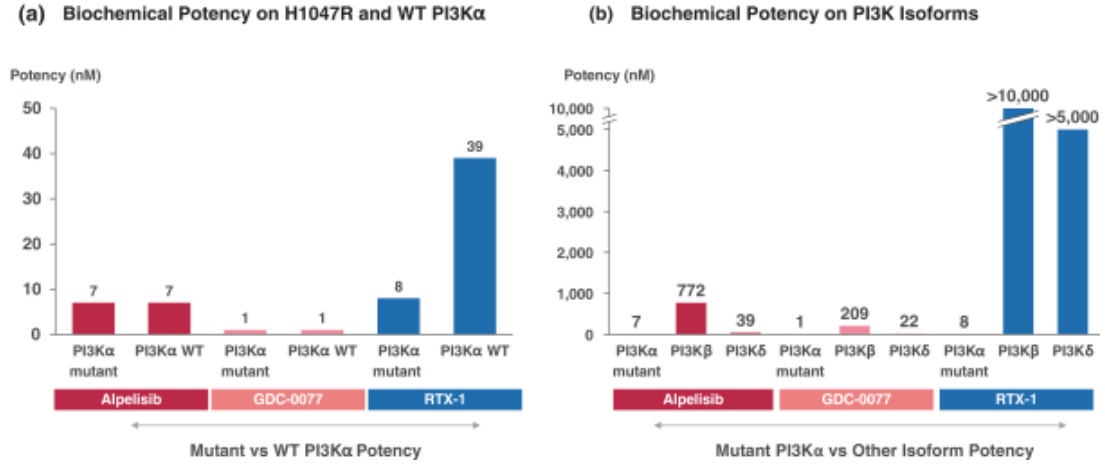
Current lead molecule for PI3K-H1047X Mutations, RLY-PI3K1047

RLY-PI3K1047 is a small molecule inhibitor of PI3Kα that we designed to specifically target PI3Kα H1047X mutant via a previously undescribed allosteric mechanism. As described above, adverse events such as hyperglycemia are common among PI3K inhibitors that have been tested in the clinic, leading us to focus on identifying an inhibitor that bound to a novel site on PI3Kα. Our intent was to obtain a molecule that could selectively bind to the mutant form of PI3Kα.

Structural analyses of PI3Kα showed that mutations at amino acid H1047 cause structural alterations that are located away from the catalytic site, the place where other PI3K inhibitors bind. We then performed long timescale molecular dynamics simulations of wild-type and H1047R mutant PI3Kα to identify a series of dynamic structural changes caused by the mutation that are not present in the wild-type protein.

Utilizing this structural information, we designed inhibitors to target a novel allosteric binding site on the PI3Kα H1047R mutant protein that our computational and experimental approaches exposed. This process led to the discovery of RLY-PI3K1047, which is approximately 5-fold selective for the H1047R mutant form of PI3Kα compared to the wild-type protein in biochemical assays (**Figure 29**). In contrast, alpelisib and GDC-0077 (an orthosteric PI3Kα inhibitor currently in development) biochemically inhibited the mutant and wild-type proteins with approximately equivalent potency. In addition, we found that RLY-PI3K1047 is selective for PI3Kα over other PI3K isoforms, including PI3Kß and PI3Kd, showing no measurable inhibition. In contrast, alpelisib and GDC-0077 inhibited the PI3Kd isoform with IC50 < 1μM. Given toxicities associated with inhibitors that target PI3K isoforms other than PI3Kα and GDC-0077, including gastrointestinal side effects and transaminitis, we believe that RLY-PI3K1047 provides a dual advantage of isoform and mutant selectivity, which could result in increased clinical efficacy compared alpelisib or other orthosteric PI3Kα inhibitors.

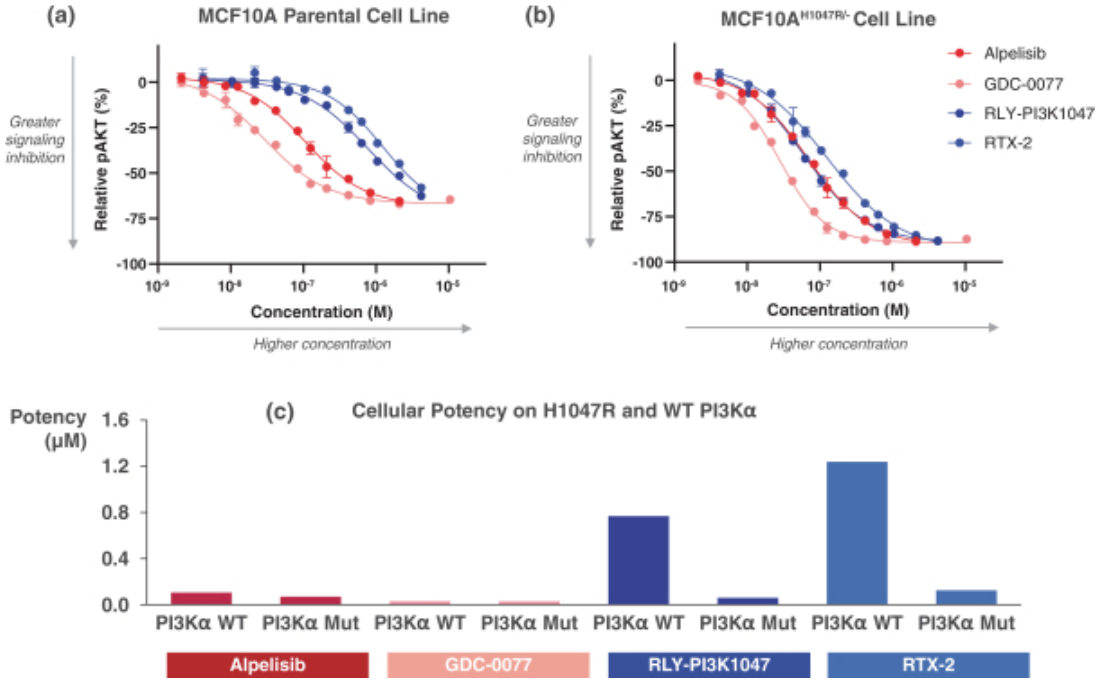
Figure 29: Compared to alpelisib and GDC-0077, RLY-PI3K1047 is more selective for the PI3Kα mutant (H1047R) compared to wild-type (a) and more selective for the PI3Kα isoform compared to other PI3K isoforms PI3Kß and PI3Kd (b).



*Biochemical potency for RLY-PI3K1047 compared to alpelisib and GDC-0077. IC50 values are shown for inhibition of the PI3Kα mutant (H1047R) compared to wild-type **(a)** and for PI3Kα compared to other PI3K isoforms **(b)**. Phosphotransfer activity (PtdIns(3,4,5)P3 production in liposomes using diC8-PtdIns(4,5)P2 as a substrate in the presence of 100uM ATP and titrated compounds after a 120min incubation) was measured by ADP-Glo. All samples were run in duplicate and data represent the mean.*

This increased biochemical potency for PI3Kα H1047R mutant protein translates into an increased potency in cellular pharmacodynamic assays. RLY-PI3K1047 was approximately 10-fold more potent for inhibition of phosphorylated AKT (pAKT), a key substrate of PI3Kα, in transformed breast epithelial cells expressing PI3Kα H1047R compared to the same cells expressing wild-type PI3Kα. RTX-2, an example of another lead compound generated in this program, also showed approximately 10-fold increased potency for inhibition of pAKT in transformed breast epithelial cells expressing PI3Kα H1047R (**Figure 30**). In contrast, alpelisib and GDC-0077 (an orthosteric PI3Kα inhibitor currently in development) showed approximately equal potencies in cells expressing either the mutant or wild-type forms.

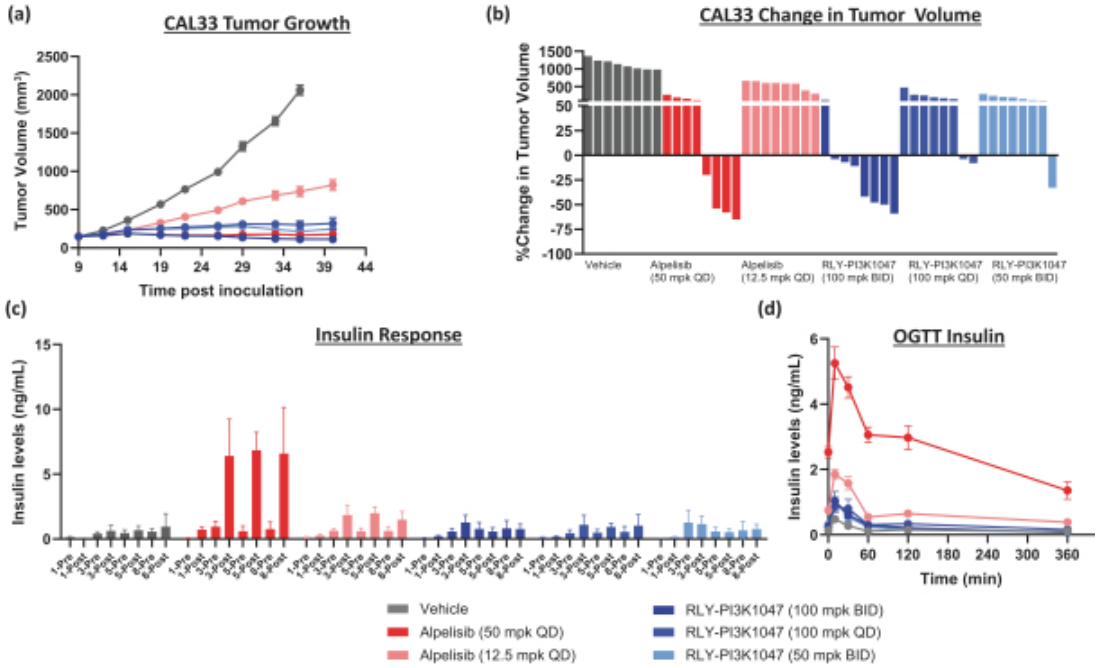
Figure 30: Compared to other clinical PI3Kα inhibitors (alpelisib and GDC-0077), Relay compounds more potently inhibits pAKT in cells expressing H1047R mutant PI3Kα compared to cells expressing wild-type PI3Kα.



*Inhibition of pAKT by Relay compounds RLY-PI3K1047 and RTX-2 in a pharmacodynamic assay. MCF10A immortalized breast epithelial cells endogenously expressing wild-type PI3Kα **(a)** or engineered to express the PI3Kα H1047R mutation **(b)** were treated with alpelisib, GDC-0077 or Relay compounds. After 2 hours cell lysates were collected and the impact on pAKT levels was assessed using an HTRF assay (three fold dilution dose response was run in duplicate, data represented as mean +/- standard error of the mean). Half maximal effective concentrations (EC50) from the dose response curves (a, b) are plotted in **(c)**.*

The selectivity of RLY-PI3K1047 was then evaluated *in vivo*. Oral dosing of RLY-PI3K1047 resulted in tumor growth inhibition in a mouse xenograft model of PI3Kα H1047R carcinoma at doses of 100 mg/kg delivered once or twice daily or 50 mg/kg delivered twice daily. (**Figure 31**). An important validation of our efforts to avoid the dose-limiting toxicities associated with other PI3K inhibitors is the effect of RLY-PI3K1047 on hyperinsulinemia. As discussed above, hyperinsulinemia and hyperglycemia can lead to decreased efficacy of PI3K inhibitors. In a study evaluating the effects of alpelisib or RLY-PI3K1047 treatment on insulin levels, RLY-PI3K1047 led to minimal changes in serum insulin ($p=0.116$ compared to vehicle by 2-way ANOVA) when administered orally at all doses tested for the duration of the study. In contrast, alpelisib treatment resulted in increases in serum insulin ($p<0.0001$ compared to vehicle by 2-way ANOVA). Additionally, in an oral glucose tolerance test (OGTT) assessing insulin response after dosing of compounds, alpelisib treatment at 50 mg/kg once daily lead to larger increases in serum insulin compared to all doses of RLY-PI3K1047 tested ($p<0.0001$ by 2-way ANOVA).

Figure 31: RLY-PI3K1047 inhibits tumor growth in vivo with minimal increases in serum insulin levels.



Anti-tumor activity and impact on serum insulin levels in response to treatment with RLY-PI3K1047.

(a) *The CAL33 xenograft model was dosed once or twice daily (12 hour interval) with RLY-PI3K1047 by oral administration or alpelisib once daily by oral administration, and tumor growth was evaluated. Data represent mean tumor volume over time, and error bars represent standard error of the mean. (n=8 per group).*

(b) *RLY-PI3K1047 dosed at 100 mg/kg twice daily led to reduction in tumor volume in most animals compared to vehicle ($p<0.0001$ as measured by 2-way ANOVA).*

(c) *Insulin levels in serum were measured one hour before and one hour after drug administration in non-tumor bearing animals throughout an 8 day dosing period (measurements were taken specifically on day 1, 3, 5 and 8, n=8 per group). Data presented as mean +/- standard error of the mean.*

(d) *In the oral glucose tolerance test (OGTT), animals were fasted overnight for 16 hours prior to compound treatment. Animals were then allowed to recover after compound dosing for 1 hour. After the 1 hour recovery, a 2 g/kg glucose solution was administered orally. Insulin levels were measured at time 0 (prior to glucose administration), 10, 30, 60, 120, and 360 minutes post dosing (n=8 per group, data presented as mean +/- standard error of the mean).*

While RLY-PI3K1047 is one lead molecule generated in this franchise, we are continuing lead optimization to identify mutant selective inhibitors of PI3Kα meeting our criteria to enter IND-enabling studies.

Our clinical development plan

We expect to begin IND-enabling studies for a differentiated PI3Kα H1047X mutant-selective inhibitor in 2021. With this profile, we will look to advance a precision medicine program that quickly establishes safety, tolerability, and preliminary efficacy, in patients with advanced solid tumors with H1047X mutations. Upon completion of dose escalation, the mutant PI3Kα inhibitor will be tested as a monotherapy in advanced cancer

patients with PI3Kα H1047X mutations in a tumor-agnostic study. We will also pursue disease-specific development paths including combination with endocrine therapy +/- CDK4/6 inhibitors in hormone-receptor positive breast cancer and a PI3Kα H1047X mutation.

Our Discovery Programs

We are deploying our Dynamo platform to advance an additional three discovery-stage precision oncology programs. As with our lead programs, these programs leverage insights into protein conformational dynamics to address high-value, genetically validated oncogenes that previously have been intractable to conventional drug-discovery approaches. The capabilities for our Dynamo platform in protein visualization can be applied to multiple therapeutic areas beyond precision oncology. We are continuing to leverage the power of our Dynamo platform to further diversify our pipeline by extending our approach to address genetically validated targets in monogenic diseases with two discovery-stage programs, where genetic alterations lead to disease-causing defects in protein conformational dynamics.

Our Key Scientific Collaborations

While we have invested extensively in our in-house capabilities and know-how, we selectively work with key collaborators and field experts on certain emerging technologies. Most of our experimental collaborations are focused on the technologies we use to visualize protein structure at the atomic level. For example, we work with Professor James Fraser from UCSF on performing and analyzing room temperature X-ray crystallography experiments and Professor Adam Frost from UCSF on Cryo-EM image analysis. Both are world leading experts on these technologies, and they provide important know-how and insights in collaboration with our scientists.

Since our firm's founding we have collaborated with D. E. Shaw Research, a computational biochemistry research firm operating under the scientific leadership of Dr. David E. Shaw, which has developed proprietary software and hardware to perform long timescale molecular dynamics simulations. Through an affiliate, D. E. Shaw Research is also one of our investors. We collaborate with D. E. Shaw Research scientists to research certain protein targets on an exclusive basis, with a focus on the dynamic behavior of proteins, through the use of D. E. Shaw Research's computational modeling capabilities, such as the Anton 2 supercomputer and proprietary algorithms and software developed specifically by D. E. Shaw Research for processing long timescale molecular dynamics simulations. Our scientists work closely with D. E. Shaw Research scientists on each of our programs, especially in the discovery stage as we develop motion-based hypotheses and identify lead compounds. See "Business—Collaboration and License Agreement with D. E. Shaw Research, LLC" for more detail on the terms of the DESRES Agreement.

While our key computational collaboration is with D. E. Shaw Research, we also have other collaborations mostly focused on developing machine learning models. Specifically, we collaborate with Google on machine learning models to generate novel molecules with specific activity, and with Professor Tim Cernak from the University of Michigan on machine learning models focused on chemical synthesis and high throughput experimentation.

Competition

The biotechnology and pharmaceutical industries are characterized by rapid innovation of new technologies, fierce competition and strong defense of intellectual property. While we believe that our platform and our 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.

We compete in the segments of the pharmaceutical, biotechnology, and other related markets that address experimentally and computationally driven structure-based drug design in cancer and genetic diseases. There are other companies focusing on structure-based drug design to develop therapies in the fields of cancer and other diseases. These companies include divisions of large pharmaceutical companies and biotechnology companies of various sizes. Any product candidates that we successfully develop and commercialize will compete with currently approved therapies and new therapies that may become available in the future from segments of the pharmaceutical, biotechnology and other related markets that pursue precision medicines. Key product features that would affect our ability to effectively compete with other therapeutics include the efficacy, safety and convenience of our products.

We believe principal competitive factors to our business include, among other things, the rich protein structural data sets we are able to generate, the power and accuracy of our computations and predictions, ability to integrate experimental and computational capabilities, ability to successfully transition research programs into clinical development, ability to raise capital, and the scalability of the platform, pipeline, and business.

While there are many pharmaceutical and biotechnology companies that use some of the same tools that we use in our platform, we believe we compete favorably on the basis of these factors. The effort and investment required to develop a highly integrated experimental and computational platform similar to ours will hinder new entrants that are unable to invest the necessary capital and time and lack the breadth and depth of technical expertise required to develop competing capabilities. Our ability to remain competitive will largely depend on our ability to continue to augment our integrated experimental and computational platform and demonstrate success in our drug discovery efforts.

Our competitors may obtain regulatory approval of their products more rapidly than we may or may obtain patent protection or other intellectual property rights that limit our ability to develop or commercialize our product candidates. Our competitors may also develop drugs that are more effective, more convenient, more widely used and less costly or have a better safety profile than our products and these competitors may also be more successful than us in manufacturing and marketing their products.

In addition, we will need to develop our product candidates in collaboration with diagnostic companies, and we will face competition from other companies in establishing these collaborations. Our competitors will also compete with us in recruiting and retaining qualified scientific, management and commercial personnel, establishing clinical trial sites and patient registration for clinical trials, as well as in acquiring technologies complementary to, or necessary for, our programs.

Furthermore, we also face competition more broadly across the market for cost-effective and reimbursable cancer treatments. The most common methods of treating patients with cancer are surgery, radiation and drug therapy, including chemotherapy, hormone therapy and targeted drug therapy or a combination of such methods. There are a variety of available drug therapies marketed for cancer. In many cases, these drugs are administered in combination to enhance efficacy. While our product candidates, if any are approved, may compete with these existing drug and other therapies, to the extent they are ultimately used in combination with or as an adjunct to these therapies, our product candidates may not be competitive with them. Some of these drugs are branded and subject to patent protection, and others are available on a generic basis. Insurers and other third-party payors may also encourage the use of generic products or specific branded products. We expect that if our product candidates are approved, they will be priced at a significant premium over competitive generic, including branded generic, products. As a result, obtaining market acceptance of, and gaining significant share of the market for, any of our product candidates that we successfully introduce to the market will pose challenges. In addition, many companies are developing new therapeutics, and we cannot predict what the standard of care will be as our product candidates progress through clinical development.

RLY-1971

While there are currently no approved products targeting SHP2, we are aware of other companies in clinical trials developing therapeutics that target SHP2, including Revolution Medicines in partnership with Sanofi, Novartis AG, and Jacobio Pharmaceuticals in partnership with AbbVie.

RLY-4008

While there are currently no approved products that selectively target FGFR2, we are aware of other companies developing therapeutics that selectively target FGFR2, which include, but are not limited to: Five Prime Therapeutics and Russian Pharmaceutical Technologies. Specifically, we expect RLY-4008 to compete with approved development stage non-selective inhibitors of the FGFR receptor family that are being tested in patients with FGFR2 alterations, including but not limited to: Incyte Corporation (pemigatinib), QED Therapeutics (infigratinib), Basilea Pharmaceutica (derazantinib), Janssen (erdafitinib), Otsuka Holdings through its subsidiary Taiho Pharmaceutical (TAS-120), Debiopharm (Debio1347), Eisai Co (E-7090), and InnoCare Pharma (ICP-192).

The development of RLY-4008 will focus on solid tumor patients with FGFR2 alterations, including intrahepatic cholangiocarcinoma (ICC) patients harboring FGFR2 gene fusions. While there are no approved systemic therapies for ICC, the current standard of care for unresectable or metastatic patients is first-line gemcitabine/cisplatin chemotherapy. In addition, there are other companies developing potentially competitive drug candidates in ICC including, but not limited to: Merck & Co, Astrazeneca plc, Merck KGaA, and NuCana plc.

Mutant-PI3Kα Inhibitor Program

We expect that our mutant-selective PI3Kα inhibitor program will compete against an approved drug, Piqray (alpelisib), a non-selective PI3Kα inhibitor marketed by Novartis for the treatment of PI3Kα mutated breast cancer. We are aware of other companies developing therapeutics that target both wild-type and mutant PI3Kα, including but not limited to: Roche Holding AG through its subsidiary Genentech, Petra Pharma, Menarini Group, and Shanghai Haihe Pharma. Petra Pharma also has a preclinical development program for a mutant-selective PI3Kα inhibitor.

Collaboration and License Agreement with D. E. Shaw Research, LLC

On June 15, 2020, we entered into an Amended and Restated Collaboration and License Agreement with D. E. Shaw Research, LLC, or D. E. Shaw Research, extending the term and otherwise modifying the terms of a Collaboration and License Agreement originally entered into on August 17, 2016, as amended. We refer to this amended and restated agreement as the DESRES Agreement. Under the DESRES Agreement, we agreed to collaborate with D. E. Shaw Research to research certain biological targets through the use of D. E. Shaw Research computational modeling capabilities focused on analysis of protein motion, with an aim to develop and commercialize compounds and products directed to such targets. After completing the computational modeling with D. E. Shaw Research and naming a compound development candidate, we develop and commercialize such compounds and products. D. E. Shaw Research has no involvement with the clinical development or potential commercialization of these compounds and products, regardless of any co-ownership rights pursuant to the terms of the DESRES Agreement, and instead receives solely milestone and royalty payments as described below.

Under the DESRES Agreement, there are three categories of targets: Category 1 Targets, Category 2 Targets and Category 3 Targets. We and D. E. Shaw Research agreed on a list of Category 1 Targets and Category 2 Targets as part of the DESRES Agreement. Category 1 Targets are targets that, among other things, we collaborate on with D. E. Shaw Research, D. E. Shaw Research has exclusivity obligations with respect to, and we may owe royalties on; Category 2 Targets are targets in connection with the potential re-categorization of which into a Category 1 Target, we may, among other things, perform in vitro non-clinical research and development (but not

in vivo non-clinical development, clinical development or commercialization), and Category 3 Targets are all targets other than Category 1 Targets and Category 2 Targets. There are mechanisms for re-categorizing targets, and we and D. E. Shaw Research have re-categorized a number of targets during the first four years of our collaboration. Our rights and obligations, and D. E. Shaw Research's rights and obligations, with respect to targets vary by the category of each target. However, the parties only conduct collaborative activities together for Category 1 Targets, and we are limited to a maximum of eleven Category 1 Targets in the current collaboration year (with such number potentially changing from year to year, with any increase in such number of targets subject to the collaboration in each collaboration year capped at four more than the highest number of such targets in the previous year). The sum of the number of Category 1 Targets and the number of Category 2 Targets is capped at twenty, in any event.

Work product that is jointly developed with D. E. Shaw Research is initially co-owned with them. Specifically, intellectual property rights covering the composition of matter for RLY-1971 are currently co-owned by D. E. Shaw Research and us under this arrangement. We have the right to have patents claiming certain product candidates (including one claiming RLY-1971) assigned to us upon issuance of those patents. Although other compounds in our FGFR2 and PI3Kα programs were jointly conceived with D. E. Shaw Research, RLY-4008 and RLY-PI3K1047 were conceived solely by Relay Therapeutics inventors. For each Category 1 Target there is a limit of up to 10 core compounds and a total of 500 compounds including derivatives of those core compounds that can be designated as solely owned by us, provided that if D. E. Shaw Research provides us with notice that certain compounds cannot be designated as solely owned by us due to concerns in respect of a Category 3 Target, then the limit on Category 1 Target core compounds will increase by one and the limit on total compounds will increase by fifty, but subject to a maximum of 15 and 750, respectively, for each Category 1 Target. Each of we and D. E. Shaw Research grants to the other a perpetual, irrevocable, non-exclusive license for jointly held intellectual property, subject to certain exclusions.

During the initial research term, which is expected to last until August 2025, unless extended by mutual agreement, D. E. Shaw Research will not, and will cause its subsidiaries not to, research any Category 1 Target (or grant certain rights with respect to such target) with the aim of pursuing any compound designed to interact with or bind to such Category 1 Target, subject to some exceptions. Following the end of the initial research term, D. E. Shaw Research will not, and will cause its subsidiaries not to, research a Category 1 Target (or grant certain rights with respect to such target) with the aim of pursuing any compound designed to interact with or bind to any target that was a Category 1 Target at the end of the initial research term, subject to some exceptions. D. E. Shaw Research will not be bound by such exclusivity provisions with respect to a particular Category 1 Target if we, and parties acting on our behalf, stop using commercially reasonable efforts to research, develop or commercialize any products against such Category 1 Target. Further, D. E. Shaw Research will be released from such exclusivity obligations with respect to a particular Category 1 Target if, at least 24 months after the end of the initial research term, D. E. Shaw Research informs us that D. E. Shaw Research will forgo all future payments with respect to such Category 1 Target.

During the initial research term, neither D. E. Shaw Research nor we will, and we will each cause our subsidiaries not to, research a Category 2 Target (or grant certain rights with respect to such target) with the aim of pursuing any compound designed to interact with or bind to such Category 2 Target, subject to some exceptions. These exclusivity restrictions do not extend past the initial research term.

There is no exclusivity with respect to Category 3 Targets.

Through May 31, 2020, we have made cash payments to D. E. Shaw Research totaling $3.5 million in the aggregate. On a product-by-product basis, we have also agreed to pay D. E. Shaw Research milestone payments upon the achievement of certain development and regulatory milestone events for products we develop under the DESRES Agreement that are directed to a Category 1 Target or any target that was a Category 1 Target. Our SHP2, FGFR2 and PI3K programs are each directed to Category 1 Targets. Such payments for achievement of development and regulatory milestones total up to $7.25 million in the aggregate for each of the first three products we develop, and up to $6.25 million in the aggregate for each product we develop after the first three.

Additionally, we have agreed to pay D. E. Shaw Research, on a product-by-product basis, with respect to products directed to Category 1 Targets or any target that was a Category 1 Target, royalties in the low single digits on worldwide net sales of products that we commercialize directed to the targets selected for development under the DESRES Agreement, subject to certain reductions. Royalties are payable on a product-by-product and country-by-country basis until the later of twelve years after first commercial sale in such country or the expiration of all applicable regulatory exclusivities in such country. On a product-by-product basis, we also agreed to pay D. E. Shaw Research sales milestone payments up to $36.0 million in the aggregate based on sales of each product directed to a Category 1 Target or any target that was a Category 1 Target. Further, if we enter into transactions granting third parties rights to a Category 1 Target or a compound or product directed to a Category 1 Target or any target that was a Category 1 Target, but subject to certain exclusions, we will share with D. E. Shaw Research a percentage of the proceeds of such transactions ranging from the low- to high-single digits, depending on the stage of development of compounds or products directed to such target at the time we enter into such transaction. We have also agreed to pay D. E. Shaw Research an annual collaboration fee in August of each year during the initial research term, such fee to be $7,900,000 for each year between 2020 and 2025.

Unless earlier terminated, the DESRES Agreement will continue at least until the end of the initial research term and thereafter on a target-by-target basis until all payment obligations have expired. D. E. Shaw Research has the right to terminate the DESRES Agreement due to non-payment. We and D. E. Shaw Research each have the right to terminate the DESRES Agreement due to an uncured material breach by the other party, or in the event the other party becomes insolvent or enters into bankruptcy or dissolution proceedings. Our payment obligations to D. E. Shaw Research survive termination of the DESRES Agreement. If D. E. Shaw Research terminates the DESRES Agreement, the exclusivity obligations will terminate. If we terminate the DESRES Agreement, D. E. Shaw Research remains bound by its exclusivity obligations with respect to certain targets until, on a target-by-target basis, there are no further payment obligations due to D. E. Shaw Research in respect of such targets.

Intellectual Property

We seek to protect the intellectual property and proprietary technology that we consider important to our business, including by pursuing patent applications that cover our product candidates and methods of using the same, as well as any other relevant inventions and improvements that we believe to be commercially important to the development of our business. We also rely on trade secrets, know-how and continuing technological innovation to develop and maintain our proprietary and intellectual property position. Our commercial success depends, in part, on our ability to obtain, maintain, enforce and protect our intellectual property and other proprietary rights for the technology, inventions and improvements we consider important to our business, and to defend any patents we may own or in-license in the future, prevent others from infringing any patents we may own or in-license in the future, preserve the confidentiality of our trade secrets, and operate without infringing, misappropriating or otherwise violating the valid and enforceable patents and proprietary rights of third parties.

As with other biotechnology and pharmaceutical companies, our ability to maintain and solidify our proprietary and intellectual property position for our product candidates and technologies will depend on our success in obtaining effective patent claims and enforcing those claims if granted. However, our pending provisional and PCT patent applications, and any patent applications that we may in the future file or license from third parties, may not result in the issuance of patents and any issued patents we may obtain do not guarantee us the right to practice our technology or commercialize our product candidates. We also cannot predict the breadth of claims that may be allowed or enforced in any patents we may own or in-license in the future. Any issued patents that we may own or in-license in the future may be challenged, invalidated, circumvented or have the scope of their claims narrowed. In addition, because of the extensive time required for clinical development and regulatory review of a product candidate we may develop, it is possible that, before any of our product candidates can be commercialized, any related patent may expire or remain in force for only a short period following

commercialization, thereby limiting the protection such patent would afford the respective product and any competitive advantage such patent may provide.

The term of individual patents depends upon the date of filing of the patent application, the date of patent issuance and the legal term of patents in the countries in which they are obtained. In most countries, including the United States, the patent term is 20 years from the earliest filing date of a non-provisional patent application. In the United States, a patent's term may be lengthened by patent term adjustment, which compensates a patentee for administrative delays by the USPTO in examining and granting a patent, or may be shortened if a patent is terminally disclaimed over an earlier expiring patent. The term of a patent claiming a new drug product may also be eligible for a limited patent term extension when FDA approval is granted, provided statutory and regulatory requirements are met. The restoration period granted on a patent covering a product is typically one-half the time between the effective date of a clinical investigation involving human beings is begun and the submission date of an application, plus the time between the submission date of an application and the ultimate approval date. The restoration period cannot be longer than five years, and the restoration period may not extend the patent term beyond 14 years from the date of FDA approval. Only one patent applicable to an approved product is eligible for the extension, and only those claims covering the approved product, a method for using it, or a method for manufacturing it may be extended. Additionally, the application for the extension must be submitted prior to the expiration of the patent in question. A patent that covers multiple products for which approval is sought can only be extended in connection with one of the approvals. The United States Patent and Trademark Office reviews and approves the application for any patent term extension or restoration in consultation with the FDA. In the future, if our product candidates receive approval by the FDA, we expect to apply for patent term extensions on one issued patent covering each of those products, depending upon the length of the clinical studies for each product and other factors. There can be no assurance that patents will issue from our current or future pending patent applications, or that we will benefit from any patent term extension or favorable adjustments to the terms of any patents we may own or in-license in the future. In addition, the actual protection afforded by a patent varies on a product-by-product basis, from country-to-country, and depends upon many factors, including the type of patent, the scope of its coverage, the availability of regulatory-related extensions, the availability of legal remedies in a particular country and the validity and enforceability of the patent. Patent term may be inadequate to protect our competitive position on our products for an adequate amount of time.

As of June 15, 2020, we owned four pending U.S. provisional patent applications, four pending U.S. non-provisional patent applications, and six pending Patent Cooperation Treaty, or PCT, patent applications, two pending Argentina non-provisional patent applications, and two pending Taiwan non-provisional patent applications. We currently do not own or in-license any issued patents or non-provisional patent applications with respect to RLY-4008, our platform technology, or our PI3K Program, and our intellectual property portfolio is in its very early stages. We do not currently own or in-license any issued patents or provisional or non-provisional patent applications covering our other product candidates or technology. Presently, all of the patent applications we own are co-owned with D. E. Shaw, with the exception of one of our U.S. provisional patent applications relating to RLY-1971 solid forms and methods of manufacture, which are wholly owned by us.

RLY-1971

As of June 15, 2020, we owned one U.S. non-provisional patent application, one PCT patent application, one Argentina patent application, and one Taiwan patent application that cover the composition of matter for RLY-1971, as well as methods of using and making RLY-1971. Any U.S. or foreign patent that may issue from these patent applications would be scheduled to expire in 2039, excluding any additional term for patent term adjustment or patent term extension, if applicable. As of June 15, 2020, we wholly own one U.S. provisional patent application that covers RLY-1971 solid forms and methods of manufacture. Any U.S. or foreign patent that may issue from a non-provisional patent application claiming priority to this patent application would be scheduled to expire in 2040, excluding any additional term for patent term adjustment or patent term extension, if applicable.

RLY-4008

As of June 15, 2020, we owned two pending U.S. provisional applications, one PCT patent application, one Argentina patent application and one Taiwan patent application that cover the composition of matter for RLY-4008, as well as methods of using and making RLY-4008. Any U.S. or foreign patent that may issue from a non-provisional patent application claiming priority to these applications would be scheduled to expire in 2040, excluding any additional term for patent term adjustment or patent term extension, if applicable.

PI3K Program

As of June 15, 2020, we owned one pending U.S. provisional patent application that cover our PI3K Program, which is directed to the composition of matter for the drug candidates of the program, analogs thereof, as well as methods of making and using these compounds. Any U.S. or foreign patent that may issue from a non-provisional patent application claiming priority to this application would be scheduled to expire in 2041.

Prosecution of the PCT patent application covering RLY-4008 and the provisional patent application covering our PI3K Program has not commenced, and will not commence unless and until they are timely converted into U.S. non-provisional or national stage applications. Prosecution is a lengthy process, during which the scope of the claims initially submitted for examination by the USPTO or other foreign jurisdiction are often significantly narrowed by the time they issue, if they issue at all. Any U.S. or foreign patent issuing from these provisional, PCT, or foreign patent applications (assuming they are timely converted into non-provisional applications, and such non-provisional applications are granted as issued patents) would be scheduled to expire in 2040 (for RLY-4008) or 2041 (for our PI3K application), excluding any additional term for patent term adjustment or patent term extension, and assuming national phase entries are timely made based upon the pending PCT application, and payment of all applicable maintenance or annuity fees. Any of our pending PCT patent applications are not eligible to become issued patents until, among other things, we file national stage patent applications within 30 months in the countries in which we seek patent protection. If we do not timely file any national stage patent applications, we may lose our priority date with respect to our PCT patent applications and any patent protection on the inventions disclosed in such PCT patent applications. Our provisional patent applications may never result in issued patents and are not eligible to become issued patents until, among other things, we file a non-provisional patent application and/or PCT patent application within 12 months of filing the related provisional patent application. If we do not timely file non-provisional patent applications, we may lose our priority date with respect to our provisional patent applications and any patent protection on the inventions disclosed in our provisional patent applications. While we intend to timely file non-provisional and national stage patent applications relating to our provisional and PCT patent applications, we cannot predict whether any of our current or future patent applications for RLY-1971, RLY-4008, or any of our other product candidates or technology, will issue as patents. If we do not successfully obtain patent protection, or, even if we do obtain patent protection, if the scope of the patent protection we, or our potential licensors, obtain with respect to RLY-1971, RLY-4008, or our other product candidates or technology is not sufficiently broad, we will be unable to prevent others from using our technology or from developing or commercializing technology and products similar or identical to ours or other competing products and technologies.

In addition to patent applications, we rely on unpatented trade secrets, know-how and continuing technological innovation to develop and maintain our competitive position. However, trade secrets and confidential know-how are difficult to protect. In particular, we anticipate that with respect to the building of our compound library, our trade secrets and know-how will over time be disseminated within the industry through independent development and public presentations describing the methodology. We seek to protect our proprietary information, in part, by executing confidentiality agreements with our collaborators and scientific advisors and non-competition, non-solicitation, confidentiality and invention assignment agreements with our employees and consultants. We have also executed agreements requiring assignment of inventions with selected consultants, scientific advisors and collaborators. The confidentiality agreements we enter into are designed to protect our proprietary information and the agreements or clauses requiring assignment of inventions to us are designed to grant us

ownership of technologies that are developed through our relationship with the respective counterparty. We cannot guarantee that we will have executed such agreements with all applicable employees and contractors, or that these agreements will afford us adequate protection of our intellectual property and proprietary information rights. In addition, our trade secrets and/or confidential know-how may become known or be independently developed by a third party or misused by any collaborator to whom we disclose such information. These agreements may also be breached, and we may not have an adequate remedy for any such breach. Despite any measures taken to protect our intellectual property, unauthorized parties may attempt to copy aspects of our products or to obtain or use information that we regard as proprietary. Although we take steps to protect our proprietary information, third parties may independently develop the same or similar proprietary information or may otherwise gain access to our proprietary information. As a result, we may be unable to meaningfully protect our trade secrets and proprietary information. For more information regarding the risks related to our intellectual property, please see “Risk Factors—Risks Related to our Intellectual Property.”

Commercialization

Subject to receiving marketing approvals, we expect to commence commercialization activities by building a focused sales and marketing organization in the United States to sell our products. We believe that such an organization will be able to address the community of oncologists who are the key specialists in treating the patient populations for which our product candidates are being developed. Outside the United States, we expect to enter into distribution and other marketing arrangements with third parties for any of our product candidates that obtain marketing approval.

We also plan to build a marketing and sales management organization to create and implement marketing strategies for any products that we market through our own sales organization and to oversee and support our sales force. The responsibilities of the marketing organization would include developing educational initiatives with respect to approved products and establishing relationships with researchers and practitioners in relevant fields of medicine.

Manufacturing

We do not have any manufacturing facilities or personnel. We currently rely, and expect to continue to rely, on third parties for the manufacture of our product candidates undergoing preclinical testing, as well as for clinical testing and commercial manufacture if our product candidates receive marketing approval.

All of our drug candidates are small molecules and are manufactured in synthetic processes from available starting materials. The chemistry appears amenable to scale-up and does not currently require unusual equipment in the manufacturing process. We expect to continue to develop product candidates that can be produced cost-effectively at contract manufacturing facilities.

We generally expect to rely on third parties for the manufacture of companion diagnostics for our products, which are assays or tests to identify an appropriate patient population. Depending on the technology solutions we choose, we may rely on multiple third parties to manufacture and sell a single test.

Governmental Regulation

The FDA and other regulatory authorities at federal, state and local levels, as well as in foreign countries, extensively regulate, among other things, the research, development, testing, manufacture, quality control, import, export, safety, effectiveness, labeling, packaging, storage, distribution, recordkeeping, approval, advertising, promotion, marketing, post-approval monitoring and post-approval reporting of drugs. We, along

with our vendors, contract research organizations and contract manufacturers, will be required to navigate the various preclinical, clinical, manufacturing and commercial approval requirements of the governing regulatory agencies of the countries in which we wish to conduct studies or seek approval of our product candidates. The process of obtaining regulatory approvals of drugs and ensuring subsequent compliance with appropriate federal, state, local and foreign statutes and regulations requires the expenditure of substantial time and financial resources.

In the United States, where we are initially focusing our drug development, the FDA regulates drug products under the Federal Food, Drug, and Cosmetic Act, or FD&C Act, as amended, its implementing regulations and other laws. If we fail to comply with applicable FDA or other requirements at any time with respect to product development, clinical testing, approval or any other legal requirements relating to product manufacture, processing, handling, storage, quality control, safety, marketing, advertising, promotion, packaging, labeling, export, import, distribution, or sale, we may become subject to administrative or judicial sanctions or other legal consequences. These sanctions or consequences could include, among other things, the FDA's refusal to approve pending applications, issuance of clinical holds for ongoing studies, suspension or revocation of approved applications, warning or untitled letters, product withdrawals or recalls, product seizures, relabeling or repackaging, total or partial suspensions of manufacturing or distribution, injunctions, fines, civil penalties or criminal prosecution.

The process required by the FDA before our product candidates are approved as drugs for therapeutic indications and may be marketed in the United States generally involves the following:

- completion of extensive preclinical studies in accordance with applicable regulations, including studies conducted in accordance with good laboratory practice, or GLP, requirements;
- completion of the manufacture, under current Good Manufacturing Practices, or cGMP, conditions, of the drug substance and drug product that the sponsor intends to use in human clinical trials along with required analytical and stability testing;
- submission to the FDA of an investigational new drug application, or IND, which must become effective before clinical trials may begin;
- approval by an institutional review board, or IRB, or independent ethics committee at each clinical trial site before each trial may be initiated;
- performance of adequate and well-controlled clinical trials in accordance with applicable IND regulations, good clinical practice, or GCP, requirements and other clinical trial-related regulations to establish the safety and efficacy of the investigational product for each proposed indication;
- submission to the FDA of a New Drug Application, or NDA;
- a determination by the FDA within 60 days of its receipt of an NDA, to accept the filing for review;
- satisfactory completion of one or more FDA pre-approval inspections of the manufacturing facility or facilities where the drug will be produced to assess compliance with cGMP requirements to assure that the facilities, methods and controls are adequate to preserve the drug's identity, strength, quality and purity;
- potentially, satisfactory completion of FDA audit of the clinical trial sites that generated the data in support of the NDA;
- payment of user fees for FDA review of the NDA; and
- FDA review and approval of the NDA, including consideration of the views of any FDA advisory committee, prior to any commercial marketing or sale of the drug in the United States.

Preclinical studies and clinical trials for drugs

Before testing any drug in humans, the product candidate must undergo rigorous preclinical testing. Preclinical studies include laboratory evaluations of drug chemistry, formulation and stability, as well as *in vitro* and animal

studies to assess safety and in some cases to establish the rationale for therapeutic use. The conduct of preclinical studies is subject to federal and state regulation, including GLP requirements for safety/toxicology studies. The results of the preclinical studies, together with manufacturing information and analytical data, must be submitted to the FDA as part of an IND. An IND is a request for authorization from the FDA to administer an investigational product to humans and must become effective before clinical trials may begin. Some long-term preclinical testing may continue after the IND is submitted. The IND automatically becomes effective 30 days after receipt by the FDA, unless the FDA, within the 30-day time period, raises concerns or questions about the conduct of the clinical trial, including concerns that human research subjects will be exposed to unreasonable health risks, and imposes a full or partial clinical hold. FDA must notify the sponsor of the grounds for the hold and any identified deficiencies must be resolved before the clinical trial can begin. Submission of an IND may result in the FDA not allowing clinical trials to commence or not allowing clinical trials to commence on the terms originally specified in the IND. A clinical hold can also be imposed once a trial has already begun, thereby halting the trial until the deficiencies articulated by FDA are corrected.

The clinical stage of development involves the administration of the product candidate to healthy volunteers or patients under the supervision of qualified investigators, who generally are physicians not employed by or under the trial sponsor's control, in accordance with GCP requirements, which include the requirements 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 and criteria to be used in monitoring safety and evaluating effectiveness. Each protocol, and any subsequent amendments to the protocol, must be submitted to the FDA as part of the IND. Furthermore, each clinical trial must be reviewed and approved by an IRB for each institution at which the clinical trial will be conducted to ensure that the risks to individuals participating in the clinical trials are minimized and are reasonable compared to the 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. The FDA, the IRB, or the sponsor may suspend or discontinue a clinical trial at any time on various grounds, including a finding that the subjects are being exposed to an unacceptable health risk. There also are requirements governing the reporting of ongoing clinical trials and completed clinical trials to public registries. Information about clinical trials, including results for clinical trials other than Phase 1 investigations, must be submitted within specific timeframes for publication on www.ClinicalTrials.gov, a clinical trials database maintained by the National Institutes of Health.

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

Clinical trials to evaluate therapeutic indications to support NDAs for marketing approval are typically conducted in three sequential phases, which may overlap.

- *Phase 1*—Phase 1 clinical trials involve initial introduction of the investigational product into healthy human volunteers or patients with the target disease or condition. These studies are typically designed to test the safety, dosage tolerance, absorption, metabolism and distribution of the investigational product in humans, excretion the side effects associated with increasing doses, and, if possible, to gain early evidence of effectiveness.
- *Phase 2*—Phase 2 clinical trials typically involve administration of the investigational product to a limited patient population with a specified disease or condition to evaluate the drug's potential efficacy, to determine the optimal dosages and dosing schedule and to identify possible adverse side effects and safety risks.
- *Phase 3*—Phase 3 clinical trials typically involve administration of the investigational product to an expanded patient population to further evaluate dosage, to provide statistically significant evidence of

clinical efficacy and to further test for safety, generally at multiple geographically dispersed clinical trial sites. These clinical trials are intended to establish the overall risk/benefit ratio of the investigational product and to provide an adequate basis for product approval and physician labeling.

In August 2018, the FDA released a draft guidance entitled "Expansion Cohorts: Use in First-In-Human Clinical Trials to Expedite Development of Oncology Drugs and Biologics," which outlines how drug developers can utilize an adaptive trial design commonly referred to as a seamless trial design in early stages of oncology drug development (i.e., the first-in-human clinical trial) to compress the traditional three phases of trials into one continuous trial called an expansion cohort trial. Information to support the design of individual expansion cohorts are included in IND applications and assessed by FDA. Expansion cohort trials can potentially bring efficiency to drug development and reduce development costs and time.

Post-approval trials, sometimes referred to as Phase 4 clinical trials or post-marketing studies, 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 and are commonly intended to generate additional safety data regarding use of the product in a clinical setting. In certain instances, the FDA may mandate the performance of Phase 4 clinical trials as a condition of NDA approval.

Progress reports detailing the results of the clinical trials, among other information, must be submitted at least annually to the FDA. Written IND safety reports must be submitted to the FDA and the investigators fifteen days after the trial sponsor determines the information qualifies for reporting for serious and unexpected suspected adverse events, findings from other studies or animal or *in vitro* testing that suggest a significant risk for human volunteers and any clinically important increase in the rate of a serious suspected adverse reaction over that listed in the protocol or investigator brochure. The sponsor must also notify the FDA of any unexpected fatal or life-threatening suspected adverse reaction as soon as possible but in no case later than seven calendar days after the sponsor's initial receipt of the information.

Concurrent with clinical trials, companies usually complete additional animal studies and must also develop additional information about the chemistry and physical characteristics of the product candidate and finalize a process for manufacturing the drug product in commercial quantities in accordance with cGMP requirements. The manufacturing process must be capable of consistently producing quality batches of the product candidate and manufacturers must develop, among other things, methods for testing the identity, strength, quality and purity of the final drug product. Additionally, appropriate packaging must be selected and tested, and stability studies must be conducted to demonstrate that the product candidate does not undergo unacceptable deterioration over its shelf life.

U.S. marketing approval for drugs

Assuming successful completion of the required clinical testing, the results of the preclinical studies and clinical trials, together with detailed information relating to the product's chemistry, manufacture, controls and proposed labeling, among other things, are submitted to the FDA as part of an NDA package requesting approval to market the product for one or more indications. An NDA is a request for approval to market a new drug for one or more specified indications and must contain proof of the drug's safety and efficacy for the requested indications. The marketing application is required to include both negative and ambiguous results of preclinical studies and clinical trials, as well as positive findings. Data may come from company-sponsored clinical trials intended to test the safety and efficacy of a product's use or from a number of alternative sources, including studies initiated by investigators. To support marketing approval, the data submitted must be sufficient in quality and quantity to establish the safety and efficacy of the investigational product to the satisfaction of the FDA. FDA must approve an NDA before a drug may be marketed in the United States.

The FDA reviews all submitted NDAs before it accepts them for filing and may request additional information rather than accepting the NDA for filing. The FDA must make a decision on accepting an NDA for filing within

60 days of receipt, and such decision could include a refusal to file by the FDA. Once the submission is accepted for filing, the FDA begins an in-depth substantive review of the NDA. The FDA reviews an NDA to determine, among other things, whether the drug is safe and effective for the indications sought and whether the facility in which it is manufactured, processed, packaged or held meets standards designed to assure the product's continued safety, quality and purity. Under the goals and polices agreed to by the FDA under the Prescription Drug User Fee Act, or PDUFA, the FDA targets ten months, from the filing date, in which to complete its initial review of a new molecular entity NDA and respond to the applicant, and six months from the filing date of a new molecular entity NDA for priority review. The FDA does not always meet its PDUFA goal dates for standard or priority NDAs, and the review process is often extended by FDA requests for additional information or clarification.

Further, under PDUFA, as amended, each NDA must be accompanied by a substantial user fee. The FDA adjusts the PDUFA user fees on an annual basis. Fee waivers or reductions are available in certain circumstances, including a waiver of the application fee for the first application filed by a small business. Additionally, no user fees are assessed on NDAs for products designated as orphan drugs, unless the product also includes a non-orphan indication.

The FDA also may require submission of a Risk Evaluation and Mitigation Strategy, or REMS, if it believes that a risk evaluation and mitigation strategy is necessary to ensure that the benefits of the drug outweigh its risks. A REMS can include use of risk evaluation and mitigation strategies like medication guides, physician communication plans, assessment plans, and/or elements to assure safe use, such as restricted distribution methods, patient registries, or other risk-minimization tools.

The FDA may refer an application for a novel drug to an advisory committee. An advisory committee is a panel of independent experts, including clinicians and other scientific experts, which reviews, evaluates and provides a recommendation as to whether the application should be approved and under what conditions. The FDA is not bound by the recommendations of an advisory committee, but it considers such recommendations carefully when making decisions.

Before approving an NDA, the FDA typically will inspect the facility or facilities where the product is manufactured. The FDA will not approve an application unless it determines that the manufacturing processes and facilities are in compliance with cGMP requirements and are adequate to assure consistent production of the product within required specifications. Additionally, before approving an NDA, the FDA may inspect one or more clinical trial sites to assure compliance with GCP and other requirements and the integrity of the clinical data submitted to the FDA.

After evaluating the NDA and all related information, including the advisory committee recommendation, if any, and inspection reports regarding the manufacturing facilities and clinical trial sites, the FDA may issue an approval letter, or, in some cases, a complete response letter. A complete response letter generally contains a statement of specific conditions that must be met in order to secure final approval of the NDA and may require additional clinical or preclinical testing in order for the FDA to reconsider the application. Even with submission of this additional information, the FDA ultimately may decide that the application does not satisfy the regulatory criteria for approval. If and when those conditions have been met to the FDA's satisfaction, the FDA will typically issue an approval letter. An approval letter authorizes commercial marketing of the drug with specific prescribing information for specific indications.

Even if the FDA approves a product, depending on the specific risk(s) to be addressed it may limit the approved indications for use of the product, require that contraindications, warnings or precautions be included in the product labeling, require that post-approval studies, including Phase 4 clinical trials, be conducted to further assess a drug's safety after approval, require testing and surveillance programs to monitor the product after commercialization, or impose other conditions, including distribution and use restrictions or other risk management mechanisms under a REMS, which can materially affect the potential market and profitability of the

product. The FDA may prevent or limit further marketing of a product based on the results of post-marketing studies or surveillance programs. After approval, some types of changes to the approved product, such as adding new indications, manufacturing changes, and additional labeling claims, are subject to further testing requirements and FDA review and approval.

Orphan drug designation and exclusivity

Under the Orphan Drug Act, the FDA may grant orphan designation to a drug intended to treat a rare disease or condition, which is a disease or condition that affects fewer than 200,000 individuals in the United States, or if it affects more than 200,000 individuals in the United States, there is no reasonable expectation that the cost of developing and making the product available in the United States for the disease or condition will be recovered from sales of the product. Orphan designation must be requested before submitting an NDA. Orphan designation does not convey any advantage in or shorten the duration of the regulatory review and approval process, though companies developing orphan products are eligible for certain incentives, including tax credits for qualified clinical testing and waiver of application fees.

If a product that has orphan designation subsequently receives the first FDA approval for the disease or condition for which it has such designation, the product is entitled to a seven-year period of marketing exclusivity during which the FDA may not approve any other applications to market the same therapeutic agent for the same indication, except in limited circumstances, such as a subsequent product's showing of clinical superiority over the product with orphan exclusivity or where the original applicant cannot produce sufficient quantities of product. Competitors, however, may receive approval of different therapeutic agents for the indication for which the orphan product has exclusivity or obtain approval for the same therapeutic agent for a different indication than that for which the orphan product has exclusivity. Orphan product exclusivity could block the approval of one of our products for seven years if a competitor obtains approval for the same therapeutic agent for the same indication before we do, unless we are able to demonstrate that our product is clinically superior. If an orphan designated product receives marketing approval for an indication broader than what is designated, it may not be entitled to orphan exclusivity. Further, orphan drug exclusive marketing rights in the United States may be lost if the FDA later determines that the request for designation was materially defective or the manufacturer of the approved product is unable to assure sufficient quantities of the product to meet the needs of patients with the rare disease or condition.

Rare pediatric disease designation and priority review vouchers

Under the FD&C Act, the FDA incentivizes the development of drugs that meet the definition of a "rare pediatric disease," defined to mean a serious or life-threatening disease in which the serious or life-threatening manifestations primarily affect individuals aged from birth to 18 years and the disease affects fewer than 200,000 individuals in the United States or affects more than 200,000 in the United States and for which there is no reasonable expectation that the cost of developing and making in the United States a drug for such disease or condition will be received from sales in the United States of such drug. The sponsor of a product candidate for a rare pediatric disease may be eligible for a voucher that can be used to obtain a priority review for a subsequent human drug application after the date of approval of the rare pediatric disease drug product, referred to as a priority review voucher, or PRV. A sponsor may request rare pediatric disease designation from the FDA prior to the submission of its NDA. A rare pediatric disease designation does not guarantee that a sponsor will receive a PRV upon approval of its NDA. Moreover, a sponsor who chooses not to submit a rare pediatric disease designation request may nonetheless receive a PRV upon approval of its marketing application if it requests such a voucher in its original marketing application and meets all of the eligibility criteria. If a PRV is received, it may be sold or transferred an unlimited number of times. Congress has extended the PRV program until September 30, 2020, with the potential for PRVs to be granted until 2022.

Expedited development and review programs for drugs

The FDA maintains several programs intended to facilitate and expedite development and review of new drugs to address unmet medical needs in the treatment of serious or life-threatening diseases or conditions. These programs include Fast Track designation, Breakthrough Therapy designation, Priority Review and Accelerated Approval, and the purpose of these programs is to either expedite the development or review of important new drugs to get them to patients more quickly than standard FDA review timelines typically permit.

A new drug is eligible for Fast Track designation if it is intended to treat a serious or life-threatening disease or condition and demonstrates the potential to address unmet medical needs for such disease or condition. Fast Track designation provides increased opportunities for sponsor interactions with the FDA during preclinical and clinical development, in addition to the potential for rolling review once a marketing application is filed. Rolling review means that the agency may review portions of the marketing application before the sponsor submits the complete application. In addition, a new drug may be eligible for Breakthrough Therapy designation if it is intended to treat a serious or life-threatening disease or condition and preliminary clinical evidence indicates that the drug may demonstrate substantial improvement over existing therapies on one or more clinically significant endpoints, such as substantial treatment effects observed early in clinical development. Breakthrough Therapy designation provides all the features of Fast Track designation in addition to intensive guidance on an efficient drug development program beginning as early as Phase 1, and FDA organizational commitment to expedited development, including involvement of senior managers and experienced review staff in a cross-disciplinary review, where appropriate.

Any product submitted to the FDA for approval, including a product with Fast Track or Breakthrough Therapy designation, may also be eligible for additional FDA programs intended to expedite the review and approval process, including Priority Review designation and Accelerated Approval. A product is eligible for Priority Review, once an NDA or BLA is submitted, if the drug that is the subject of the marketing application has the potential to provide a significant improvement in safety or effectiveness in the treatment, diagnosis or prevention of a serious disease or condition. Under priority review, the FDA's goal date to take action on the marketing application is six months compared to ten months for a standard review. Products are eligible for Accelerated Approval if they can be shown to have an effect on a surrogate endpoint that is reasonably likely to predict clinical benefit, or an effect on a clinical endpoint that can be measured earlier than an effect on irreversible morbidity or mortality, which 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.

Accelerated Approval is usually contingent on a sponsor's agreement to conduct additional post-approval studies to verify and describe the product's clinical benefit. The FDA may withdraw approval of a drug or an indication approved under Accelerated Approval if, for example, the confirmatory trial fails to verify the predicted clinical benefit of the product. In addition, the FDA generally requires, as a condition for Accelerated Approval, that all advertising and promotional materials intended for dissemination or publication within 120 days of marketing approval be submitted to the agency for review during the pre-approval review period. After the 120-day period has passed, all advertising and promotional materials must be submitted at least 30 days prior to the intended time of initial dissemination or publication.

Even if a product qualifies for one or more of these programs, the FDA may later decide that the product no longer meets the conditions for qualification or the time period for FDA review or approval may not be shortened. Furthermore, Fast Track designation, Breakthrough Therapy designation, Priority Review and Accelerated Approval do not change the scientific or medical standards for approval or the quality of evidence necessary to support approval, though they may expedite the development or review process.

Pediatric information and pediatric exclusivity

Under the Pediatric Research Equity Act, or PREA, as amended, certain NDAs and NDA supplements must contain data that can be used to assess the safety and efficacy of the drug for the claimed indications in all

relevant pediatric subpopulations and to support dosing and administration for each pediatric subpopulation for which the product is safe and effective. The FDA may grant deferrals for submission of pediatric data or full or partial waivers. The FD&C Act requires that a sponsor who is planning to submit a marketing application for a drug that includes a new active ingredient, new indication, new dosage form, new dosing regimen or new route of administration submit an initial Pediatric Study Plan, or PSP, within 60 days of an end-of-Phase 2 meeting or, if there is no such meeting, as early as practicable before the initiation of the Phase 3 or Phase 2/3 study. The initial PSP must include an outline of the pediatric study or studies that the sponsor plans to conduct, including study objectives and design, age groups, relevant endpoints and statistical approach, or a justification for not including such detailed information, and any request for a deferral of pediatric assessments or a full or partial waiver of the requirement to provide data from pediatric studies along with supporting information. The FDA and the sponsor must reach an agreement on the PSP. A sponsor can submit amendments to an agreed-upon initial PSP at any time if changes to the pediatric plan need to be considered based on data collected from preclinical studies, early phase clinical trials and/or other clinical development programs.

A drug can also obtain pediatric market exclusivity in the United States. Pediatric exclusivity, if granted, adds six months to existing exclusivity periods and patent terms. This six-month exclusivity, which runs from the end of other exclusivity protection or patent term, may be granted based on the voluntary completion of a pediatric study in accordance with an FDA-issued "Written Request" for such a study.

U.S. post-approval requirements for drugs

Drugs manufactured or distributed pursuant to FDA approvals are subject to continuing regulation by the FDA, including, among other things, requirements relating to recordkeeping, periodic reporting, product sampling and distribution, reporting of adverse experiences with the product, complying with promotion and advertising requirements, which include restrictions on promoting products for unapproved uses or patient populations (known as "off-label use") and limitations on industry-sponsored scientific and educational activities. Although physicians may prescribe legally available products for off-label uses, manufacturers may not market or promote such uses. The FDA and other agencies actively enforce the laws and regulations prohibiting the promotion of off-label uses, and a company that is found to have improperly promoted off-label uses may be subject to significant liability, including investigation by federal and state authorities. Prescription drug promotional materials must be submitted to the FDA in conjunction with their first use or first publication. Further, if there are any modifications to the drug, including changes in indications, labeling or manufacturing processes or facilities, the applicant may be required to submit and obtain FDA approval of a new NDA or NDA supplement, which may require the development of additional data or preclinical studies and clinical trials.

The FDA may impose a number of post-approval requirements as a condition of approval of an NDA. For example, the FDA may require post-market testing, including Phase 4 clinical trials, and surveillance to further assess and monitor the product's safety and effectiveness after commercialization. In addition, drug manufacturers and their subcontractors involved in the manufacture and distribution of approved drugs are required to register their establishments with the FDA and certain state agencies and are subject to periodic unannounced inspections by the FDA and certain state agencies for compliance with ongoing regulatory requirements, including cGMPs, which impose certain procedural and documentation requirements. Failure to comply with statutory and regulatory requirements may subject a manufacturer to legal or regulatory action, such as warning letters, suspension of manufacturing, product seizures, injunctions, civil penalties or criminal prosecution. There is also a continuing, annual prescription drug product program user fee.

Later discovery of previously unknown problems with a product, including adverse events of unanticipated severity or frequency, or with manufacturing processes, or failure to comply with regulatory requirements, may result in revisions to the approved labeling to add new safety information, requirements for post-market studies or clinical trials to assess new safety risks, or imposition of distribution or other restrictions under a REMS. Other potential consequences include, among other things:

- restrictions on the marketing or manufacturing of the product, complete withdrawal of the product from the market or product recalls;

- the issuance of safety alerts, Dear Healthcare Provider letters, press releases or other communications containing warnings or other safety information about the product;
- fines, warning letters or holds on post-approval clinical trials;
- refusal of the FDA to approve applications or supplements to approved applications, or suspension or revocation of product approvals;
- product seizure or detention, or refusal to permit the import or export of products;
- injunctions or the imposition of civil or criminal penalties; and
- consent decrees, corporate integrity agreements, debarment or exclusion from federal healthcare programs; or mandated modification of promotional materials and labeling and issuance of corrective information.

Regulation of companion diagnostics

Companion diagnostics identify patients who are most likely to benefit from a particular therapeutic product; identify patients likely to be at increased risk for serious side effects as a result of treatment with a particular therapeutic product; or monitor response to treatment with a particular therapeutic product for the purpose of adjusting treatment to achieve improved safety or effectiveness. Companion diagnostics are regulated as medical devices by the FDA. In the United States, the FD&C Act, and its implementing regulations, and other federal and state statutes and regulations govern, among other things, medical device design and development, preclinical and clinical testing, premarket clearance or approval, registration and listing, manufacturing, labeling, storage, advertising and promotion, sales and distribution, export and import, and post-market surveillance. Unless an exemption or FDA exercise of enforcement discretion applies, diagnostic tests generally require marketing clearance or approval from the FDA prior to commercialization. The two primary types of FDA marketing authorization applicable to a medical device are clearance of a premarket notification, or 510(k), and approval of a premarket approval application, or PMA.

To obtain 510(k) clearance for a medical device, or for certain modifications to devices that have received 510(k) clearance, a manufacturer must submit a premarket notification demonstrating that the proposed device is substantially equivalent to a previously cleared 510(k) device or to a pre-amendment device that was in commercial distribution before May 28, 1976, or a predicate device, for which the FDA has not yet called for the submission of a PMA. In making a determination that the device is substantially equivalent to a predicate device, the FDA compares the proposed device to the predicate device and assesses whether the subject device is comparable to the predicate device with respect to intended use, technology, design and other features which could affect safety and effectiveness. If the FDA determines that the subject device is substantially equivalent to the predicate device, the subject device may be cleared for marketing. The 510(k) premarket notification pathway generally takes from three to twelve months from the date the application is completed, but can take significantly longer.

A PMA must be supported by valid scientific evidence, which typically requires extensive data, including technical, preclinical, clinical and manufacturing data, to demonstrate to the FDA's satisfaction the safety and effectiveness of the device. For diagnostic tests, a PMA typically includes data regarding analytical and clinical validation studies. As part of its review of the PMA, the FDA will conduct a pre-approval inspection of the manufacturing facility or facilities to ensure compliance with the quality system regulation, or QSR, which requires manufacturers to follow design, testing, control, documentation and other quality assurance procedures. The FDA's review of an initial PMA is required by statute to take between six to ten months, although the process typically takes longer, and may require several years to complete. If the FDA evaluations of both the PMA and the manufacturing facilities are favorable, the FDA will either issue an approval letter or an approvable letter, which usually contains a number of conditions that must be met in order to secure the final approval of the PMA. If the FDA's evaluation of the PMA or manufacturing facilities is not favorable, the FDA will deny the approval of the PMA or issue a not approvable letter. A not approvable letter will outline the deficiencies in the

application and, where practical, will identify what is necessary to make the PMA approvable. Once granted, PMA approval may be withdrawn by the FDA if compliance with post-approval requirements, conditions of approval or other regulatory standards is not maintained or problems are identified following initial marketing.

On July 31, 2014, the FDA issued a final guidance document addressing the development and approval process for "In Vitro Companion Diagnostic Devices." According to the guidance document, for novel therapeutic products that depend on the use of a diagnostic test and where the diagnostic device could be essential for the safe and effective use of the corresponding therapeutic product, the companion diagnostic device should be developed and approved or cleared contemporaneously with the therapeutic, although the FDA recognizes that there may be cases when contemporaneous development may not be possible. However, in cases where a drug cannot be used safely or effectively without the companion diagnostic, the FDA's guidance indicates it will generally not approve the drug without the approval or clearance of the diagnostic device. The FDA also issued a draft guidance in July 2016 setting forth the principles for co-development of an in vitro companion diagnostic device with a therapeutic product. The draft guidance describes principles to guide the development and contemporaneous marketing authorization for the therapeutic product and its corresponding in vitro companion diagnostic.

Once cleared or approved, the companion diagnostic device must adhere to post-marketing requirements including the requirements of the FDA's QSR, adverse event reporting, recalls and corrections along with product marketing requirements and limitations. Like drug makers, companion diagnostic makers are subject to unannounced FDA inspections at any time during which the FDA will conduct an audit of the product(s) and the company's facilities for compliance with its authorities.

Other regulatory matters

Manufacturing, sales, promotion and other activities of product candidates following product approval, where applicable, or commercialization are also subject to regulation by numerous regulatory authorities in the United States in addition to the FDA, which may include the Centers for Medicare & Medicaid Services, or CMS, other divisions of the U.S. Department of Health and Human Services, the Department of Justice, the Drug Enforcement Administration, the Consumer Product Safety Commission, the Federal Trade Commission, the Occupational Safety & Health Administration, the Environmental Protection Agency and state and local governments and governmental agencies.

Other healthcare laws

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 business operations and any current or 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 develop, 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 federal Anti-Kickback Statute prohibits, among other things, persons and entities from knowingly and willfully soliciting, offering, paying, receiving or providing any remuneration (including any kickback, bribe, or certain rebate), directly or indirectly, overtly or covertly, in cash or in kind, to induce or reward, or in return for, either the referral of an individual for, or the purchase, order or recommendation of, any good or service, for which payment may be made, in whole or in part, under a federal healthcare program such as Medicare and Medicaid; a person or entity need not have actual knowledge of the federal Anti-Kickback Statute or specific intent to violate it in order to have committed a violation. Violations are subject to civil and criminal fines and penalties for each violation, plus up to three times the remuneration involved,

imprisonment, and exclusion from government healthcare programs. In addition, the government may assert that a claim that includes items or services resulting from a violation of the federal Anti-Kickback Statute constitutes a false or fraudulent claim for purposes of the civil False Claims Act.

- The federal civil and criminal false claims laws, including the civil False Claims Act, or FCA, prohibit individuals or entities from, among other things, knowingly presenting, or causing to be presented, to the federal government, claims for payment or approval that are false, fictitious or fraudulent; knowingly making, using, or causing to be made or used, a false statement or record material to a false or fraudulent claim or obligation to pay or transmit money or property to the federal government; or knowingly concealing or knowingly and improperly avoiding or decreasing 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. When an entity is determined to have violated the federal civil False Claims Act, the government may impose civil fines and penalties for each false claim, plus treble damages, and exclude the entity from participation in Medicare, Medicaid and other federal healthcare programs.
- The federal civil monetary penalties laws impose civil fines for, among other things, the offering or transfer or remuneration to a Medicare or state healthcare program beneficiary, if the person knows or should know it is likely to influence the beneficiary's selection of a particular provider, practitioner, or supplier of services reimbursable by Medicare or a state health care program, unless an exception applies.
- The Health Insurance Portability and Accountability Act of 1996, or HIPAA, imposes criminal and civil liability for knowingly and willfully executing a scheme, or attempting to execute a scheme, to defraud any healthcare benefit program, including private payors, knowingly and willfully embezzling or stealing from a healthcare benefit program, willfully obstructing a criminal investigation of a healthcare offense, or falsifying, concealing or covering up a material fact or making any materially false statements in connection with the delivery of or payment for healthcare benefits, items or services.
- HIPAA, as amended by the Health Information Technology for Economic and Clinical Health Act of 2009, or HITECH, and their respective implementing regulations, impose, among other things, specified requirements on covered entities and their business associates relating to the privacy and security of individually identifiable health information including mandatory contractual terms and required implementation of technical safeguards of such information. HITECH also created new tiers of civil monetary penalties, amended HIPAA to make civil and criminal penalties directly applicable to business associates in some cases, 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 Physician Payments Sunshine Act, enacted as part of the Patient Protection and Affordable Care Act, as amended by the Health Care and Education Reconciliation Act of 2010, or collectively, the ACA, imposed new annual reporting requirements for certain manufacturers of drugs, devices, biologics, and medical supplies for which payment is available under Medicare, Medicaid, or the Children's Health Insurance Program, for certain payments and "transfers of value" provided to physicians (currently 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. In addition, many states also require reporting of payments or other transfers of value, many of which differ from each other in significant ways, are often not pre-empted, and may have a more prohibitive effect than the Sunshine Act, thus further complicating compliance efforts. Effective January 1, 2022, these reporting obligations will extend to include transfers of value made in the previous year to certain non-physician providers such as physician assistants and nurse practitioners.
- Federal consumer protection and unfair competition laws broadly regulate marketplace activities and activities that potentially harm consumers.

- Analogous state and foreign laws and regulations may be broader in scope than the provisions described above and may apply regardless of payor. Some state laws require pharmaceutical companies to comply with the pharmaceutical industry's voluntary compliance guidelines and relevant federal government compliance guidance; require drug manufacturers to report information related to payments and other transfers of value to physicians and other healthcare providers; restrict marketing practices or require disclosure of marketing expenditures and pricing information. State and foreign laws may govern the privacy and security of health information in some circumstances. These data privacy and security laws may differ from each other in significant ways and often are not pre-empted by HIPAA, which may complicate compliance efforts.

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 do 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 related governmental regulations that may apply to us, we may be subject to significant civil, criminal and administrative penalties, damages, fines, imprisonment, disgorgement, exclusion from government funded healthcare programs, such as Medicare and Medicaid, reputational harm, additional oversight and reporting obligations if we become subject to a corporate integrity agreement or similar settlement to resolve allegations of non-compliance with these laws and the curtailment or restructuring of our operations. If any of the physicians or other healthcare providers or entities with whom we expect to do business is found not to be in compliance with applicable laws, they may be subject to similar actions, penalties and sanctions. 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 its business.

Insurance Coverage and Reimbursement

In the United States and markets in other countries, patients who are prescribed treatments for their conditions and providers performing the prescribed services generally rely on third-party payors to reimburse all or part of the associated healthcare costs. Thus, even if a product candidate is approved, sales of the product will depend, in part, on the extent to which third-party payors, including government health programs in the United States such as Medicare and Medicaid, commercial health insurers and managed care organizations, provide coverage, and establish adequate reimbursement levels for, the product. In the United States, the principal decisions about reimbursement for new medicines are typically made by the Centers for Medicare & Medicaid Services, or CMS, an agency within the U.S. Department of Health and Human Services. CMS decides whether and to what extent a new medicine will be covered and reimbursed under Medicare and private payors tend to follow CMS to a substantial degree. No uniform policy of coverage and reimbursement for drug products exists among third-party payors. Therefore, coverage and reimbursement for drug products can differ significantly from payor to payor. The process for determining whether a third-party payor will provide coverage for a product may be separate from the process for setting the price or reimbursement rate that the payor will pay for the product once coverage is approved. Third-party payors are increasingly challenging the prices charged, examining the medical necessity, reviewing the cost-effectiveness of medical products and services and imposing controls to manage costs. 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 approved products for a particular indication.

In order to secure coverage and reimbursement for any product that might be approved for sale, a company may need to conduct expensive pharmacoeconomic studies in order to demonstrate the medical necessity and cost-effectiveness of the product, which will require additional expenditure above and beyond the costs required to obtain FDA or other comparable regulatory approvals. Additionally, companies may also need to provide discounts to purchasers, private health plans or government healthcare programs. Nonetheless, product

candidates may not be considered medically necessary or cost effective. A decision by a third-party payor not to cover a product could reduce physician utilization once the product is approved and have a material adverse effect on sales, our operations and financial condition. Additionally, a third-party payor's decision to provide coverage for a product does not imply that an adequate reimbursement rate will be approved. Further, one payor's determination to provide coverage for a product does not assure that other payors will also provide coverage and reimbursement for the product, and the level of coverage and reimbursement can differ significantly from payor to payor.

The containment of healthcare costs has become a priority of federal, state and foreign governments, and the prices of products have been a focus in this effort. Governments have shown significant interest in implementing cost-containment programs, including price controls, restrictions on reimbursement and requirements for substitution of generic products. Adoption of price controls and cost-containment measures, and adoption of more restrictive policies in jurisdictions with existing controls and measures, could further limit a company's revenue generated from the sale of any approved products. Coverage policies and third-party payor reimbursement rates may change at any time. Even if favorable coverage and reimbursement status is attained for one or more products for which a company or its collaborators receive regulatory approval, less favorable coverage policies and reimbursement rates may be implemented in the future.

Current and future healthcare reform legislation

In the United States and some foreign jurisdictions, there have been, and likely will continue to be, a number of legislative and regulatory changes and proposed changes regarding the healthcare system directed at broadening the availability of healthcare, improving the quality of healthcare, and containing or lowering the cost of healthcare. For example, in March 2010, the United States Congress enacted the Affordable Care Act, which, among other things, includes changes to the coverage and payment for products under government health care programs. The Affordable Care Act includes provisions of importance to our potential product candidates that:

- created an annual, nondeductible fee on any entity that manufactures or imports specified branded prescription drugs and biologic products, apportioned among these entities according to their market share in certain government healthcare programs;
- expanded eligibility criteria for Medicaid programs by, among other things, allowing states to offer Medicaid coverage to certain individuals with income at or below 133% of the federal poverty level, thereby potentially increasing a manufacturer's Medicaid rebate liability;
- expanded manufacturers' rebate liability under the Medicaid Drug Rebate Program by increasing the minimum rebate for both branded and generic drugs and revising the definition of "average manufacturer price," or AMP, for calculating and reporting Medicaid drug rebates on outpatient prescription drug prices;
- 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;
- expanded the types of entities eligible for the 340B drug discount program;
- established the Medicare Part D coverage gap discount program by requiring manufacturers to provide point-of-sale-discounts off the negotiated price of applicable brand drugs to eligible beneficiaries during their coverage gap period as a condition for the manufacturers' outpatient drugs to be covered under Medicare Part D; and
- created a new Patient-Centered Outcomes Research Institute to oversee, identify priorities in, and conduct comparative clinical effectiveness research, along with funding for such research.

Since its enactment, there have been numerous judicial, administrative, executive, and legislative challenges to certain aspects of the Affordable Care Act, and we expect there will be additional challenges and amendments to the Affordable Care Act in the future. For example, various portions of the Affordable Care Act are currently

facing legal and constitutional challenges in the Fifth Circuit Court of Appeals and the United States Supreme Court. Additionally, the current administration has issued various Executive Orders which eliminated cost sharing subsidies and various provisions that would impose a fiscal burden on states or a cost, fee, tax, penalty or regulatory burden on individuals, healthcare providers, health insurers, or manufacturers of pharmaceuticals or medical devices, and Congress has introduced several pieces of legislation aimed at significantly revising or repealing the Affordable Care Act. It is unclear whether the Affordable Care Act will be overturned, repealed, replaced, or further amended. We cannot predict what effect further changes to the Affordable Care Act would have on our business.

Other legislative changes have been proposed and adopted in the United States since the Affordable Care Act was enacted. In August 2011, the Budget Control Act of 2011, among other things, included aggregate reductions of Medicare payments to providers of 2% per fiscal year, which went into effect in April 2013 and, due to subsequent legislative amendments to the statute, will remain in effect through 2030 unless additional Congressional action is taken. The Coronavirus Aid, Relief and Economic Security Act, or CARES Act, which was signed into law in March 2020 and is designed to provide financial support and resources to individuals and businesses affected by the COVID-19 pandemic, suspended these reductions from May 1, 2020 through December 31, 2020. In January 2013, the American Taxpayer Relief Act of 2012 was signed into law, which, among other things, further reduced Medicare payments to several providers, including hospitals, imaging centers and cancer treatment centers, and increased the statute of limitations period for the government to recover overpayments to providers from three to five years.

Moreover, payment methodologies may be subject to changes in healthcare legislation and regulatory initiatives. For example, CMS may develop new payment and delivery models, including bundled payment models. In addition, recently there has been heightened governmental scrutiny over the manner in which manufacturers set prices for their commercial products, which has resulted in several Congressional inquiries and proposed and enacted state and federal legislation designed to, among other things, bring more transparency to product pricing, review the relationship between pricing and manufacturer patient programs, and reform government program reimbursement methodologies for pharmaceutical products. For example, at the federal level, the current administration's budgets for fiscal years 2019 and 2020 contained further drug price control measures that could be enacted in 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. Additionally, the current administration released a "Blueprint" to lower drug prices and reduce out of pocket costs of drugs that contains additional proposals to increase drug manufacturer competition, increase the negotiating power of certain federal healthcare programs, incentivize manufacturers to lower the list price of their products, and reduce the out of pocket costs of drug products paid by consumers. The U.S. Department of Health and Human Services has already started the process of soliciting feedback on some of these measures and, at the same time, is immediately implementing others under its existing authority. For example, in May 2019, CMS issued a final rule to allow Medicare Advantage Plans the option of using step therapy, a type of prior authorization, for Part B drugs beginning January 1, 2020. This final rule codified CMS's policy change that was effective January 1, 2019. Although a number of these and other measures may require additional authorization to become effective, Congress and the current administration have each indicated that it will continue to seek new legislative and/or administrative measures to control drug costs. Additionally, in December 2019, the FDA issued a notice of proposed rulemaking that, if finalized, would allow for the importation of certain prescription drugs from Canada. If finalized, the FDA would allow for two potential pathways: the first would allow federal or state entities to partner with pharmacists or wholesalers to submit proposals to the FDA to allow them to import drugs sold at retail pharmacies, while the other pathway would allow for manufacturers to obtain an additional National Drug Code, or NDC, for an FDA-approved drug that was originally intended to be marketed in a foreign country and that was authorized for sale in that foreign country and to sell it in the United States. The regulatory and market implications of the notice of proposed rulemaking and draft guidance are unknown at this time, but legislation, regulations or policies allowing the reimportation of drugs, if enacted and implemented, could decrease the price we receive for our products and adversely affect our future revenues and prospects for profitability. Individual

states in the United States have also increasingly passed legislation and implemented regulations designed to control pharmaceutical product pricing, including price or patient reimbursement constraints, discounts, restrictions on certain product access and marketing cost disclosure and transparency measures, and, in some cases, designed to encourage importation from other countries and bulk purchasing.

On May 30, 2018, the Right to Try Act was signed into law. The law, among other things, provides a federal framework for certain patients to access certain investigational new drug products that have completed a Phase 1 clinical trial and that are undergoing investigation for FDA approval. Under certain circumstances, eligible patients can seek treatment without enrolling in clinical trials and without obtaining FDA permission under the FDA expanded access program. There is no obligation for a drug manufacturer to make its drug products available to eligible patients as a result of the Right to Try Act, but the manufacturer must develop an internal policy and respond to patient requests according to that policy.

Outside the United States, ensuring coverage and adequate payment for a product also involves challenges. Pricing of prescription pharmaceuticals is subject to government control in many countries. Pricing negotiations with government authorities can extend well beyond the receipt of regulatory approval for a product and may require a clinical trial that compares the cost-effectiveness of a product to other available therapies. The conduct of such a clinical trial could be expensive and result in delays in commercialization.

In the European Union, pricing and reimbursement schemes vary widely from country to country. Some countries provide that products may be marketed only after a reimbursement price has been agreed upon. Some countries may require the completion of additional studies that compare the cost-effectiveness of a particular product candidate to currently available therapies or so-called health technology assessments, in order to obtain reimbursement or pricing approval. For example, the European Union provides options for its member states to restrict the range of products for which their national health insurance systems provide reimbursement and to control the prices of medicinal products for human use. European Union member states may approve a specific price for a product or it may instead adopt a system of direct or indirect controls on the profitability of the company placing the product on the market. Other member states allow companies to fix their own prices for products, but monitor and control prescription volumes and issue guidance to physicians to limit prescriptions. Recently, many countries in the European Union have increased the amount of discounts required on pharmaceuticals and these efforts could continue as countries attempt to manage healthcare expenditures, especially in light of the severe fiscal and debt crises experienced by many countries in the European Union. The downward pressure on healthcare costs in general, particularly prescription products, has become intense. As a result, increasingly high barriers are being erected to the entry of new products. Political, economic and regulatory developments may further complicate pricing negotiations, and pricing negotiations may continue after reimbursement has been obtained. Reference pricing used by various European Union member states, and parallel trade, i.e., arbitrage between low-priced and high-priced member states, can further reduce prices. 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 products, if approved in those countries.

Compliance with other federal and state laws or requirements; changing legal requirements

If any products that we may develop are made available to authorized users of the Federal Supply Schedule of the General Services Administration, additional laws and requirements apply. Products must meet applicable child-resistant packaging requirements under the U.S. Poison Prevention Packaging Act. Manufacturing, labeling, packaging, distribution, sales, promotion and other activities also are potentially subject to federal and state consumer protection and unfair competition laws, among other requirements to which we may be subject.

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

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

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

Other U.S. environmental, health and safety laws and regulations

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

We maintain workers' compensation insurance to cover us for costs and expenses we may incur due to injuries to our employees, but this insurance may not provide adequate coverage against potential liabilities. However, we do not maintain insurance for environmental liability or toxic tort claims that may be asserted against us.

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

Government regulation of drugs outside of the United States

To market any product outside of the United States, we would need to comply with numerous and varying regulatory requirements of other countries regarding safety and efficacy and governing, among other things, clinical trials, marketing authorization or identification of an alternate regulatory pathway, manufacturing, commercial sales and distribution of our products. For instance, in the United Kingdom and the European Economic Area, or the EEA (comprised of the 27 EU Member States plus Iceland, Liechtenstein and Norway), medicinal products must be authorized for marketing by using either the centralized authorization procedure or national authorization procedures.

- *Centralized procedure*—If pursuing marketing authorization of a product candidate for a therapeutic indication under the centralized procedure, following the opining of the EMA's Committee for Medicinal Products for Human Use, or, CHMP, the European Commission issues a single marketing authorization valid across the EEA. The centralized procedure is compulsory for human medicines derived from biotechnology processes or advanced therapy medicinal products (such as gene therapy, somatic cell therapy

and tissue engineered products), products that contain a new active substance indicated for the treatment of certain diseases, such as HIV/AIDS, cancer, neurodegenerative disorders, diabetes, autoimmune diseases and other immune dysfunctions, viral diseases, and officially designated orphan medicines. For medicines that do not fall within these categories, an applicant has the option of submitting an application for a centralized marketing authorization to the EMA, as long as the medicine concerned contains a new active substance not yet authorized in the EEA, is a significant therapeutic, scientific or technical innovation, or if its authorization would be in the interest of public health in the EEA. 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 CHMP. Accelerated assessment might be granted by the CHMP in exceptional cases, when a medicinal product is expected to be of 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 150 days, excluding clock stops.

- *National authorization procedures*—There are also two other possible routes to authorize products for therapeutic indications in several countries, which are available for 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, additional marketing authorizations can be sought from other EU countries in a procedure whereby the countries concerned recognize the validity of the original, national marketing authorization.

In the EEA, new products for therapeutic indications that are 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 or biosimilar applicants from relying on the preclinical and clinical trial data contained in the dossier of the reference product when applying for a generic or biosimilar marketing authorization in the EU during a period of eight years from the date on which the reference product was first authorized in the EU. The market exclusivity period prevents a successful generic or biosimilar applicant from commercializing its product in the EU until ten years have elapsed from the initial authorization of the reference product in the EU. 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.

The criteria for designating an “orphan medicinal product” in the EEA are similar in principle to those in the United States. In the EEA a medicinal product may be designated as orphan if (1) it is intended for the diagnosis, prevention or treatment of a life-threatening or chronically debilitating condition; (2) either (a) such condition affects no more than five in 10,000 persons in the EU when the application is made, or (b) the product, without the benefits derived from orphan status, would not generate sufficient return in the EU to justify investment; and (3) there exists no satisfactory method of diagnosis, prevention or treatment of such condition authorized for marketing in the EU, or if such a method exists, the product will be of significant benefit to those affected by the condition. 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. During this ten-year orphan market exclusivity period, no marketing authorization application shall be accepted, and no marketing authorization shall be granted for a similar medicinal product for the same indication. An orphan product can also obtain an additional two years of market exclusivity in the EU for pediatric studies. The ten-year market exclusivity 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 (i) the second applicant can establish that its product, although similar, is safer, more effective or otherwise clinically superior; (ii) the applicant consents to a second orphan medicinal product application; or (iii) the applicant cannot supply enough orphan medicinal product.

Similar to the United States, the various phases of non-clinical 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 study site after the competent ethics committee has issued a favorable opinion. The clinical trial application must be accompanied by, among other documents, an investigational medicinal product dossier (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.

In April 2014, the new Clinical Trials Regulation, (EU) No 536/2014 (Clinical Trials Regulation) was adopted. It is expected that the new Clinical Trials Regulation (EU) No 536/2014 will apply following confirmation of full functionality of the Clinical Trials Information System (CTIS), the centralized European Union portal and database for clinical trials foreseen by the regulation, through an independent audit. The regulation becomes applicable six months after the European Commission publishes notice of this confirmation. 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.

Government regulation of data collection outside of the United States

In the event we conduct clinical trials in the European Union, we will be subject to additional privacy restrictions. The collection and use of personal health data in the European Economic Area, or EEA (being the European Union plus Norway, Iceland, and Liechtenstein), is governed by the General Data Protection Regulation, or the GDPR, which became effective on May 25, 2018. The GDPR applies to the processing of personal data by any company established in the EEA and to companies established outside the EEA to the extent they process personal data in connection with the offering of goods or services to data subjects in the EEA or the monitoring of the behavior of data subjects in the EEA. The GDPR enhances data protection obligations for data controllers of personal data, including stringent requirements relating to the consent of data subjects, expanded disclosures about how personal data is used, requirements to conduct privacy impact assessments for “high risk”

processing, limitations on retention of personal data, mandatory data breach notification and "privacy by design" requirements, and creates direct obligations on service providers acting as processors. The GDPR also imposes strict rules on the transfer of personal data outside of the EEA to countries that do not ensure an adequate level of protection, like the United States (which, while deemed a third country, has the benefit of the Privacy Shield regime for transatlantic data transfers). Failure to comply with the requirements of the GDPR and the related national data protection laws of the European Union Member States and Norway, Iceland and Liechtenstein, which may deviate slightly from the GDPR, may result in fines of up to 4% of a company's global revenues for the preceding financial year, or €20,000,000, whichever is greater. Moreover, the GDPR grants data subjects the right to claim material and non-material damages resulting from infringement of the GDPR. Given the breadth and depth of changes in data protection obligations, maintaining compliance with the GDPR will require significant time, resources and expense, and we may be required to put in place additional controls and processes ensuring compliance with the new data protection rules. There has been limited enforcement of the GDPR to date, particularly in biopharmaceutical development, so we face uncertainty as to the exact interpretation of the new requirements on any future trials and we may be unsuccessful in implementing all measures required by data protection authorities or courts in interpretation of the new law. Further, the United Kingdom's decision to leave the European Union, often referred to as Brexit, has created uncertainty with regard to data protection regulation in the United Kingdom. In particular, it is unclear how data transfers to and from the United Kingdom will be regulated now that the United Kingdom has left the European Union.

There is significant uncertainty related to the manner in which data protection authorities will seek to enforce compliance with GDPR. For example, it is not clear if the authorities will conduct random audits of companies doing business in the EU, or if the authorities will wait for complaints to be filed by individuals who claim their rights have been violated. Enforcement uncertainty and the costs associated with ensuring GDPR compliance are onerous and may adversely affect our business, financial condition, results of operations and prospects.

Should we utilize third party distributors, compliance with such foreign governmental regulations would generally be the responsibility of such distributors, who may be independent contractors over whom we have limited control.

Employees

As of April 30, 2020, we had 122 full-time employees. Sixty of our employees have M.D. or Ph.D. degrees. Within our workforce, 91 employees are engaged in research and development and 31 are engaged in business development, finance, legal, and general management and administration. None of our employees are represented by labor unions or covered by collective bargaining agreements. We consider our relationship with our employees to be good.

Facilities

Our corporate headquarters is located in Cambridge, Massachusetts, where we lease and occupy approximately 44,336 square feet of office and laboratory space. The current term of our Cambridge lease expires April 30th, 2029, with an option to extend the term five additional years with 12 – 15 months' notice at agreed upon market rate.

We believe our existing facilities are sufficient for our needs for the foreseeable future. To meet the future needs of our business, we may lease additional or alternate space, and we believe suitable additional or alternative space will be available in the future on commercially reasonable terms.

Legal proceedings

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

MANAGEMENT

Executives and directors

The following table sets forth the name, age (as of June 30, 2020) and position of each of our executives and directors.

Name	Age	Position
Executive Officers:		
Sanjiv K. Patel, M.D.	46	President and Chief Executive Officer, and Director
Donald Bergstrom, M.D., Ph.D.	48	Executive Vice President, Head of Research & Development
Brian R. Adams	46	General Counsel
Tom Catinazzo	44	Vice President, Finance
Non-Executive Directors:		
Alexis Borisy(1)(2)	48	Director
Linda A. Hill, Ph.D.(2)(3)	63	Director
Douglas S. Ingram(2)	57	Director
Christoph Lengauer, Ph.D.	55	Director
Mark Murcko, Ph.D.(3)(4)	60	Director
Dipchand (Deep) Nishar(2)	51	Director
Jami Rubin(1)(3)	56	Director
Laura Shawver, Ph.D.(1)(4)	63	Director

(1) Member of the Audit Committee
(2) Member of the Compensation Committee
(3) Member of the Nominating and Corporate Governance Committee
(4) Member of Research and Development Committee

Executive team

Sanjiv K. Patel, M.D. has served as a member of our board of directors and as our President and Chief Executive Officer since March 2017. Before joining the Company, Dr. Patel served in various roles at Allergen from 2006 to 2017. He most recently served as Allergan's Executive Vice President, Chief Strategy Officer from March 2015 to March 2017 and previously as Corporate Vice President, Global Strategic Marketing and Global Health Outcomes from July 2013 to March 2015. Prior to this he was a management consultant at The Boston Consulting Group and practiced as a surgeon within the UK's National Health Service. Dr. Patel holds a MBBS from University of London, a MA in Medical Sciences from the University of Cambridge, a MRCS from the Royal College of Surgeons of England, and a MBA from INSEAD. We believe Dr. Patel is qualified to serve as a member of our board of directors due to his extensive experience in the life sciences industry as well as an executive at various pharmaceutical companies.

Donald Bergstrom, M.D., Ph.D. has served as our Executive Vice President, Head of Research & Development since April 2018. Dr. Bergstrom previously served as Chief Medical Officer of Mersana Therapeutics, Inc., a publicly traded biotechnology company, from January 2014 through March 2018. Before that, Dr. Bergstrom served as Global Head of Translational Medicine at Sanofi Genzyme, Oncology from May 2010 through January 2014. Dr. Bergstrom holds a B.A. in biophysics from The Johns Hopkins University, an M.D. from the University of Washington, Seattle and a Ph.D. from the University of Washington – Fred Hutchinson Cancer Research Center.

Brian R. Adams has served as our General Counsel and Secretary since March 2018. Mr. Adams previously served as the Senior Vice President, General Counsel & Secretary at Keryx Biopharmaceuticals, Inc. from March 2014 to March 2018. Before joining Keryx, Mr. Adams served as General Counsel of Algeta ASA from March

2012 to March 2014 prior to its acquisition by Bayer AG. Mr. Adams holds a B.A. from Harvard University and a J.D. from the Catholic University of America's Columbus School of Law.

Tom Catinazzo has served as our Vice President, Finance since April 2018. From June 2013 to April 2018, Mr. Catinazzo held several roles at Foundation Medicine, Inc., a biotechnology company, including as the Vice President, Financial Planning & Analysis from January 2017 to April 2018, the Senior Director, Financial Planning & Analysis from April 2015 to December 2016, and the Director, Financial Planning & Analysis from June 2013 to March 2015. Mr. Catinazzo received his B.S. from Boston College.

Non-executive directors

Alexis Borisy has served as a member of our board of directors since our founding in April 2015. Since June 2019, Mr. Borisy has served as Chief Executive Officer and chairman of EQRx, Inc., a biotechnology company. From 2010 to June 2019, Mr. Borisy was a partner at Third Rock Ventures, a series of venture capital funds investing in life science companies. Mr. Borisy co-founded Blueprint Medicines Corporation, a biopharmaceutical company, and served as its Interim Chief Executive Officer from 2013 to 2014 and has served as a member of its board of directors since 2011. Mr. Borisy co-founded Foundation Medicine, Inc. and served as its Interim Chief Executive Officer from 2009 to 2011 and served as a member of its board of directors from 2009 to July 2018, until its acquisition by Roche. In addition, during the past five years Mr. Borisy has served as a member of the board of directors of various public companies, including Revolution Medicines, Inc., Magenta Therapeutics, Inc., Editas Medicine, Inc. Mr. Borisy received an A.B. in Chemistry from the University of Chicago and an A.M. in Chemistry and Chemical Biology from Harvard University. We believe Mr. Borisy's extensive experience as an executive of, and working with and serving on the boards of directors of, multiple biopharmaceutical and life sciences companies, his educational background and his experience working in the venture capital industry provide him with the qualifications and skills necessary to serve as a member of our board of directors.

Linda A. Hill, Ph.D. has served as a member of our board of directors since October 2018. Dr. Hill has served as the Wallace Brett Donham Professor of Business Administration at the Harvard Business School since July 1984 and is the author of several leadership books and articles. Her research focuses on building innovative organizations and ecosystems and the role of the board in governing innovation. Dr. Hill is also a Founding Partner of Paradox Strategies, a leadership and advisory firm. In the past five years, Dr. Hill has also served as member of the board of directors of publicly traded companies, State Streep Corp., from 2000 to October 2018, and Eaton Corp plc., from 2012 to April 2017. Dr. Hill is also a member of the board of directors of Harvard Business Publishing and the Global Citizens Initiative, Inc. She also serves on the Advisory Board of the Aspen Institute Business and Society Program and the Advisory Board for the California Institute for Telecommunications and Information Technology. Dr. Hill holds a B.A. in psychology from Bryn Mawr College, and a M.A. in educational psychology and a Ph.D. in behavioral sciences from the University of Chicago. Dr. Hill has also completed a post-doctoral research fellowship at the Harvard Business School. We believe Dr. Hill's experience in leadership and organizational innovation provide her with the qualifications and skills necessary to serve as a member of our board of directors.

Douglas S. Ingram has served as a member of our board of directors since June 2019. Mr. Ingram has served as President and Chief Executive Officer of Sarepta Therapeutics, Inc., a publicly traded biotechnology company, and a member of its board of directors since June 2017. From December 2015 until November 2016, he served as President and Chief Executive Officer of Chase Pharmaceuticals Corporation and as a member of its board of directors. Prior to joining Chase Pharmaceuticals, Mr. Ingram served as the President of Allergan, Inc. from July 2013 until it was acquired by Actavis in March 2015. At Allergan, he also served as President, Europe, Africa and Middle East from August 2010 to June 2013, and Executive Vice President, Chief Administrative Officer, and Secretary from October 2006 to July 2010. During the past five years, Mr. Ingram has also served as a member of the board of directors of Endo International plc and Emerald Bioscience, Inc. Mr. Ingram holds a B.S. from Arizona State University and a J.D. from the University of Arizona. We believe Mr. Ingram's extensive

experience leading large pharmaceutical companies provides him with the qualifications and skills necessary to serve as a member of our board of directors.

Christoph Lengauer, Ph.D., MBA, has served as a member of our board of directors since November 2019. Dr. Lengauer has served as a member of the board of directors of Hookipa Pharma Inc. since June 2018. Dr. Lengauer is currently a partner at Third Rock Ventures, where he has worked since March 2016. He also currently serves as the Chief Innovation Officer at Thrive Earlier Detection, since April 2019 and Chief Scientific Officer of MOMA Therapeutics, Inc. since April 2020. He previously served as Chief Scientific Officer at Celsius Therapeutics, Inc. from May 2018 through April 2020. He currently serves as the Executive Vice President, but additionally was the Chief Scientific Officer and Chief Drug Hunter at Blueprint Medicines from January 2012 to November 2016, the Vice President and Global Head of Oncology Drug Discovery and Preclinical Development at Sanofi S.A. from May 2008 to January 2012 and Executive Director and Senior Unit Head of Oncology Discovery at the Novartis Institutes for Biomedical Research from July 2005 to May 2008. Prior to his experience at Novartis, Dr. Lengauer was a member of the faculty at the Sidney Kimmel Comprehensive Cancer Center at the Johns Hopkins University School of Medicine from 1997 to 2005. During the past five years, Dr. Lengauer has served as a member of the board of directors of HOOKIPA Pharma Inc., Celsius Therapeutics, Thrive Earlier Detection, MOMA Therapeutics, and Presage Biosciences. Dr. Lengauer holds a MBA from the Johns Hopkins Carey Business School and a Ph.D. in biology from the University of Heidelberg. We believe that Dr. Lengauer's experience in biopharmaceutical research and development and his experience in venture capital qualify him to serve on our board of directors. Dr. Lengauer resigned from our board of directors effective July 15, 2020. Dr. Lengauer's resignation was not due to any disagreement with the Company or any matters relating to our operations, policies or practices.

Mark Murcko, Ph.D. is a co-founder of Relay and has served as a member of our board of directors since July 2016. Dr. Murcko was also our interim Chief Scientific Officer from February 2016 to January 2018. Since July 2012, Dr. Murcko has been a senior lecturer in the Department of Biological Engineering at MIT. Since November 2018, Dr. Murcko has also been the Chief Scientific Officer and a member of the board of directors of Dewpoint Therapeutics, Inc. Until November 2011, Dr. Murcko served as the Chief Technology Officer and chair of the scientific advisory board at Vertex Pharmaceuticals and was responsible for the identification, validation and implementation of disruptive technologies across R&D. Dr. Murcko holds a B.S. in chemistry and applied mathematics from Fairfield University and holds a Ph.D. in organic chemistry from Yale University. We believe Dr. Murcko's significant experience in the healthcare and biotechnology industry qualify him to serve on our board of directors.

Dipchand (Deep) Nishar has served as a member of our board of directors since June 2019. Since June 2015, Mr. Nishar has worked for SoftBank Investment Advisors and currently serves as Senior Managing Partner. From January 2009 to October 2014, Mr. Nishar served in various roles with LinkedIn Corporation, most recently as Senior Vice President, Products and User Experience. From August 2003 to January 2009, Mr. Nishar served in various roles with Google Inc., most recently as the Senior Director of Products for the Asia-Pacific region. In addition, during the past five years, Mr. Nishar has served as a member of the board of directors of various publicly traded companies, including Guardant Health, Inc., Vir Biotechnology, Inc., TripAdvisor, Inc., and OPower, Inc. Mr. Nishar holds a B. Tech from the Indian Institute of Technology, a MSEE from the University of Illinois, Urbana-Champaign, and a MBA from the Harvard Business School. We believe Mr. Nishar is qualified to serve on our board of directors due to his extensive background in the technology industry and his investment activities in the life science sector.

Jami Rubin has served as a member of our board of directors since October 2019. Ms. Rubin is currently a partner at PJT Partners, a global advisory-focused investment bank since May 2019. Prior to that, Ms. Rubin spent more than 25 years as an equity analyst following the pharmaceutical industry. Most recently, Ms. Rubin was an equity research analyst and then partner at Goldman Sachs managing the global healthcare research team from September 2008 to October 2018. Ms. Rubin holds a B.A. from Vassar College. Ms. Rubin's extensive

financial leadership in the life sciences industry and health care investment banking provide her with the experience and skills necessary to serve on our board of directors.

Laura Shawver, Ph.D. has served as a member of our board of directors since March 2017. Since April 2020, Dr. Shawver has served as the President and Chief Executive Officer of Silverback Therapeutics, Inc. and a member of its board of directors. Since March 2020, Dr. Shawver has also served as a member of the board of directors of Nkarta, Inc. From November 2017 until its acquisition by Sanofi, Inc. in January 2020, Dr. Shawver served as the President and Chief Executive Officer of Synthorx, Inc., a publicly traded biotechnology company, and as a member of its board of directors. Dr. Shawver currently serves on the board of directors of Cleave Therapeutics (formerly Cleave Biosciences) and was previously its Chief Executive Officer from September 2011 through November 2017. Prior to that, she was Entrepreneur in Residence for 5AM Ventures from October 2010 through August 2011. In prior years, Dr. Shawver served as Chief Executive Officer of Phenomix Corporation, from 2002 to 2010, and President of Sugen, Inc. from 2000 through 2002, after holding various positions there since 1992. From June 2012 to February 2014, Dr. Shawver served on the board of directors of Cornerstone Therapeutics, Inc., a publicly traded specialty pharmaceutical company. She is the founder and director of The Clearity Foundation, a non-profit corporation. Dr. Shawver holds a B.S. in microbiology and a Ph.D. in pharmacology from the University of Iowa. Dr. Shawver's extensive experience leading companies in the pharmaceutical industry qualifies her to serve on our board of directors.

Composition of our board of directors

Our board consists of eight members, each of whom are members pursuant to the board composition provisions of our 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 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, 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 fourth amended and restated certificate of incorporation that will become effective upon the closing of this offering and amended and restated bylaws that became effective upon the effectiveness of the registration statement of which this prospectus is a part, 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

We have been approved to list our common stock on The Nasdaq Global Market. Under the Nasdaq listing rules, independent directors must comprise a majority of a listed company's board of directors within twelve months from the date of listing. In addition, the Nasdaq listing rules require that, subject to specified exceptions, each member of a listed company's audit, compensation and nominating and governance committees be independent within twelve months from the date of listing. Audit committee members must also satisfy additional independence criteria, including those set forth in Rule 10A-3 under the Securities Exchange Act of 1934, as amended (the Exchange Act), and compensation committee members must also satisfy the independence criteria set forth in Rule 10C-1 under the Exchange Act. Under Nasdaq listing rules, a director will only qualify as an "independent director" if, in the opinion of that company's board of directors, that person does not have a relationship that would interfere with the exercise of independent judgment in carrying out the responsibilities of

a director. In order to be considered independent for purposes of Rule 10A-3 under the Exchange Act, a member of an audit committee of a listed company may not, other than in his or her capacity as a member of the audit committee, the board of directors, or any other board committee: (1) accept, directly or indirectly, any consulting, advisory, or other compensatory fee from the listed company or any of its subsidiaries, other than compensation for board service; or (2) be an affiliated person of the listed company or any of its subsidiaries. In order to be considered independent for purposes of Rule 10C-1, the board of directors must consider, for each member of a compensation committee of a listed company, all factors specifically relevant to determining whether a director has a relationship to such company which is material to that director's ability to be independent from management in connection with the duties of a compensation committee member, including, but not limited to: the source of compensation of the director, including any consulting advisory or other compensatory fee paid by such company to the director, and whether the director is affiliated with the company or any of its subsidiaries or affiliates.

Our board of directors has determined that all members of the board of directors, except Sanjiv K. Patel, M.D. and Mark Murcko, Ph.D., are independent directors, including for purposes of the rules of the Nasdaq Global Market and the 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 the Nasdaq Global Market and the rules and regulations of the SEC. There are no family relationships among any of our directors or executive officers. Dr. Patel is not an independent director under these rules because he is an executive officer of the Company. Dr. Murcko is not an independent director under these rules because he is a founder and receives compensation as a consultant of the Company.

Staggered board

In accordance with the terms of our fourth amended and restated certificate of incorporation that will become effective upon the closing of this offering and amended and restated bylaws that became effective upon the effectiveness of the registration statement of which this prospectus is a part, our board of directors is divided into three staggered classes of directors and each is 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 2021 for Class I directors, 2022 for Class II directors and 2023 for Class III directors.

- Our Class I directors are Sanjiv K. Patel, M.D. and Linda A. Hill, Ph.D.;
- Our Class II directors are Alexis Borisy, Laura Shawver, Ph.D. and Mark Murcko, Ph.D.; and
- Our Class III directors are Dipchand Nishar, Douglas S. Ingram and Jami Rubin.

Our fourth amended and restated certificate of incorporation that will become effective upon the closing of this offering and amended and restated by-laws that became effective upon the effectiveness of the registration statement of which this prospectus is a part provide that the number of our directors shall be fixed from time to time by a resolution of the majority of our board of directors.

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

Currently, the role of chairman of the board of directors is separated from the role of Chief Executive Officer. Our Chief Executive Officer is responsible for recommending strategic decisions and capital allocation to the

board of directors and to ensure the execution of the recommended plans. The chairman of the board of directors is responsible for leading 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 chairman, particularly as the board of directors' oversight responsibilities continue to grow. While our amended and restated by-laws and corporate governance guidelines will not require that our 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 the four risks more fully discussed in the section entitled "Business" 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, a nominating and corporate governance committee, and a research and development committee, each of which will operate pursuant to a charter to be adopted by our board of directors and became effective upon the effectiveness of the registration statement of which this prospectus is a part. The board of directors may also establish other committees from time to time to assist the Company and the board of directors. Upon the effectiveness of the registration statement of which this prospectus is a part, the composition and functioning of all of our committees complied with all applicable requirements of the Sarbanes-Oxley Act of 2002, Nasdaq and SEC rules and regulations, if applicable. Upon our listing on Nasdaq, each committee's charter will be available on our website at www.relaytx.com. The reference to our website address does not constitute incorporation by reference of the information contained at or available through our website, and you should not consider it to be part of this prospectus.

Audit committee

Jami Rubin, Alexis Borisy and Laura Shawver, Ph.D. serve on the audit committee, which is chaired by Jami Rubin. Our board of directors has determined that each are "independent" for audit committee purposes as that term is defined by the rules of the SEC and Nasdaq, and that each has sufficient knowledge in financial and auditing matters to serve on the audit committee. Our board of directors has designated Jami Rubin 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

Douglas S. Ingram, Linda A. Hill, Ph.D., Dipchand Nishar and Alexis Borisy serve on the compensation and talent committee, or compensation committee, which is chaired by Douglas S. Ingram. Our board of directors has determined that each member of the compensation and talent committee is "independent" as defined in the applicable Nasdaq rules. The compensation and talent 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, recommending to the board of directors the cash compensation of our Chief Executive Officer;
- determining the cash compensation of our other executive officers;
- overseeing and administering our compensation and similar plans;
- reviewing and approving the retention or termination of any consulting firm or outside advisor to assist in the evaluation of compensation matters and evaluating and assessing potential and current compensation advisors in accordance with the independence standards identified in the applicable Nasdaq rules;
- retaining and approving the compensation of any compensation advisors;
- reviewing and approving the grant of equity-based awards;
- reviewing and recommending to the board of directors the compensation of our directors; and
- preparing the compensation committee report required by SEC rules, if and when required, to be included in our annual proxy statement.

Nominating and corporate governance committee

Linda A. Hill, Ph.D., Mark Murcko Ph.D. and Jami Rubin serve on the nominating and corporate governance committee, which is chaired by Linda A. Hill, Ph.D. Our board of directors has determined that a majority of the

nominating and corporate governance committee is "independent" as defined in the applicable Nasdaq 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;
- reviewing and recommending to the board of directors appropriate corporate governance guidelines; and
- overseeing the evaluation of our board of directors.

Research and development committee

Mark Murcko, Ph.D., and Laura Shawver, Ph.D. serve on the research and development committee, which is chaired by Mark Murcko, Ph.D. The research and development committee's responsibilities include reviewing and assessing personnel and research and development program and recommending key discovery and development strategies.

Compensation committee interlocks and insider participation

In 2019, the compensation committee consisted of Mr. Borisy, Dr. Hill, Mr. Ingram, and Mr. Nishar. 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.

Code of Business Conduct and Ethics

Our board of directors adopted a Code of Business Conduct and Ethics in connection with this offering. The Code of Business Conduct and Ethics 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. A current copy of this code is posted on the Corporate Governance section of our website, which is located at www.relaytx.com. The information on our website is deemed not to be incorporated in this prospectus or to be a part of this prospectus. 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.

Limitations on Liability and Indemnification Agreements

As permitted by Delaware law, provisions in our fourth amended and restated certificate of incorporation, which will become effective immediately prior to the closing of this offering, and amended and restated bylaws, which became effective upon the effectiveness of this registration statement, limit or eliminate the personal liability of directors for a breach of their fiduciary duty of care as a director. The duty of care generally requires that, when acting on behalf of the corporation, a director exercise an informed business judgment based on all material information reasonably available to him or her. 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 act related to unlawful stock repurchases, redemptions or other distributions or payments of dividends; or
- any transaction from which the director derived an improper personal benefit.

These limitations of liability do not limit or eliminate our rights or any stockholder's rights to seek non-monetary relief, such as injunctive relief or rescission. These provisions will not alter a director's liability under other laws, such as the federal securities laws or other state or federal laws. Our fourth amended and restated certificate of incorporation that will become effective immediately prior to the closing of this offering also authorizes us to indemnify our officers, directors and other agents to the fullest extent permitted under Delaware law.

As permitted by Delaware law, our amended and restated bylaws, which became effective upon the effectiveness of this registration statement will provide that:

- we will indemnify our directors, officers, employees and other agents to the fullest extent permitted by law;
- we must advance expenses to our directors and officers, and may advance expenses to our employees and other agents, in connection with a legal proceeding to the fullest extent permitted by law; and
- the rights provided in our amended and restated bylaws are not exclusive.

If Delaware law is amended to authorize corporate action further eliminating or limiting the personal liability of a director or officer, then the liability of our directors or officers will be so eliminated or limited to the fullest extent permitted by Delaware law, as so amended. Our amended and restated bylaws will also permit us to secure insurance on behalf of any officer, director, employee or other agent for any liability arising out of his or her actions in connection with their services to us, regardless of whether our bylaws permit such indemnification. We have obtained such insurance.

In addition to the indemnification that will be provided for in our fourth amended and restated certificate of incorporation and amended and restated bylaws, we plan to enter into separate indemnification agreements with each of our directors and executive officers, which may be broader than the specific indemnification provisions contained in the Delaware General Corporation Law. These indemnification agreements may require us, among other things, to indemnify our directors and executive officers for some expenses, including attorneys' fees, expenses, judgments, fines and settlement amounts incurred by a director or executive officer in any action or proceeding arising out of his service as one of our directors or executive officers or any other company or enterprise to which the person provides services at our request. We believe that these provisions and agreements are necessary to attract and retain qualified individuals to serve as directors and executive officers.

This description of the indemnification provisions of our fourth amended and restated certificate of incorporation, our amended and restated bylaws and our indemnification agreements is qualified in its entirety by reference to these documents, each of which is attached as an exhibit to the registration statement of which this prospectus forms a part.

Insofar as indemnification for liabilities arising under the Securities Act may be permitted to our directors, officers and controlling persons pursuant to the foregoing provisions, or otherwise, we have been advised that, in the opinion of the SEC, such indemnification is against public policy as expressed in the Securities Act, and is, therefore, unenforceable.

There is no pending litigation or proceeding naming any of our directors or officers as to which indemnification is being sought, nor are we aware of any pending or threatened litigation that may result in claims for indemnification by any director or officer.

EXECUTIVE COMPENSATION

Overview

The following discussion contains forward-looking statements that are based on our current plans and expectations regarding our future compensation programs. The actual amount and form of compensation that we pay and the compensation policies and practices that we adopt in the future may differ materially from the currently-planned programs that are summarized in this discussion.

Our executive compensation program reflects our continued focus on growth and development. To date, the compensation of our executive officers identified in the Summary Compensation Table below, who we refer to as our named executive officers, has consisted of a combination of base salary, annual incentive bonuses and long-term incentive compensation. Our named executive officers, like all other full-time employees, are eligible to participate in our retirement and health 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 Radford, an AON Hewitt company, its external 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.

The compensation provided to our named executive officers for the fiscal year ended December, 31, 2019 is detailed in the 2019 Summary Compensation Table and accompanying footnotes and narrative that follow.

Our named executive officers for the fiscal year ended December 31, 2019, which consisted of our Chief Executive Officer and our two most highly-compensated executive officers other than our Chief Executive Officer, were:

- Sanjiv K. Patel, M.D., our President and Chief Executive Officer
- Donald Bergstrom, M.D., Ph.D., our Executive Vice President, Head of Research & Development
- Brian R. Adams, our General Counsel

Summary Compensation Table

The following table provides information regarding the total compensation awarded to, earned by, and paid to our named executive officers for services rendered to us in all capacities for the fiscal year ended December 31, 2019.

Name and Principal Position	Year	Salary ($)	Option Awards ($)(1)	Non-Equity Incentive Plan Compensation ($)(2)	Total ($)
Sanjiv K. Patel M.D. *President and Chief Executive Officer*	2019	585,000	2,590,671	353,925	3,529,596
Donald Bergstrom M.D., Ph.D. *Executive Vice President, Head of Research & Development*	2019	406,850	330,652	179,014	916,516
Brian R. Adams *General Counsel*	2019	356,213	165,326	97,958	619,497

(1) The amounts reported represent the aggregate grant date fair value of the stock options awarded to our named executive officers during fiscal year 2019, 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. The assumptions used in calculating the grant

date fair value of the awards reported in this column are set forth in the notes to our consolidated financial statements included elsewhere in this prospectus. The amounts reported in this column reflect the accounting cost for the stock options and do not correspond to the actual economic value that may be received upon exercise of the stock option or any sale of any of the underlying shares of common stock.

(2) The amounts represent actual bonuses earned for performance in 2019 by our named executive officers based on the achievement of Company performance objectives, as described under "Annual Bonuses" below. The amounts were approved by our board of directors in December 2019.

Narrative to Summary Compensation Table

Base Salaries

We use base salaries to recognize the experience, skills, knowledge, and responsibilities required of all our employees, including our named executive officers. Base salaries are reviewed annually, typically in connection with our annual performance review process. From January 1, 2019 until December 31, 2019, the annual base salaries for Dr. Patel, Dr. Bergstrom and Mr. Adams were $585,000, $406,850, and $356,213, respectively. In 2020, the annual base salaries of Dr. Bergstrom and Mr. Adams were increased in connection with their entering into new employment agreements with us, described below.

Annual Bonuses

Our board of directors may approve annual bonuses for our named executive officers based on individual and/or Company performance objectives, as determined to be appropriate. In fiscal year 2019, Dr. Patel, Mr. Bergstrom and Mr. Adams were all eligible to receive an annual cash bonus based solely upon the achievement of Company performance objectives, which consisted of pre-specified milestones, including the progression of pre-clinical programs, and certain financial metrics. In fiscal year 2019, the target bonus opportunity for each of Dr. Patel, Mr. Bergstrom and Mr. Adams was equal to 55%, 40% and 25%, respectively, of each executive officer's respective base salary. The corporate objectives for fiscal year 2019 also included advancement of the our scientific programs, further build out of our scientific platform, execution of a hiring plan approved by our board of directors, and achievement of several operational goals intended to further mature our business operations. In late 2019, our board of directors evaluated the Company's performance in 2019 against these objectives, and determined that, based upon the level of achievement in 2019, Dr. Patel, Dr. Bergstrom and Mr. Adams each earned cash bonuses of $353,925**,** $179,014, and $97,958, respectively. Mr. Adams' target bonus opportunity was increased to 35% pursuant to his new employment agreement, described below.

Equity Compensation

Although we do not have a formal policy with respect to the grant of equity incentive awards to our executive officers, we believe that equity grants provide our executives with a strong link to our long-term performance, create an ownership culture, and help to align the interests of our executives and our stockholders. Accordingly, our board of directors periodically reviews the outstanding equity incentive awards of our named executive officers and from time to time may grant additional equity incentive awards to them. In April 2019, our board of directors approved stock option grants to our employees, including our named executive officers. Dr. Patel, Mr. Bergstrom and Mr. Adams were granted 772,268 stock options, 98,566 stock options, and 49,283 stock options, respectively, as described in more detail in the "Outstanding equity awards at fiscal 2019 year-end" table.

March 2020 Stock Option Grants

On March 2, 2020, our board of directors approved the grant of stock options to our named executive officers. Dr. Patel, Mr. Bergstrom and Mr. Adams were granted 753,804 stock options, 126,727 stock options, and 67,588 stock options, respectively.

The stock options will vest in 16 equal quarterly installments commencing on the three month anniversary of the determination by our board of directors that we have met, in whole or in part, certain specified performance criteria for 2020 and 2021 (and provided that no stock options shall be deemed to have vested unless and until our board of directors makes such a determination with respect to such criteria).

Executive Employment Arrangements

In March and April 2020, we entered into employment agreements with each of our named executive officers. Each employment agreement sets forth such executive officer's base salary, target bonus opportunity, and eligibility to participate in our benefit plans generally. Each of our executives is also subject to a non-competition, non-solicitation, confidentiality, and assignment agreement, which provides for a perpetual post-termination confidentiality covenant as well as non-competition and non-solicitation of customers, employees and consultants covenants that apply during employment and for one year following termination, subject to the type of termination in the case of the non-competition provision.

Sanjiv. K. Patel

On March 25, 2020, we entered into an employment agreement with Dr. Patel, who currently serves as our President and Chief Executive Officer. The March 25, 2020 employment agreement supersedes the prior letter agreement entered into between Dr. Patel and the Company on February 11, 2017. The March 25, 2020 employment agreement provides an annual base salary of $585,000, an annual target bonus equal to 55% of Dr. Patel's annual base salary and eligibility to participate in our benefit plans generally. The March 26, 2020 employment agreement also provides that, while public, the Company will cause Dr. Patel to be nominated for election to our board of directors and to be recommended to our stockholders for election to our board of directors. The equity awards previously held by Dr. Patel continue to be governed by the terms and conditions of the Company's applicable equity incentive plan(s) and the applicable award agreement(s). Dr. Patel shall also be entitled to reimbursement for all reasonable business expenses incurred during the term of his employment, in accordance with the policies and procedures then in effect and established by the Company for its executive officers. Dr. Patel's severance and change in control entitlements are described in the section titled "Executive Severance and Change in Control."

Donald Bergstrom

On April 7, 2020, we entered into an employment agreement with Dr. Bergstrom, who currently serves as our Executive Vice President, Head of Research & Development. The April 7, 2020 employment agreement supersedes the prior letter agreement entered into between Dr. Bergstrom and the Company on February 24, 2018. The April 7, 2020 employment agreement provides for an annual base salary of $440,000, an annual target bonus equal to 40% of Dr. Bergstrom's annual base salary, and eligibility to participate in our benefit plans generally. The equity awards previously held by Dr. Bergstrom shall continue to be governed by the terms and conditions of the Company's applicable equity incentive plan(s) and the applicable award agreements(s). Dr. Bergstrom shall also be entitled to reimbursement for all reasonable business expenses incurred during the term of his employment, in accordance with the policies and procedures then in effect and established by the Company for its executive officers. Dr. Bergstrom's severance and change in control entitlements are described in the section titled "Executive Severance and Change in Control."

Brian R. Adams

On March 25, 2020, we entered into an employment agreement with Mr. Adams, who currently serves as our General Counsel. The March 25, 2020 employment agreement supersedes the prior letter agreement entered into between Mr. Adams and the Company on January 29, 2018. The March 25, 2020 employment agreement provides an annual base salary of $390,000, an annual target bonus equal to 35% of Mr. Adam's annual base salary, and his eligibility to participate in our benefit plans generally. The equity awards previously held by

Mr. Adams shall continue to be governed by the terms and conditions of the Company's applicable equity incentive plan(s) and the applicable award agreements(s). Mr. Adams shall also be entitled to reimbursement for all reasonable business expenses incurred during the term of his employment, in accordance with the policies and procedures then in effect and established by the Company for its executive officers. Mr. Adams' severance and change in control severance entitlements are described in the section titled "Executive Severance and Change in Control."

Executive Severance and Change in Control

Pursuant to the employment agreements described above, each of our named executive officers is subject to severance and change in control provisions. Each employment agreement provides that upon (i) a termination of the executive's employment by us for any reason other than for "cause" (as defined in the respective employment agreement), death or disability or (ii) a resignation for "good reason" (as defined in the respective employment agreement), in each case outside of the change in control period (i.e., in the case of Dr. Patel, the period beginning 60 days prior to and ending 18 months after, a change in control of the Company (as defined in the letter agreement), and in the case of Dr. Bergstrom and Mr. Adams, the period beginning in anticipation of, and ending 12 months after, a change in control of the Company), such executive will be entitled to receive, subject to the execution and delivery of an effective separation agreement and release, which shall include a release of claims in favor of the Company, (A) in the case of Dr. Patel, an amount equal to the sum of 18 months of Dr. Patel's then current base salary, and in the case of Dr. Bergstrom and Mr. Adams, an amount equal to the sum of 12 months of each of their respective base salaries, (B) an amount equal to the executive's target bonus opportunity for the then-current year, which amount shall be prorated in the case of Dr. Bergstrom and Mr. Adams, in the case of each of (A) and (B) payable in substantially equal installments over 12 months following the date of termination of employment, (C) the employer portion of the premiums for health insurance benefits continuation under the Consolidated Omnibus Budget Reconciliation Act of 1985, as amended, or COBRA, for up to 18 months in the case of Dr. Patel and for up to 12 months in the case of Dr. Bergstrom and Mr. Adams, (D) for Dr. Patel, accelerated vesting of all stock options subject to time-based vesting and any other stock-based awards subject to time-based vesting that would have otherwise vested in the 12-month period following such termination of employment, with such accelerated vesting to be effective as of the later (y) of the date of termination of employment and (z) the effective date of the separation agreement and release, such acceleration to include pro rata vesting of that portion of the vesting quarter ending after expiration of the applicable 12-month period, based on number of days falling within the applicable 12-month period during such quarter divided by 91, and (E) for Dr. Patel, reimbursement for the reasonable cost of outplacement services during the 12-month period immediately following such termination of employment.

Each employment agreement also provides that upon (i) a termination of the executive's employment by us other than for cause, death or disability or (ii) a resignation for good reason, in each case, within the change in control period described above, the executive will be entitled to receive, subject to the execution and delivery of an effective separation agreement and release, which shall include a release of claims in favor of the Company, (A) a lump sum payment equal to 1.5x, in the case of Dr. Patel, or 1x, in the case of Dr. Bergstrom and Mr. Adams, the sum of such executive's current base salary and target bonus opportunity, in the case of each of (A) and (B), payable or commencing payment within 60 days following the date of termination of employment, (B) the employer portion of the premiums for health insurance benefits continuation under COBRA for up to 18 months for Dr. Patel and for up to 12 months for each of Dr. Bergstrom and Mr. Adams, (C) accelerated vesting of all stock options subject to time-based vesting and any other stock-based awards subject to time-based vesting, as of the later of (y) the date of termination of employment and (z) the effective date of the separation agreement and release, and (D) for Dr. Patel, reimbursement for the reasonable cost of outplacement services during the 12-month period immediately following such termination of employment.

The payments and benefits provided under the applicable employment agreement in connection with a change in control may not be eligible for a federal income tax deduction by us pursuant to Section 280G of the Code, and may also subject the applicable named executive officer to an excise tax under Section 4999 of the Code. If the

payments or benefits payable in connection with a change in control would be subject to the excise tax imposed under Section 4999 of the Code, then those payments or benefits will be reduced if such reduction would result in a higher net after-tax benefit to the executive officer.

Outstanding equity awards at fiscal 2019 year-end

The following table sets forth information regarding outstanding equity awards held by our named executive officers as of December 31, 2019:

		Option Awards(1)					Stock Awards(1)	
Name	Grant Date	Vesting Commencement Date	Number of Securities Underlying Unexercised Options (#) Exercisable	Number of Securities Underlying Unexercised Options (#) Unexercisable	Option Exercise Price ($)	Option Expiration Date	Number of Shares or Units of Stock That Have Not Vested (#)	Market Value of Shares or Units of Stock That Have Not Vested ($)(2)
Sanjiv K. Patel M.D.	03/16/2017(3)	03/16/2017	—	—	—	—	344,325	506,158
President and Chief	03/23/2018(4)	03/23/2018	172,175	—	4.12	03/22/2028	—	—
Executive Officer	03/23/2018(4)	03/23/2018	—	—	—	—	33,757	49,623
	04/23/2019(5)	04/23/2019	56,869	675,735	5.04	04/22/2029	—	—
Donald Bergstrom M.D., Ph.D.	04/10/2018(6)	04/02/2018	394,264	—	4.12	04/09/2028	—	—
Executive Vice President, Head of Research & Development	04/23/2019(5)	04/23/2019	12,321	86,245	5.04	04/22/2029	—	—
Brian R. Adams	03/23/2018(6)	03/19/2018	171,786	—	4.12	03/22/2028	—	—
General Counsel	04/23/2019(5)	04/23/2019	6,160	43,123	5.04	04/22/2029	—	—

(1) Each equity award is subject to the terms of our 2016 Plan, the applicable award agreement and certain acceleration of vesting provisions under each executive's employment agreement, described above.

(2) There was no public market for our common stock as of December 31, 2019. The fair market value of our common stock as of December 31, 2019, as determined by an independent valuation firm, was $5.22 per share.

(3) Represents an award of restricted shares, subject to repurchase by us at the original purchase price, which repurchase right lapses as the shares vest as follows: 1/4th of the restricted shares vest on the first anniversary of the vesting commencement date and an additional 1/12th vests quarterly thereafter, generally subject to the executive's continued employment through each applicable vesting date. Pursuant to Dr. Patel's employment agreement with us, in the event such award is not assumed or continued in connection with a change in control of the Company, 100% of the then-unvested shares shall accelerate in full.

(4) Represents a stock option award of 366,102 shares that are subject to an early exercise provision and is immediately exercisable for restricted shares. Restricted shares acquired upon the early exercise of options are subject to repurchase by us at the original exercise price, which repurchase right lapses consistent with the option's original vesting schedule, which is as follows: as to 1/16 of the shares underlying the option on each of the first 16 equal quarters following the vesting commencement date, generally subject to the executive's continued employment through each applicable vesting date. Dr. Patel early exercised the stock option with respect to 193,927 shares, of which 33,757 shares remain unvested as of December 31, 2019.

(5) Represents stock options that vest in 16 equal quarterly installments following the vesting commencement date, generally subject to the executive's continued employment through each applicable vesting date.

(6) Represents awards of stock options, subject to an early exercise provision and that are immediately exercisable for restricted shares. Restricted shares acquired upon the early exercise of options are subject to repurchase by us at the original exercise price, which repurchase right lapses consistent with the option's original vesting schedule, which is as follows: 1/4th of the shares underlying the option vest on the one-year anniversary of the vesting commencement date and an additional 1/12th vests quarterly thereafter, subject to the executive's continued employment through each applicable vesting date.

Employee benefits and equity compensation plans

2020 Stock Option and Incentive Plan

Our 2020 Stock Option and Incentive Plan, or 2020 Stock Plan, was adopted by our board of directors in June 2020 and our stockholders in July 2020. The 2020 Stock Plan became effective on the date immediately prior to the date on which the registration statement of which this prospectus is a part was declared effective by the SEC. The 2020 Stock Plan is expected to replace our 2016 Plan, as our board of directors has determined not to make additional awards under the 2016 Plan following the closing of this offering. The 2020 Stock Plan will provide flexibility to our compensation committee to use various equity-based incentive awards as compensation tools to motivate our workforce.

We will initially reserve 8,376,080 shares of our common stock, or the Initial Limit, for the issuance of awards under the 2020 Stock Plan, which includes 769,354 shares of common stock remaining available for issuance under our 2016 Plan as of the business day immediately prior to the effective date of the registration statement of which this prospectus forms a part. The 2020 Stock Plan will provide that the number of shares reserved and available for issuance under the plan will automatically increase each January 1, beginning on January 1, 2021, by 5% of the outstanding number of shares of our common stock on the immediately preceding December 31, or such lesser number of shares as determined by our compensation committee, or the Annual Increase. This number will be subject to adjustment in the event of a stock split, stock dividend or other change in our capitalization.

The shares we issue under the 2020 Stock 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 any issuance of stock, expire or are otherwise terminated (other than by exercise) under the 2020 Stock Plan will be added back to the shares of common stock available for issuance under the 2020 Stock Plan.

The maximum aggregate number of shares that may be issued in the form of incentive stock options may not exceed the Initial Limit cumulatively increased on January 1, 2021, and on each January 1 thereafter by the lesser of the Annual Increase for such year or 8,376,080 shares of common stock.

The grant date fair value of all awards made under our 2020 Stock Plan and all other cash compensation paid by us to any non-employee director in any calendar year may not exceed $1 million for the first year of service and $750,000 for each year of service thereafter.

The 2020 Stock Plan will be administered by our compensation committee. Our compensation committee will have 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 the 2020 Stock Plan. Persons eligible to participate in the 2020 Stock Plan will be those full or part-time employees, non-employee directors and consultants of the Company and its affiliates, as selected from time to time by our compensation committee in its discretion.

The 2020 Stock Plan will permit the granting of both options to purchase common stock intended to qualify as incentive stock options under Section 422 of the Internal Revenue Code and options that do not so qualify. The option 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 in its discretion. Stock appreciation rights entitle the recipient to shares of common stock or cash, equal to the value of the appreciation in our stock price over the exercise price. The exercise price of each stock appreciation right may not be less than 100% of the fair market value of the 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 will be permitted to 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 or service relationship with us through a specified vesting period. Our compensation committee will also be permitted to grant shares of common stock that are free from any restrictions under the 2020 Stock Plan. Unrestricted stock may be granted to participants in recognition of past services or other valid consideration and may be issued in lieu of cash compensation due to such participant.

Our compensation committee will be permitted to grant cash bonuses under the 2020 Stock Plan to participants, subject to the achievement of certain performance goals.

The 2020 Stock Plan will provide that upon the effectiveness of a "sale event," as defined in the 2020 Stock Plan, an acquirer or successor entity may assume, continue or substitute outstanding awards under the 2020 Stock Plan. To the extent that awards granted under our 2020 Stock Plan are not assumed or continued or substituted by the successor entity, except as may be otherwise provided in the relevant award agreement, all awards with time-based vesting, conditions or restrictions will 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 agreement. Upon the effective time of the sale event, all outstanding awards granted under the 2020 Stock Plan will terminate to the extent not assumed or continued or substituted by the successor entity. 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 the 2020 Stock 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 will be permitted to amend or discontinue the 2020 Stock Plan and our compensation committee will be permitted to amend the exercise price of options and 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 the 2020 Stock Plan will require the approval of our stockholders.

No awards will be granted under the 2020 Stock Plan after the date that is 10 years from the date of stockholder approval. No awards under the 2020 Stock Plan have been made prior to the date of this prospectus.

2016 Stock Option and Grant Plan, as amended

Our board of directors adopted, and our stockholders approved our 2016 Plan on July 6, 2016. Our 2016 Plan was most recently amended on November 12, 2018. Our 2016 Plan allows for the grant of incentive stock options to our employees and any of our subsidiary corporations' employees, and grants of non-qualified stock options, restricted stock awards, unrestricted stock awards, and restricted stock units to the full- or part-time officers, employees, directors, consultants, and key persons of the Company and our subsidiaries.

Authorized Shares. No shares will be available for future issuance under the 2016 Plan following the effectiveness of the registration statement of which this prospectus forms a part. However, our 2016 Plan will continue to govern outstanding awards granted thereunder. As of June 30, 2020, we reserved an aggregate of

10,951,156 shares of our common stock for the issuance of options and other equity awards under the 2016 Plan. This number is subject to adjustment in the event of a reorganization, recapitalization, reclassification, stock dividend, stock split, reverse stock split or other similar change in our capitalization. As of June 30, 2020, stock options to purchase 7,471,087, shares of our common stock at a weighted average exercise price of $5.05 per share, 290,477 shares of restricted stock, and no restricted stock units were outstanding under the 2016 Plan and 7,471,087 shares remained available for future issuance under the 2016 Plan.

The shares of common stock we have issued under the 2016 Plan were authorized but unissued shares we reacquired. The shares of common stock underlying any awards that are forfeited, canceled, reacquired by us prior to vesting, satisfied without the issuance of stock, or otherwise terminated (other than by exercise) and the shares of common stock that are withheld upon exercise of a stock option or settlement of an award to cover the exercise price or tax withholding, are currently added back to the shares of common stock available for issuance under the 2016 Plan. Following the effectiveness of the 2020 Stock Plan, any such shares of Common Stock underlying outstanding awards that would otherwise return to the 2016 Plan were added to the shares of common stock available for issuance under the 2020 Stock Plan.

Administration. Our board of directors currently administers our 2016 Plan. Subject to the provisions of our 2016 Plan, the administrator has full authority and discretion to take any actions it deems necessary or advisable for the administration our 2016 Plan, including but not limited to determining the individuals to whom awards may be granted; the number of shares to be covered by any award; the price, exercise price, conversation ratio or other price relating thereto; the vesting schedule applicable to the awards together with any vesting acceleration and the terms of the award agreement for use under our 2016 Plan. The plan administrator is specifically authorized to exercise its discretion to reduce the exercise price of outstanding stock options or effect the repricing of stock options through cancellation and re-grants without stockholder approval.

Options. Stock options may be granted under our 2016 Plan. The 2016 Plan permits the granting of (i) stock options to purchase common stock intended to qualify as incentive stock options under Section 422 of the Internal Revenue Code and (ii) stock options that do not so qualify. The stock option exercise price per share of our common stock underlying each stock option was determined by our board or directors or a committee appointed by the board of directors, and must have been at least equal to 100% of the fair market value of a share of our common stock on the date of grant. In the case of an incentive stock option granted to a participant who, at the time of grant of such stock option, owned stock representing more than 10% of the voting power of all classes of stock of the Company, or a 10% owner, the exercise price per share of our common stock underlying each such stock option must have been at least equal to 110% of the fair market value of a share of our common stock on the date of grant. The term of each stock option may not have exceeded 10 years from the date of grant (or five years for a 10% owner). The administrator will determine the methods of payment of the exercise price of a stock option , which may include cash or cash equivalents; delivery of a promissory note from the optionee to the Company; surrender of shares of common stock or certain other forms of payment acceptable to the administrator and permitted by the Delaware General Corporation Law.

Stock Awards. The 2016 Plan allows for the grant of shares of restricted stock. Restricted stock awards are grants of shares of our common stock that are subject to various restrictions, including restrictions on transferability and forfeiture provisions. Shares of restricted stock will vest, and the restrictions on such shares will lapse, in accordance with terms and conditions established by the administrator.

The 2016 Plan also allows for the grant of shares of unrestricted stock. Unrestricted stock awards 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.

Restricted Stock Units. The 2016 Plan permits the granting of restricted stock units. A restricted stock unit is an award that covers a number of shares of our common stock that may be settled upon vesting in cash or shares of common stock. The administrator determines the terms and conditions of restricted stock units, including the

number of units granted, the vesting criteria (which may include achievement of pre-established performance goals or continued service to us), and the form and timing of payment.

Termination. After a participant's termination of service (other than a termination for cause), the participant generally may exercise his or her stock options, to the extent vested as of such date of termination, for three months after termination or such longer period of time as specified in the applicable stock option agreement; provided, that if the termination is due to death or disability, the stock option generally will remain exercisable, to the extent vested as of such date of termination, until the one-year anniversary of such termination. However, in no event may a stock option be exercised later than the expiration of its term.

Transferability or Assignability of Awards. Our awards are subject to transfer restrictions as the administrator may determine. The 2016 Plan generally does not allow for the transfer or assignment of awards, other than, at the discretion of the plan administrator, by will or the laws of descent and distribution, by gift to an immediate family member, or by instrument to an inter vivos or testamentary trust in which the award is passed to beneficiaries upon the death of the participant.

Sale Event. The 2016 Plan provides that upon the occurrence of a "sale event" (as defined in the 2016 Plan), awards may be assumed, substituted for new awards of a successor entity, or otherwise continued or terminated at the effective time of such sale event. In the case of the termination of outstanding stock options, such stock options may be exercised to the extent then exercisable within a period of time prior to the consummation of the sale event. In the case of forfeiture of restricted stock, such awards may be repurchased by us for a price per share equal to the original per share purchase price paid by the participant for the shares. We may also make or provide for a cash payment to holders of vested and exercisable stock options, in exchange for the cancellation thereof, equal to, for each share of our common stock underlying such stock option, the difference between the per share cash consideration in the sale event, as determined by the compensation committee, and the per share exercise price, if any. We may make or provide for a cash payment to holders of restricted stock and restricted stock unit awards, in exchange for the cancellation thereof, in an amount equal to the product of the per share cash consideration in the sale event and the number of shares subject to each such award.

Certain Adjustments. In the event of certain changes in our capitalization, the number of shares available for future grants, the number of shares covered by each outstanding equity grant and the exercise price under each outstanding option will be proportionately adjusted.

Our board of directors may amend, suspend, or terminate the 2016 Plan at any time, subject to stockholder approval where such approval is required by applicable law. The board of directors may also amend, modify, or terminate any outstanding award, including the exercise price of such award, provided that no amendment to an award may adversely affect any of the rights of a participant under any awards previously granted without his or her consent. We will not make any further grants under the 2016 Plan following this offering.

Employee Stock Purchase Plan

Our 2020 Employee Stock Purchase Plan, or ESPP, was adopted by our board of directors in June 2020 and our stockholders in July 2020. The ESPP is intended to qualify as an "employee stock purchase plan" within the meaning of Section 423(b) of the Code. The ESPP initially reserves and authorizes the issuance of up to a total of 1,092,532 shares of common stock to participating employees. The ESPP provides that the number of shares reserved and available for issuance will automatically increase each January 1, beginning on January 1, 2021 and January 1 thereafter through January 1, 2030, by the least of (i) 1% of the outstanding number of shares of our common stock on the immediately preceding December 31, (ii) 2,185,064 shares or (iii) such number of shares as determined by the ESPP administrator. The number of shares reserved under the ESPP is subject to adjustment in the event of a stock split, stock dividend or other change in our capitalization.

All employees whose customary employment is for more than 20 hours per week and have completed at least thirty (30) days of employment are eligible to participate in the ESPP. However, any participating employee who would own 5% or more of the total combined voting power or value of all classes of stock after an option was granted under the ESPP would not be eligible to purchase shares under the ESPP.

We may make one or more offerings each year to our employees to purchase shares under the ESPP. Offerings will begin on such dates as determined by the compensation committee and, unless otherwise determined by the compensation committee, will continue for six (6) month periods, referred to as offering periods. The compensation committee may provide for one or more purchase periods in each offering period. Each eligible employee may elect to participate in any offering by submitting an enrollment form at least 15 business days before the relevant offering date.

Each employee who is a participant in the ESPP may purchase shares by authorizing payroll deductions of between 1% and 15% of his or her base compensation during each pay period. Unless the participating employee has previously withdrawn from the offering, his or her accumulated payroll deductions will be used to purchase shares on the last business day of the purchase period at a price equal to 85% of the fair market value of the shares on the first business day or the last business day of the purchase period, whichever is lower. 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 offering period, under the 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 the ESPP terminate upon voluntary withdrawal from the plan or when the employee ceases employment with us for any reason.

Senior Executive Cash Incentive Bonus Plan

In June 2020, our board of directors adopted the Senior Executive Cash Incentive Bonus Plan, or the Bonus Plan. The Bonus Plan provides for cash 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 the Company, corporate performance goals, and individual performance objectives.

Our compensation committee may select corporate performance goals from among the following: developmental, publication, clinical or regulatory milestones; 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; acquisitions, licenses or strategic transactions; financing or other capital raising transactions; operating income (loss); return on capital, assets, equity, or investment; stockholder returns; return on sales; total shareholder return; 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 prescriptions or prescribing physicians; coverage decisions; leadership development, employee retention, and recruiting and other human resources matters; 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, or as compared to results of a peer group.

Each executive officer who is selected to participate in the 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. 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, but not later than two and one-half months after the end of the fiscal year in which such performance period ends. Subject to the rights contained in any agreement between the

executive officer and us, an executive officer must generally be employed by us on the bonus payment date to be eligible to receive a bonus payment. If an executive officer was not employed for an entire performance period, the compensation committee may pro rate the bonus based on the number of days employed during such period. The 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 that provides eligible U.S. employees with an opportunity to save for retirement on a tax-advantaged basis. Plan participants are able to defer eligible compensation subject to applicable annual Internal Revenue Code limits. Effective February 2020, we provide an employer-matching contribution of up to 3.5% of eligible compensation that a participant elects to defer, which is 100% vested when contributed. The 401(k) plan is intended to be qualified under Section 401(a) of the Internal Revenue Code with the 401(k) plan's related trust intended to be tax exempt under Section 501(a) of the Internal Revenue Code. As a tax-qualified retirement plan, contributions to the 401(k) plan and earnings on those contributions are not taxable to the employees until distributed from the 401(k) plan.

DIRECTOR COMPENSATION

Non-employee director compensation program

During the fiscal year ended December 31, 2019, we provided compensation to our non-employee directors in the form of cash retainers and equity awards as set forth below, with cash retainers prorated for partial years of service:

Annual Retainer for service on the board of directors	$ 35,000

Upon initial election to our board of directors, each non-employee director was granted an option to purchase 150,000 shares of our common stock, or the Initial Grant. In addition, for each year thereafter, each non-employee director who continued as a member of the board of directors was granted an option to purchase 25,000 shares of our common stock, or the Annual Grant. The Initial Grant and the Annual Grant each vest in full on the first anniversary of their respective grant dates, subject to continued service as a director through such date. All of the foregoing options were granted with a per share exercise price equal to the fair market value of a share of our common stock on the date of grant and with a term of ten years.

Dr. Murcko also receives compensation for the provision of certain scientific and strategic advisory services as requested by our Chief Executive Officer and his designees pursuant to a consulting agreement that we entered into with him on January 2, 2018, which has subsequently been amended. Under his consulting agreement, Dr. Murcko receives four equal payments of $50,000, each payable at the end of each calendar quarter. Dr. Murcko has agreed to certain confidentiality, intellectual property and non-competition obligations during and following his period of consultancy services.

Employee directors received no additional compensation for their service as a director and directors affiliated with our investors do not receive compensation for their service as a director.

We reimbursed all reasonable out-of-pocket business expenses incurred by directors for their attendance at meetings of our board of directors or any committee thereof.

Non-Employee Director Compensation Policy

In June 2020, we adopted a non-employee director compensation policy that became effective upon the effectiveness of the registration statement of which this prospectus forms a part and is 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 will be paid cash compensation from and after the completion of this offering, as set forth below:

	Annual Retainer
Board of Directors:	
Members	$ 40,000
Additional retainer for non-executive chair	$ 30,000
Audit Committee:	
Members (other than chair)	$ 7,500
Retainer for chair	$ 15,000
Compensation Committee:	
Members (other than chair)	$ 5,000
Retainer for chair	$ 10,000
Nominating and Corporate Governance Committee:	
Members (other than chair)	$ 4,000
Retainer for chair	$ 8,000
Research and Development Committee:	
Members (other than chair)	$ 5,000
Retainer for chair	$ 10,000

In addition, the non-employee director compensation policy provides that, upon initial election to our board of directors, each non-employee director will be granted an option to purchase 36,610 shares of our common stock ("Initial Grant"). The Initial Grant will vest ratably in 36 equal monthly installments following the grant date, subject to continued service as a director through the applicable vesting date. Furthermore, on the date of each annual meeting of stockholders following the completion of this offering, each non-employee director who continues as a non-employee director following such meeting will be granted an option to purchase 18,305 shares of our common stock ("Annual Grant"). The Annual Grant will vest in full on the earlier of (i) the first anniversary of the grant date and (ii) our next annual meeting of stockholders, subject to continued service as a director through the vesting date. The Initial Grants and Annual Grants are subject to full accelerated vesting upon the sale of the company.

We will reimburse all reasonable out-of-pocket business expenses incurred by non-employee directors in attending meetings of the board of directors and committees thereof.

Non-employee director compensation table

The following table provides information regarding the total compensation that was earned by or paid to each of our non-employee directors during the fiscal year ended December 31, 2019.

Name	Fees Earned or Paid in Cash ($)	Option Awards ($)(1)(2)	All Other Compensation ($)	Total ($)
Alexis Borisy	17,500	141,114	—	158,614
Linda A. Hill, Ph.D.	35,000	23,274	—	58,274
Douglas S. Ingram	17,500	174,211	—	191,711
Christoph Lengauer, Ph.D.	—	—	—	—
Mark Murcko, Ph.D.	35,000	23,618	200,000(3)	258,618
Dipchand (Deep) Nishar	—	—	—	—
Jami Rubin	8,750	139,644	—	148,394
Laura Shawver, Ph.D.	35,000	23,618	—	58,618
Steven Kafka, Ph.D.(4)	35,000	—	—	35,000

(1) The amounts reported represent the aggregate grant date fair value of the stock options awarded to the non-employee directors during fiscal year 2019, 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. The assumptions used in calculating the grant date fair value of the awards reported in this column are set forth in the notes to our consolidated financial statements included elsewhere in this prospectus. The amounts reported in this column reflect the accounting cost for the stock options and do not correspond to the actual economic value that may be received upon exercise of the stock option or any sale of any of the underlying shares of common stock.

(2) As of December 31, 2019, each of our non-employee members of our board of directors held the following aggregate number of unexercised options as of such date:

Name	Number of Securities Underlying Unexercised Options
Alexis Borisy	2,640
Linda A. Hill, Ph.D.	13,024
Douglas S. Ingram	3,256
Christoph Lengauer, Ph.D.	—
Mark Murcko, Ph.D.	10,120
Dipchand (Deep) Nishar	—
Jami Rubin	—
Laura Shawver, Ph.D.	3,960
Steven Kafka, Ph.D.(4)	—

(3) Amount represents consulting fees paid to Dr. Murcko under his consulting agreement described above for consulting services provided in 2019.

(4) Steven Kafka resigned from the board on November 8, 2019.

CERTAIN RELATIONSHIPS AND RELATED PARTY TRANSACTIONS

The following is a description of transactions or series of transactions since January 1, 2017, to which we were or will be a party, in which:

- the amount involved in the transaction exceeds, or will exceed, the lesser of $120,000 or one percent of the average of the Company's total assets for the last two completed fiscal years; and
- in which any of our executive officers, directors or holder of five percent or more of any class of our capital stock, including their immediate family members or affiliated entities, had or will have a direct or indirect material interest.

Compensation arrangements for our named executive officers and our directors are described elsewhere in this prospectus under "Executive Compensation" and "Management—Director Compensation."

Sales of Securities

Series A Convertible Preferred Stock Financing

In August 2016, we sold an aggregate of 56,824,740 shares of our Series A convertible preferred stock at a purchase price of $1.00 per share pursuant to agreements entered into with investors. Each share of our Series A convertible preferred stock will automatically convert into one share of our common stock immediately prior to the completion of this offering. The following table summarizes purchases of our Series A convertible preferred stock by related persons:

Participant	Affiliated Director(s) or Officer(s)	Shares of Series A Preferred Stock	Total Purchase Price ($)
Third Rock Ventures III, L.P.(1)	Christoph Lengauer, Ph.D.	35,404,286	35,404,286
Third Rock Ventures IV, L.P.(2)	Christoph Lengauer, Ph.D.	9,920,455	9,920,455

(1) Third Rock Ventures III, L.P., or TRV III, is an affiliate of Third Rock Ventures, LLC, or TRV, and is a holder of five percent or more of our capital stock. Dr. Lengauer is a Partner at TRV and a member of our board of directors.
(2) Third Rock Ventures IV, L.P., or TRV IV, is an affiliate of TRV and is a holder of five percent or more of our capital stock. Dr. Lengauer is a Partner at TRV and a member of our board of directors.

Series B Preferred Stock Financing

In December 2017, we sold an aggregate of 31,188,115 shares of our Series B convertible preferred stock at a purchase price of $2.02 per share pursuant to agreements entered into with investors. Each share of our Series B convertible preferred stock will automatically convert into one share of our common stock immediately prior to the completion of this offering. The following table summarizes purchases of our Series B preferred stock by related persons:

Participant	Affiliated Director(s) or Officer(s)	Shares of Series B Preferred Stock	Total Purchase Price ($)
Mark Murcko, Ph.D.(1)	—	990,099	2,000,000
Third Rock Ventures III, L.P.(2)	Christoph Lengauer, Ph.D.	61,881	125,000
Third Rock Ventures IV, L.P.(3)	Christoph Lengauer, Ph.D.	61,881	125,000

(1) Mark Murcko, Ph.D., is a cofounder and a member of our board of directors.
(2) TRV III is an affiliate of TRV and is a holder of five percent or more of our capital stock. Dr. Lengauer is a Partner at TRV and a member of our board of directors.

(3) TRV IV is an affiliate of TRV and is a holder of five percent or more of our capital stock. Dr. Lengauer is a Partner at TRV and a member of our board of directors.

Series C Preferred Stock Financing

In December 2018, we sold an aggregate of 124,630,002 shares of our Series C and Series C-1 convertible preferred stock at a purchase price of $3.2095 per share pursuant to agreements entered into with investors. Each share of our Series C and Series C-1 convertible preferred stock will automatically convert into one share of our common stock immediately prior to the completion of this offering. The following table summarizes purchases of our Series C and Series C-1 preferred stock by related persons:

Participant	Affiliated Director(s) or Officer(s)	Shares of Series C Preferred Stock	Shares of Series C-1 Preferred Stock	Total Purchase Price ($)
Alexis Borisy(1)	—	350,000	—	1,123,325
SoftBank Vision Fund (AIV M2) L.P.(2)	Dipchand (Deep) Nishar	14,963,746	78,508,757	300,000,000

(1) Mr. Borisy is a member of our board of directors.
(2) SVF Pauling (Cayman) Limited, an affiliate of SoftBank Vision Fund (AIV M2) L.P., is a holder of five percent or more of our capital stock. Dipchand (Deep) Nishar is a senior managing partner at SoftBank and a member of our board of directors.

Agreements with Our Stockholders

In connection with our preferred stock financings, we entered into an investor rights agreement and stockholders agreement, in each case, with the purchasers of our preferred stock and certain holders of our common stock.

Our second amended and restated investors' rights agreement, as amended, or Investor Rights Agreement, provides certain holders of our preferred stock with a participation right to purchase their pro rata share of new securities that we may propose to sell and issue, subject to certain exceptions. Such participation right will terminate upon the closing of this offering. The Investor Rights Agreement further provides certain holders of our capital stock with the right to demand that we file a registration statement, subject to certain limitations, and to request that their shares be covered by a registration statement that we are otherwise filing. See the section titled "Description of Capital Stock—Registration rights" appearing elsewhere in this prospectus, for additional information regarding such registration rights.

Our second amended and restated stockholders agreement, or Stockholders Agreement, provides for rights of first refusal and co-sale and drag along rights in respect of sales by certain holders of our capital stock. The Stockholders Agreement also contains provisions with respect to the elections of our board of directors and its composition. The rights under the Stockholders Agreement will terminate upon the closing of this offering.

Management and Consulting Services

During the years ended December 31, 2017, 2018 and 2019, we received consulting, advisory and related services from TRV in the amount of $400,000, $100,000, and $200,000, respectively. TRV is a management company that provides services to us and TRV III and TRV IV are the beneficial owners of more than 5% of our voting securities. Dr. Lengauer is a partner at TRV and a member of our board of directors. Alexis Borisy was previously a partner at TRV during the time in which we received services from TRV and Mr. Borisy is currently a member of our board of directors. These consulting fees were paid to TRV in amounts mutually agreed upon in advance by us and TRV in consideration of certain strategic and ordinary course business operations and such services were provided to us on an as-needed basis, from time to time and at our request, by individuals related to

TRV. Such fees were payable pursuant to invoices submitted to us by TRV from time to time. None of these consulting fees were paid directly to Dr. Lengauer or Mr. Borisy. The consulting fees paid to TRV did not exceed 5% of the consolidated gross revenue of TRV during any of these fiscal years.

In January 2018, we entered into a consulting agreement with Mark Murcko, Ph.D., under which we would provide payment to Dr. Murcko in exchange for certain consulting, advisory and related services. During the year ended December 31, 2018, we received consulting, advisory and related services from Dr. Murcko in the amount of $100,000. In June 2019, the consulting agreement with Dr. Murcko was amended and assigned to Disruptive Biomedical, LLC, an entity wholly owned by Dr. Murcko. During the year ended, December 31, 2019, we received consulting, advisory and related services from in the amount of $200,000 from Disruptive Biomedical, LLC. Dr. Murcko is a member of our board of directors. These consulting fees were paid to Dr. Murcko and Disruptive Biomedical, LLC in amounts mutually agreed upon in advance by us and Dr. Murcko and Disruptive Biomedical, LLC in consideration of certain strategic and ordinary course business operations and such services were provided to us on an as-needed basis from time to time and at our requests, with Dr. Murcko devoting at least one working day per week to such services, by Dr, Murcko. Such fees were payable in equal quarterly installments.

Collaboration Agreement

On June 15, 2020, we entered into an amended and restated collaboration and license agreement with D. E. Shaw Research, LLC, or D. E. Shaw Research. We refer to this agreement as the DESRES Agreement. Under the DESRES Agreement, we agreed to collaborate with D. E. Shaw Research to research certain biological targets through the use of D. E. Shaw Research's computational modeling capabilities focused on analysis of protein motion, with an aim to develop and commercialize compounds and products directed to such targets. Picularium is an affiliate of D. E. Shaw Research and is a holder of five percent or more of our capital stock. For more information regarding the DESRES Agreement, see "Business—Collaboration and License Agreement with D. E. Shaw Research, LLC."

Indemnification Agreements

We have entered 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.

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 have adopted a written related party transactions policy that such transactions must be approved by our audit committee. This policy became effective on the date on which the registration statement of which this prospectus is a part was declared effective by the SEC.

PRINCIPAL STOCKHOLDERS

The following table sets forth certain information known to us regarding beneficial ownership of our capital stock as of June 30, 2020, 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 five percent 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. 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.

Each individual or entity shown on the table has furnished information with respect to beneficial ownership. Unless otherwise indicated, the address for each beneficial owner is c/o Relay Therapeutics, Inc., 399 Binney Street, 2nd Floor, Cambridge, MA 02139.

The percentage of beneficial ownership prior to this offering in the table below is based on 66,875,742 shares of common stock deemed to be outstanding as of June 30, 2020, assuming the conversion of all outstanding shares of our preferred stock immediately prior to the completion of this offering, and based on the initial public offering price of $20.00 per share. The percentage of beneficial ownership after this offering in the table below is based on 86,875,742 shares of common stock assumed to be outstanding after the closing of the offering. The information in the table below assumes no exercise of the underwriters' option to purchase additional shares.

The following table also does not include any shares of common stock that directors and executive officers may purchase in this offering through the directed share program described under "Underwriting."

Name of Beneficial Owner	Number of Shares Beneficially Owned	Percentage of Shares Outstanding Beneficially Owned	
		Before Offering	After Offering
Entities affiliated with Third Rock Ventures(1)	13,362,312	19.98%	15.38%
SVF Pauling (Cayman) Limited(2)	27,904,963	41.73%	32.12%
Named Executive Officers and Directors:			
Sanjiv K. Patel, M.D.(3)	1,549,103	2.31%	1.78%
Donald Bergstrom, M.D., Ph.D.(4)	252,574	*	*
Brian R. Adams(5)	112,029	*	*
Alexis Borisy(6)	115,047	*	*
Linda A. Hill, Ph.D.(7)	24,112	*	*
Douglas S. Ingram(8)	9,768	*	*
Christoph Lengauer, Ph.D.(9)	14,080	*	*
Mark Murcko, Ph.D.(10)	1,011,470	1.51%	*
Dipchand (Deep) Nishar	—	—	—
Jami Rubin(11)	7,920	*	*%
Laura Shawver, Ph.D.(12)	58,697	*	*%
All executive officers and directors as a group (12 persons)(13)	3,245,269	4.81%	3.73%

* Less than one percent.

(1) Consists of (i) 563,234 shares of common stock, (ii) 9,970,454 shares of common stock issuable upon conversion of shares of Series A preferred stock held by Third Rock Ventures III, L.P., or TRV III LP, (iii) 2,793,770 shares of common stock issuable upon conversion of shares of Series A preferred stock held by Third Rock Ventures IV, L.P., or TRV IV LP, (iv) 17,427 shares of common stock issuable upon conversion of shares of Series B preferred stock held by TRV III LP and (v) 17,427 shares of common stock issuable upon conversion of shares of Series B preferred stock held by TRV IV LP. Each of Third Rock Ventures III GP, LP, or TRV III GP, the general partner of TRV III LP, Third Rock Ventures GP III, LLC, or TRV III LLC, the general partner of TRV III GP, and Mark Levin, Kevin Starr and Dr. Tepper, the managers of TRV II LLC, may be deemed to share voting and investment power over the shares held of record by TRV III LP. Each of Third Rock Ventures III GP, LP, or TRV III GP, the general partner of TRV III LP, and Third Rock Ventures GP III, LLC, TRV III LLC, the general partner of TRV III GP, and Mark Levin, Kevin Starr and Dr. Tepper, the managers of TRV III LLC, may be deemed to share voting and investment power over the shares held of record by TRV III LP. The general partner of TRV IV is Third Rock Ventures GP IV, L.P., or TRV GP IV LP. The general partner of TRV GP IV LP is TRV GP IV, LLC, or TRV GP IV LLC. Abbie Celniker, Ph.D., Robert Tepper, M.D., Craig Muir and Cary Pfeffer, M.D. are the managing members of TRV GP IV LLC who collectively make voting and investment decisions with respect to shares held by TRV IV. Dr. Lengauer is a partner at Third Rock Ventures, LLC, and a member of our board of directors. The address for each of TRV III LP and TRV IV LP is 29 Newbury Street, Suite 401, Boston, MA 02116.

(2) Consists of 27,904,963 shares of common stock issuable upon the conversion of Series C Preferred Stock held by SVF Pauling (Cayman) Limited, a wholly owned subsidiary of SoftBank Vision Fund (AIV M2) L.P., or SVF. SVF GP (Jersey) Limited, or SVF GP, is the general partner of SVF. SB Investment Advisers (UK) Limited, or SBIA UK, has been appointed as alternative investment fund manager, or AIFM, and is exclusively responsible for managing SVF in accordance with the Alternative Investment Fund Managers Directive and is authorized and regulated by the UK Financial Conduct Authority accordingly. As AIFM of SVF, SBIA UK is exclusively responsible for making all decisions related to the acquisition, structuring, financing, voting and disposal of SVF's investments. SVF GP and SBIA UK are both wholly owned by SoftBank Group Corp. Mr. Nishar, a member of our board of directors, is a Senior Managing Partner at SB Investment Advisers (U.S.) Inc., an affiliate of SBIA UK, but does not have voting or investment power over the shares held by SVF. The address of SVF is 251 Little Falls Drive, Wilmington, Delaware 19808.

(3) Consists of (i) 378,082 shares of common stock held by Dr. Patel, (ii) 524,548 shares of common stock held by The Patel Family Irrevocable Trust of 2019, (iii) 432,801 shares of common stock held by The SSP Irrevocable Trust of 2020 and (iv) 904,779 shares subject to options held by Dr. Patel, of which 213,672 are vested and exercisable within 60 days of June 30, 2020.

(4) Consists of (i) 98,566 shares of common stock held by Dr. Bergstrom and (ii) 394,264 shares subject to options held by Dr. Bergstrom, of which 154,008 are vested and exercisable within 60 days of June 30, 2020.

(5) Consists of 221,069 shares subject to options held by Mr. Adams, of which 112,029 are vested and exercisable within 60 days of June 30, 2020.

(6) Consists of (i) 104,487 shares of common stock issuable upon the conversion of Series C Preferred Stock held by Mr. Borisy and (ii) 42,242 shares subject to options held by Mr. Borisy, of which 10,560 are vested and exercisable within 60 days of June 30, 2020.

(7) Consists of 59,139 shares subject to options held by Dr. Hill, of which 24,112 are vested and exercisable within 60 days of June 30, 2020.

(8) Consists of 59,139 shares subject to options held by Mr. Ingram, of which 9,768 are vested and exercisable within 60 days of June 30, 2020.

(9) Consists of 14,080 shares of common stock held by Dr. Lengauer.

(10) Consists of (i) 436,506 shares of common stock held by Dr. Murcko, (ii) 281,617 shares of shares of common stock issuable upon the conversion of Series A Preferred Stock held by Dr. Murcko, (iii) 278,829 shares of common stock issuable upon the conversion of Series B Preferred Stock held by Dr. Murcko and (iv) 35,200 shares subject to options held by Dr. Murcko, of which 14,518 are vested and exercisable within 60 days of June 30, 2020.

(11) Consists of 42,242 shares subject to options held by Ms. Rubin, of which 7,920 are vested and exercisable within 60 days of June 30, 2020.
(12) Consists of (i) 52,099 shares of common stock held by Dr. Shawver and (ii) 21,120 shares subject to options held by Dr. Shawver, of which 6,598 are vested and exercisable within 60 days of June 30, 2020.
(13) See notes 3 through 12 above; also includes 185,866 shares subject to options held by Thomas Catinazzo, who is our principal financial and accounting officer, but not named executive officer, of which 90,469 are vested and exercisable within 60 days of June 30, 2020.

DESCRIPTION OF CAPITAL STOCK

The following descriptions are summaries of the material terms of our fourth amended and restated certificate of incorporation, which will be effective upon the closing of this offering and amended and restated bylaws, which became effective upon the effectiveness of the registration statement of which this prospectus is a part. The descriptions of the common stock and preferred stock give effect to changes to our capital structure that will occur immediately prior to the completion of this offering. We refer in this section to our fourth amended and restated certificate of incorporation as our certificate of incorporation, and we refer to our amended and restated bylaws as our bylaws.

General

Upon completion of this offering, our authorized capital stock will consist of 150,000,000 shares of common stock, par value $0.001 per share, and 10,000,000 shares of preferred stock, par value $0.001 per share, all of which shares of preferred stock will be undesignated.

As of June 30, 2020, 66,875,742 shares of our common stock were outstanding and held by 61 stockholders of record. This amount assumes the conversion of all outstanding shares of our preferred stock into common stock, which will occur immediately prior to the closing 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 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 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.

Preferred stock

Immediately prior to the completion of this offering, all outstanding shares of our 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 10,000,000 shares of preferred stock in one or more series and to fix the rights, preferences, privileges and restrictions thereof. These rights, preferences and privileges could include dividend rights, conversion rights, voting rights, 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 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 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 preferred stock will be outstanding, and we have no present plan to issue any shares of preferred stock.

Registration rights

Upon the completion of this offering, the holders of 61,992,534 shares of our common stock, constituting those issuable upon the conversion of preferred stock, will be entitled to rights with respect to the registration of these

securities under the Securities Act. These rights are provided under the terms of our Investor Rights Agreement between us and the holders of our preferred stock. The Investor 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 six months after the completion of this offering, the holders of 61,992,534 shares of our common stock, constituting those issuable upon the conversion of shares of our preferred stock upon closing of this offering, will be entitled to demand registration rights. Under the terms of the Investor Rights Agreement, we will be required, upon the written request of a majority of holders of the registrable securities then outstanding that would result in an aggregate offering price of at least $7.5 million, to file a registration statement and to use commercially reasonable efforts to effect the registration of all or a portion of these shares for public resale.

Short-form registration rights

Upon the completion of this offering, the holders of 61,992,534 shares of our common stock, constituting those issuable upon the conversion of shares of our preferred stock upon closing of this offering, are also entitled to short-form registration rights. Pursuant to the Investor Rights Agreement, if we are eligible to file a registration statement on Form S-3, upon the written request of at least 10% in interest of these holders to sell registrable securities at an aggregate price of at least $1.0 million, we will be required to use commercially reasonable efforts to effect a registration of such shares. We are required to effect only two registrations in any twelve-month period pursuant to this provision of the investor rights agreement.

Piggyback registration rights

Upon the completion of this offering, the holders of 61,992,534 shares of our common stock, constituting those issuable upon the conversion of shares of our preferred stock upon closing of this offering, are entitled to piggyback registration rights. If we register any of our securities either for our own account or for the account of other security holders, the holders of these shares are entitled to include their shares in the registration. Subject to certain exceptions contained in the Investor 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.

Indemnification

Our investor 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 under the Investor Rights Agreement will terminate on the fifth anniversary of the completion of this offering.

Anti-takeover effects of our certificate of incorporation and bylaws and Delaware Law

Our certificate of incorporation and bylaws 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 certificate of incorporation 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 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 certificate of incorporation provides that all stockholder actions are required to be taken by a vote of the stockholders at an annual or special meeting, and that stockholders may not take any action by written consent in lieu of a meeting. This limit may lengthen the amount of time required to take stockholder actions and would prevent the amendment of our bylaws or removal of directors by our stockholders without holding a meeting of stockholders.

Meetings of stockholders

Our certificate of incorporation and bylaws 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 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 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 certificate of incorporation and bylaws

Any amendment of our certificate of incorporation must first be approved by a majority of our board of directors, and if required by law or our 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, and limitation of liability 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 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 bylaws; and may also be amended by the affirmative vote of a majority of the outstanding shares entitled to vote on the amendment, voting together as a single class, except that the amendment of the provisions relating to notice of stockholder business and nominations and special meetings 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, 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 certificate of incorporation provides for 10,000,000 authorized shares of preferred stock. The existence of authorized but unissued shares of 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 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 certificate of incorporation grants our board of directors broad power to establish the rights and preferences of authorized and unissued shares of preferred stock. The issuance of shares of preferred stock could decrease the amount of earnings and assets available for distribution to holders of shares of common stock. The issuance may also adversely affect the rights and powers, including voting rights, of these holders and may have the effect of delaying, deterring or preventing a change in control of us.

Choice of Forum

Our by-laws provide that, unless we consent in writing to the selection of an alternative form, the Court of Chancery of the State of Delaware (or, if the Chancery Court does not have jurisdiction, the federal district court for the District of Delaware or other state courts of the State of Delaware) will be the sole and exclusive forum for: (1) any derivative action or proceeding brought on our behalf; (2) 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; (3) any action asserting a claim against us arising pursuant to any provision of the General Corporation Law of the State of Delaware or our certificate of incorporation or by-laws; (4) any action to interpret, apply, enforce or determine the validity of our certificate of incorporation or by-laws; or (5) any action asserting a claim governed by the internal affairs doctrine. Our by-laws of incorporation also provide that any person or entity purchasing or otherwise acquiring any interest in shares of our capital stock will be deemed to have notice of and to have consented to this choice of forum provision. It is possible that a court of law could rule that the choice of forum provision contained in our restated certificate of incorporation is inapplicable or unenforceable if it is challenged in a proceeding or otherwise.

In addition, our by-laws provide that, unless we consent in writing to the selection of an alternative forum, the United States District Court in the District of Massachusetts will be the exclusive forum for any private action asserting violations by us or any of our directors or officers of the Securities Act or the Exchange Act, or the rules and regulations promulgated thereunder, and of all suits in equity and actions at law brought to enforce any liability or duty created by those statutes or the rules and regulations under such statutes. If any action the subject matter of which is within the scope of the preceding sentence is filed in a court other than the United States District of Massachusetts, the plaintiff or plaintiffs shall be deemed by this provision of the bylaws (i) to have consented to removal of the action by us to the United States District Court in the District of Massachusetts, in the case of an action filed in a state court, and (ii) to have consented to transfer of the action to the United States District Court in the District of Massachusetts.

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.

Nasdaq Global Market listing

We have been approved to list our common stock on the Nasdaq Global Market under the trading symbol “RLAY.”

Transfer agent and registrar

The transfer agent and registrar for our common stock will be Computershare Trust Company, N.A. The transfer agent and registrar’s address is 250 Royall Street, Canton, Massachusetts 02021, and its telephone number is (800) 962-4284.

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 June 30, 2020, upon the completion of this offering, 86,875,742 shares of our common stock will be outstanding, assuming no exercise of the underwriters' option to purchase additional shares and no exercise of outstanding options. 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, and 290,477 shares of our common stock are restricted shares of common stock subject to time-based vesting terms.

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 815,757 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 June 30, 2020; or
- the average weekly trading volume of our common stock on the Nasdaq Global Market during the four calendar weeks preceding the filing of a notice on Form 144 with respect to 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, all of our directors and executive officers, and the holders of substantially all of our capital stock and securities convertible into or exchangeable for our capital stock have entered into lock-up agreements with the

underwriters and/or are subject to market standoff agreements or other agreements with us, which prevents 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 representatives, subject to certain exceptions. See the section entitled “Underwriting” 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.

MATERIAL U.S. FEDERAL INCOME TAX CONSIDERATIONS FOR NON-U.S. HOLDERS OF COMMON STOCK

The following discussion is a summary of material U.S. federal income tax considerations 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, for U.S. federal income tax purposes:

- a non-resident alien individual;
- a foreign corporation or any other foreign organization taxable as a corporation for U.S. federal income tax purposes; or
- a foreign estate or trust, the income of which is not subject to U.S. federal income tax on a net income basis.

This discussion does not address the tax treatment of partnerships or other entities or arrangements that are treated as pass-through entities for U.S. federal income tax purposes or persons that hold their shares of our common stock through partnerships or such other pass-through entities. The tax treatment of a partner in a partnership or other entity or arrangement that is treated as a pass-through entity for U.S. federal income tax purposes generally will depend upon the status of the partner and the activities of the partnership. A partner in a partnership or an investor in any other pass-through entity that will hold our common stock should consult his, her or its tax advisor regarding the tax consequences of acquiring, 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, or 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, which is 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, the Medicare tax on net investment income or the rules relating to "qualified small business stock." Any U.S. federal tax other than the income tax (including, for example, the estate tax), and it does not nor does it address any aspects of U.S. state, local or non-U.S. taxes. 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:

1. insurance companies;
2. tax-exempt or governmental organizations;
3. financial institutions;
4. brokers or dealers in securities;
5. regulated investment companies;
6. pension plans;
7. "controlled foreign corporations," "passive foreign investment companies," and corporations that accumulate earnings to avoid U.S. federal income tax;
8. "qualified foreign pension funds," or entities wholly owned by a "qualified foreign pension fund";

9. partnerships or other entities or arrangements treated as partnerships for U.S. federal income tax purposes (and partners and investors therein);
10. persons that have a functional currency other than the U.S. dollar;
11. persons deemed to sell our common stock under the constructive sale provisions of the Code;
12. persons that hold our common stock as part of a straddle, hedge, conversion transaction, synthetic security or other integrated investment;
13. persons that hold or receive our common stock pursuant to the exercise of any employee stock option or otherwise as compensation;
14. investors in pass-through entities (or entities that are treated as disregarded entities for U.S. federal income tax purposes); and
15. 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, estate and non-U.S. tax consequences of the purchase, ownership and disposition of our common stock.

Distributions on our common stock

As described in the "Dividend Policy" section above, we do not intend to pay any cash dividends on our common stock to our stockholders stock in the foreseeable future. Distributions, if any, on shares of our common stock generally 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 shares of 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 shares of common stock." Any such distributions will also be subject to the discussion below under the section titled "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 specified by an applicable income tax treaty between the United States and such holder's country of residence.

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. 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 United States 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 specified by an applicable income tax treaty between the United States and such holder's country of residence.

A non-U.S. holder of shares of our common stock 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 a successor form) to the applicable withholding agent and satisfy applicable certification and other requirements. Non-U.S. holders are urged to consult their tax advisors regarding their entitlement to benefits under a relevant income tax treaty. A non-U.S. holder that is eligible for a reduced rate of U.S. withholding tax under an income tax treaty may obtain a refund or credit of any excess amounts withheld by timely filing an appropriate claim with the IRS.

Gain on sale, exchange or other taxable disposition of shares of our common stock

Subject to the discussion below under "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, exchange or other taxable disposition of shares of our common stock unless:

1. 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 graduated 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;

2. the non-U.S. holder is a nonresident alien individual who is present in the United States for a period or periods aggregating 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 net 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

3. 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, within the meaning of the relevant provisions of the Code, and the non-U.S. holder holds no more than 5% of our outstanding common stock, directly or indirectly, actually or constructively, during the shorter of the five-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" (as defined in the Code and applicable U.S. Treasury regulations) 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" for U.S. federal income tax purposes, 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.

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 shares of 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 United States person (as defined in the Code) in order to avoid backup withholding at the applicable rate with respect to dividends on shares of our common stock. Generally, a non-U.S. holder will comply with such procedures if it provides a properly executed IRS Form W-8BEN or W-8BEN-E (or other applicable IRS Form W-8), or otherwise meets documentary evidence requirements for establishing that it is a non-U.S. holder, or otherwise establishes an exemption. 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 shares of our common stock by a non-U.S. holder effected by or through the U.S. office of any broker, U.S. or non-U.S., 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

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. Such withholding may also apply to payments of gross proceeds of sales or other dispositions of shares of our common stock, although under proposed U.S. Treasury regulations (the preamble to which specifies that taxpayers, including withholding agents, are generally permitted to rely on them pending finalization), no withholding will apply to payments of gross proceeds. 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 shares of 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, Cowen and Company, LLC and Guggenheim Securities, 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	6,800,000
Goldman Sachs & Co. LLC	6,800,000
Cowen and Company, LLC	4,400,000
Guggenheim Securities, LLC	2,000,000
Total	20,000,000

The underwriters are committed to purchase all the shares of common stock 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 offering of the shares by the underwriters is subject to receipt and acceptance, and is also subject to the underwriters' right to reject any order in whole or in part.

The underwriters propose to offer the shares of 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 $0.84 per share. 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. Sales of any shares made outside of the United States may be made by affiliates of the underwriters.

The underwriters have an option to buy up to 3,000,000 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 fee 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 fee is $1.40 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 option to purchase additional shares exercise	With full option to purchase additional shares exercise
Per Share	$ 1.40	$ 1.40
Total	$ 28,000,000	$ 32,200,000

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 $3.0 million. We have agreed to reimburse the underwriters for expenses relating to the clearance of this offering with the Financial Industry Regulatory Authority, Inc. in an amount up to $40,000.

At our request, the underwriters have reserved up to 441,000 shares, or 2.2% of the shares being offered by this prospectus, for sale, at the initial public offering price, to certain of our directors, officers, employees and persons having business relationships with us. If these persons purchase reserved shares, this will reduce the number of shares available for sale to the general public. Any reserved shares that are not so purchased will be offered by the underwriters to the general public on the same terms as the other shares offered by this prospectus. Any shares sold in the directed share program to our directors or officers who have entered into lock-up agreements described below shall be subject to the provisions of such lock-up agreements.

A prospectus in electronic format may be made available on the web sites 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 (i) offer, pledge, sell, contract to sell, sell any option or contract to purchase, purchase any option or contract to sell, grant any option, right or warrant to purchase, lend or otherwise transfer or dispose of, directly or indirectly, or submit to, or file with, the SEC a registration statement under the Securities Act relating to, any shares of our common stock or securities convertible into or exercisable or exchangeable for any shares of our common stock, or publicly disclose the intention to make any offer, sale, pledge, loan, disposition or filing, or (ii) 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, other than the shares of our common stock to be sold in this offering.

Our directors and executive officers, and substantially all of our shareholders (such persons, the “lock-up parties”) have entered into lock-up agreements with the underwriters prior to the commencement of this offering pursuant to which each lock-up party, with limited exceptions, for a period of 180 days after the date of this prospectus (such period, the “restricted period”), may not (and may not cause any of their direct or indirect affiliates to), without the prior written consent of J.P. Morgan Securities LLC and Goldman Sachs & Co. LLC, (1) offer, pledge, sell, contract to sell, sell any option or contract to purchase, purchase any option or contract to sell, grant any option, right or warrant to purchase, lend or otherwise transfer or dispose of, directly or indirectly, any 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 lock-up parties in accordance with the rules and regulations of the SEC and securities which may be issued upon exercise of a stock option or warrant (collectively with the common stock, the “lock-up securities”)), (2) enter into any hedging, swap or other agreement or transaction that transfers, in whole or in part, any of the economic consequences of ownership of the lock-up securities, whether any such transaction described in clause (1) or (2) above is to be settled by delivery of lock-up securities, in cash or otherwise, (3) make any demand for, or exercise any right with respect to, the registration of any lock-up securities, or (4) publicly disclose the intention to do any of the foregoing. Such persons or entities have further acknowledged that these undertakings preclude them from engaging in any hedging or other transactions or arrangements (including, without limitation, any short sale or the purchase or sale of, or entry into, any put or call option, or combination thereof, forward, swap or any other derivative transaction or instrument, however described or defined) designed or intended, or which could reasonably be expected to lead to or result in, a sale or disposition or transfer (by any person or entity, whether or not a signatory to such agreement) of any economic

consequences of ownership, in whole or in part, directly or indirectly, of any lock-up securities, whether any such transaction or arrangement (or instrument provided for thereunder) would be settled by delivery of lock-up securities, in cash or otherwise.

The restrictions described in the immediately preceding paragraph and contained in the lock-up agreements between the underwriters and the lock-up parties do not apply, subject in certain cases to various conditions, to certain transactions, including (a) transfers of lock-up securities: (i) as a bona fide gift or gifts, or for bona fide estate planning purposes, (ii) by will or intestacy, (iii) to any trust for the direct or indirect benefit of the lock-up party or any immediate family member of the lock-up party, or, if the lock-up party is a trust, to a trustor or beneficiary of the trust or to the estate of a beneficiary of such trust, (iv) to a partnership, limited liability company or other entity of which the lock-up party and its immediate family members are the legal and beneficial owner of all of the outstanding equity securities or similar interests, (v) to a nominee or custodian of a person or entity to whom a disposition or transfer would be permissible under clauses (i) through (iv), (vi) in the case of a corporation, partnership, limited liability company, trust or other business entity, (A) to another corporation, partnership, limited liability company, trust or other business entity that is an affiliate of the lock-up party, or to any investment fund or other entity controlling, controlled by, managing or managed by or under common control with the lock-up party or its affiliates or (B) as part of a distribution to members or stockholders of the lock-up party; (vii) by operation of law, (viii) to us from an employee upon death, disability or termination of employment of such employee, (ix) as part of a sale of lock-up securities acquired in open market transactions after the completion of this offering, (x) to us in connection with the vesting, settlement or exercise of restricted stock units, options, warrants or other rights to purchase shares of our common stock (including “net” or “cashless” exercise), including for the payment of exercise price and tax and remittance payments, or (xi) pursuant to a bona fide third-party tender offer, merger, consolidation or other similar transaction approved by our board of directors and made to all shareholders involving a change in control, provided that if such transaction is not completed, all such lock-up securities would remain subject to the restrictions in the immediately preceding paragraph; (b) exercise of the options, settlement of RSUs or other equity awards, or the exercise of warrants granted pursuant to plans described in this prospectus, provided that any lock-up securities received upon such exercise, vesting or settlement would be subject to restrictions similar to those in the immediately preceding paragraph; (c) the conversion of outstanding preferred stock, warrants to acquire preferred stock, or convertible securities into shares of our common stock or warrants to acquire shares of our common stock, provided that any common stock or warrant received upon such conversion would be subject to restrictions similar to those in the immediately preceding paragraph; and (d) the establishment by lock-up parties of trading plans under Rule 10b5-1 under the Exchange Act, provided that such plan does not provide for the transfer of lock-up securities during the restricted period.

J.P. Morgan Securities LLC and Goldman Sachs & Co. LLC, in their sole discretion, may release the securities subject to any of the lock-up agreements with the underwriters described above, in whole or in part at any time.

We have agreed to indemnify the underwriters against certain liabilities, including liabilities under the Securities Act.

We have been approved to have our common stock approved for listing on the Nasdaq Global Market under the symbol “RLAY.”

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 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 the Nasdaq Global Market, 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 has been 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.

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 trade 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 and the United Kingdom

In relation to each member state of the European Economic Area and the United Kingdom (each, a "Relevant State"), no shares have been offered or will be offered pursuant to the offering to the public in that Relevant State prior to the publication of a prospectus in relation to the shares which has been approved by the competent authority in that Relevant State or, where appropriate, approved in another Relevant State and notified to the competent authority in that Relevant State, all in accordance with the Prospectus Regulation), except that offers of shares may be made to the public in that Relevant State at any time under the following exemptions under the Prospectus Regulation:

(i) to any legal entity which is a qualified investor as defined under the Prospectus Regulation;

(ii) to fewer than 150 natural or legal persons (other than qualified investors as defined under the Prospectus Regulation), subject to obtaining the prior consent of the underwriters for any such offer; or

(iii) in any other circumstances falling within Article 1(4) of the Prospectus Regulation,

provided that no such offer of shares shall require the Company or any underwriter to publish a prospectus pursuant to Article 3 of the Prospectus Regulation or supplement a prospectus pursuant to Article 23 of the Prospectus Regulation.

For the purposes of this provision, the expression an "offer to the public" in relation to any shares in any Relevant State means the communication in any form and by any means of sufficient information on the terms of the offer and any shares to be offered so as to enable an investor to decide to purchase or subscribe for any shares, and the expression "Prospectus Regulation" means Regulation (EU) 2017/1129. References to the Prospectus Regulation includes, in relation to the United Kingdom, the Prospectus Regulation as it forms part of United Kingdom domestic law by virtue of the European Union (Withdrawal) Act 2018.

Notice to Prospective Investors in the United Kingdom

This document is for distribution only to persons who (i) have professional experience in matters relating to investments and who qualify as investment professionals within the meaning of Article 19(5) of the Financial

Services and Markets Act 2000 (Financial Promotion) Order 2005 as amended the "Financial Promotion Order", (ii) are persons falling within Article 49(2)(a) to (d) ("high net worth companies, unincorporated associations etc.") of the Financial Promotion Order, (iii) are outside the United Kingdom, or (iv) are persons to whom an invitation or inducement to engage in investment activity (within the meaning of Section 21 of the Financial Services and Markets Act 2000, as amended, or FSMA) in connection with the issue or sale of any securities may otherwise lawfully be communicated or caused to be communicated (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 FSMA.

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.

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 (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 (SIX), or on any other stock exchange or regulated trading facility in Switzerland. This document does not constitute a prospectus within the meaning of, and 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 the offering, the 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 FINMA, and the offer of shares has not been and will not be authorized under the Swiss Federal Act on Collective Investment Schemes (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 document relates to an Exempt Offer in accordance with the Markets Rules 2012 of the Dubai Financial Services Authority (DFSA). This document is intended for distribution only to persons of a type specified in the Markets Rules 2012 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 supplement nor taken steps to verify the information set forth herein and has no responsibility for this document. The securities to which this document relates may be illiquid and/or subject to restrictions on their resale. Prospective purchasers of the securities offered should conduct their own due diligence on the securities. If you do not understand the contents of this document you should consult an authorized financial advisor.

In relation to its use in the Dubai International Financial Centre (DIFC), this document is strictly private and confidential and is being distributed to a limited number of investors and must not be provided to any person other than the original recipient, and may not be reproduced or used for any other purpose. The interests in the securities may not be offered or sold directly or indirectly to the public in the DIFC.

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 disclosure document or a prospectus under Chapter 6D.2 of the Corporations Act 2001 (Cth) (the Corporations Act);
- has not been, and will not be, lodged with the Australian Securities and Investments Commission (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 for the purposes of the Corporations Act; 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, available under section 708 of the Corporations Act (Exempt Investors).

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 shares 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 (1) to "professional investors" as defined in the Securities and Futures Ordinance (Cap. 571 of the Laws of Hong Kong) (the SFO), of Hong Kong and any rules made thereunder; or (2) in other circumstances which do not result in the document being a "prospectus" as defined in the Companies (Winding Up and Miscellaneous Provisions) Ordinance (Cap. 32) of Hong Kong (the CO), or which do not constitute an offer to the public within the meaning of the CO. 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 thereunder.

Notice to prospective investors in Singapore

Each representative has acknowledged that this prospectus has not been registered as a prospectus with the Monetary Authority of Singapore. Accordingly, each representative has represented and agreed that it has not offered or sold any shares or caused the shares to be made the subject of an invitation for subscription or purchase and will not offer or sell any shares or cause the shares to be made the subject of an invitation for subscription or purchase, and has not circulated or distributed, nor will it circulate or distribute, this prospectus or any other document or material in connection with the offer or sale, or invitation for subscription or purchase, of the shares, whether directly or indirectly, to any person in Singapore other than:

(1) to an institutional investor (as defined in Section 4A of the Securities and Futures Act (Chapter 289) of Singapore, as modified or amended from time to time (the SFA)) pursuant to Section 274 of the SFA;

(2) to a relevant person (as defined in Section 275(2) of the SFA) pursuant to Section 275(1) of the SFA, or any person pursuant to Section 275(1A) of the SFA, and in accordance with the conditions specified in Section 275 of the SFA; or

(3) 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:

(1) 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

(2) 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 or securities-based derivatives contracts (each term as defined in Section 2(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, 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 37A of the Securities and Futures (Offers of Investments) (Securities and Securities-based Derivatives Contracts) Regulations 2018.

Singapore SFA Product Classification—In connection with Section 309B of the SFA and the CMP Regulations 2018, unless otherwise specified before an offer of the shares, we have determined, and hereby notify all relevant persons (as defined in Section 309A(1) of the SFA), that the shares are "prescribed capital markets products" (as defined in the CMP Regulations 2018) and Excluded Investment Products (as defined in MAS Notice SFA 04-N12: Notice on the Sale of Investment Products and MAS Notice FAA-N16: Notice on Recommendations on Investment Products).

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 (CMA) pursuant to resolution number 2-11-2004 dated 4 October 2004 as amended by resolution number 1-28-2008, as amended. 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 authorized 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 us. The shares may be offered to companies incorporated under the BVI Business Companies Act, 2004 (British Virgin Islands) (BVI Companies), but only where the offer will be made to, and received by, the relevant BVI Company entirely outside of the British Virgin Islands.

Notice to prospective investors in China

This prospectus will not be circulated or distributed in the PRC and the shares will not be offered or sold, and will not be offered or sold to any person for re-offering or resale directly or indirectly to any residents of the PRC

except pursuant to any applicable laws and regulations of the PRC. Neither this prospectus nor any advertisement or other offering material may be distributed or published in the PRC, except under circumstances that will result in compliance with applicable laws and regulations.

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 (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 (the FETL). The shares have not been listed on any of the securities exchanges in the world including, without limitation, the Korea Exchange in Korea. 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 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 License; (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 twelve 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 twelve 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 License 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 authorized 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, 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) (the South African Companies Act)) is being made in connection with the issue of the shares in South Africa. 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. 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 stipulated in Section 96(1) applies:

Section 96(1)(a) the offer, transfer, sale, renunciation or delivery is to:

(1) persons whose ordinary business, or part of whose ordinary business, is to deal in securities, as principal or agent;

(2) the South African Public Investment Corporation;

(3) persons or entities regulated by the Reserve Bank of South Africa;

(4) authorised financial service providers under South African law;

(5) financial institutions recognised as such under South African law;

(6) a wholly-owned subsidiary of any person or entity contemplated in (3), (4) or (5), acting as agent in the capacity of an authorized portfolio manager for a pension fund, or as manager for a collective investment scheme (in each case duly registered as such under South African law); or

(7) any combination of the persons in (1) to (6); or

Section 96(1)(b) the total contemplated acquisition cost of the securities, for a single addressee acting as principal is equal to or greater than ZAR1,000,000 or such higher amount as may be promulgated by notice in the Government Gazette of South Africa pursuant to section 96(2)(a) of the South African Companies Act.

Information made available in this prospectus should not be considered as "advice" as defined in the South African Financial Advisory and Intermediary Services Act, 2002.

Notice to prospective investors in Israel

This document does not constitute a prospectus under the Israeli Securities Law, 5728-1968, and has not been filed with or approved by the Israel Securities Authority. In Israel, this prospectus is being distributed only to, and is directed only at, qualified investors listed in the first addendum, or the Addendum, to the Israeli Securities Law. Qualified investors may be required to submit written confirmation that they fall within the scope of the Addendum. In addition, we may distribute and direct this document in Israel, at our sole discretion, to investors who are not considered qualified investors, provided that the number of such investors in Israel shall be no greater than 35 in any 12-month period.

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. Certain legal matters related to this offering will be passed upon for the underwriters by Ropes & Gray LLP, Boston, Massachusetts.

EXPERTS

Ernst & Young LLP, independent registered public accounting firm, has audited our consolidated financial statements at December 31, 2018 and December 31, 2019, and for each of the two years in the period ended December 31, 2019, as set forth in their report. We've included our financial statements in the prospectus and elsewhere in the registration statement in reliance on Ernst & Young LLP's report, given on their authority as experts in accounting and auditing.

WHERE YOU CAN FIND MORE INFORMATION

We have filed with the SEC a registration statement on Form S-1 (File Number 333-239412) 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. We also maintain a website at www.relaytx.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 reported 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.

Index to Consolidated Financial Statements

REPORT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

To the Stockholders and the Board of Directors of Relay Therapeutics, Inc.

Opinion on the Financial Statements

We have audited the accompanying consolidated balance sheets of Relay Therapeutics, Inc. (the Company) as of December 31, 2018 and 2019, the related consolidated statements of operations and comprehensive loss, convertible preferred stock and stockholders' equity (deficit), and cash flows for each of the two years in the period ended December 31, 2019, 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 2019, and the results of its operations and its cash flows for each of the two years in the period ended December 31, 2019 in conformity with U.S. generally accepted accounting principles.

Basis for Opinion

These financial statements are the responsibility of the Company's management. Our responsibility is to express an opinion on the Company's financial statements based on our audits. We are a public accounting firm registered with the Public Company Accounting Oversight Board (United States) (PCAOB) and are required to be independent with respect to the Company in accordance with the U.S. federal securities laws and the applicable rules and regulations of the Securities and Exchange Commission and the PCAOB.

We conducted our audits in accordance with the standards of the PCAOB. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements are free of material misstatement, whether due to error or fraud. The Company is not required to have, nor were we engaged to perform, an audit of its internal control over financial reporting. As part of our audits we are required to obtain an understanding of internal control over financial reporting but not for the purpose of expressing an opinion on the effectiveness of the Company's internal control over financial reporting. Accordingly, we express no such opinion.

Our audits included performing procedures to assess the risks of material misstatement of the financial statements, whether due to error or fraud, and performing procedures that respond to those risks. Such procedures included examining, on a test basis, evidence regarding the amounts and disclosures in the financial statements. Our audits also included evaluating the accounting principles used and significant estimates made by management, as well as evaluating the overall presentation of the financial statements. We believe that our audits provide a reasonable basis for our opinion.

/s/ Ernst & Young LLP

We have served as the Company's auditor since 2017.

Boston, Massachusetts
May 22, 2020, except for Notes 17(e) and (f) as to which the date is July 9, 2020

Relay Therapeutics, Inc.
Consolidated Balance Sheets
(In thousands, except share and per share amounts)

	December 31, 2018	December 31, 2019	March 31, 2020	Pro forma March 31, 2020
			(unaudited)	
Assets				
Current assets:				
Cash and cash equivalents	$ 421,505	$ 41,954	$ 70,342	$ 70,342
Investments	—	313,862	263,861	263,861
Prepaid expenses and other current assets	2,597	4,720	4,459	4,459
Total current assets	424,102	360,536	338,662	338,662
Property and equipment, net	3,492	8,094	7,561	7,561
Operating lease assets	139	23,560	23,173	23,173
Restricted cash	878	878	878	878
Total assets	$ 428,611	$ 393,068	$ 370,274	$ 370,274
Liabilities, Convertible Preferred Stock, and Stockholders' Equity (Deficit)				
Current liabilities:				
Accounts payable	$ 4,705	$ 6,991	$ 3,958	$ 3,958
Accrued expenses and other current liabilities	1,982	3,746	6,278	6,278
Operating lease liability	178	1,249	1,308	1,308
Total current liabilities	6,865	11,986	11,544	11,544
Operating lease liability, net of current portion	—	23,583	23,242	23,242
Restricted stock liability	553	156	58	58
Total liabilities	7,418	35,725	34,844	34,844
Commitments and contingencies (Note 13)				
Convertible preferred stock (Series A, B and C), $0.001 par value; 337,272,859 shares authorized at December 31, 2018 and 2019 and March 31, 2020 (unaudited); 210,863,764, 212,642,857, 212,642,857 and no shares issued and outstanding at December 31, 2018, December 31, 2019, March 31, 2020 actual and pro forma (unaudited), respectively (aggregate liquidation preference of $519,825 at December 31, 2019 and March 31, 2020 (unaudited))	532,120	537,781	537,781	—
Stockholders' equity (deficit):				
Preferred stock, $0.001 par value, no shares authorized, issued and outstanding at December 31, 2018, 2019 and March 31, 2020 actual (unaudited) and 10,000,000 shares authorized and no shares issued and outstanding, March 31, 2020 pro forma (unaudited)	—	—	—	—
Common stock, $0.001 par value; 260,000,000 shares authorized at December 31, 2018 and 2019 and March 31, 2020 (unaudited); 4,544,010, 4,716,634, 4,787,635 and 66,780,169 shares issued at December 31, 2018, 2019 and March 31, 2020 actual and pro forma (unaudited), respectively; 2,998,017, 4,037,476, 4,333,837 and 66,326,371 shares outstanding at December 31, 2018 and 2019 and March 31, 2020 actual and pro forma (unaudited), respectively	3	4	4	66
Additional paid-in capital	3,247	8,715	10,619	548,338
Accumulated other comprehensive income	—	325	1,394	1,394
Accumulated deficit	(114,177)	(189,482)	(214,368)	(214,368)
Total stockholders' equity (deficit)	(110,927)	(180,438)	(202,351)	335,430
Total liabilities, convertible preferred stock, and stockholders' equity (deficit)	$ 428,611	$ 393,068	$ 370,274	$ 370,274

See accompanying notes.

Relay Therapeutics, Inc.
Consolidated Statements of Operations and Comprehensive Loss
(In thousands, except share and per share data)

	Year Ended December 31,		Three Months Ended March 31,	
	2018	2019	2019	2020
			(unaudited)	
Operating expenses:				
Research and development expenses	$ 41,034	$ 70,306	$ 13,335	$ 21,700
General and administrative expenses	8,855	13,742	3,067	4,758
Total operating expenses	49,889	84,048	16,402	26,458
Loss from operations	(49,889)	(84,048)	(16,402)	(26,458)
Other income (expense):				
Interest income	1,113	8,801	2,277	1,572
Other expense	(9)	(58)	(57)	—
Total other income (expense), net	1,104	8,743	2,220	1,572
Net loss	$ (48,785)	$ (75,305)	$ (14,182)	$ (24,886)
Net loss per share, basic and diluted	$ (19.63)	$ (21.82)	$ (4.59)	$ (5.99)
Weighted average shares of common stock, basic and diluted	2,485,163	3,450,500	3,087,779	4,153,791
Pro forma net loss per share, basic and diluted (unaudited)		$ (1.15)		$ (0.38)
Pro forma weighted average shares of common stock, basic and diluted (unaudited)		65,428,521		66,146,325
Other comprehensive income:				
Unrealized holding gain	—	325	—	1,069
Total other comprehensive income	—	325	—	1,069
Total comprehensive loss	$ (48,785)	$ (74,980)	$ (14,182)	$ (23,817)

See accompanying notes.

Relay Therapeutics, Inc.
Consolidated Statements of Convertible Preferred Stock and Stockholders' Equity (Deficit)
(In thousands, except share and per share data)

	Convertible Preferred Stock		Common Stock		Additional Paid-in Capital	Accumulated Other Comprehensive Loss	Accumulated Deficit	Total Stockholders' Equity (Deficit)
	Shares	Amount	Shares	Par value				
Balances at December 31, 2017	88,012,855	$ 138,533	1,890,764	$ 2	$ 5	$ —	$ (65,392)	$ (65,385)
Issuance of Series C convertible preferred stock, net of issuance costs of $764	122,850,909	393,587	—	—	—	—	—	—
Vesting of restricted common stock	—	—	1,107,253	1	355	—	—	356
Stock-based compensation expense	—	—	—	—	2,887	—	—	2,887
Net loss	—	—	—	—	—	—	(48,785)	(48,785)
Balances at December 31, 2018	210,863,764	532,120	2,998,017	3	3,247	—	(114,177)	(110,927)
Issuance of Series C convertible preferred stock, net of issuance costs of $50	1,779,093	5,661	—	—	—	—	—	—
Issuance of common stock upon exercise of stock options	—	—	178,969	—	613	—	—	613
Vesting of restricted common stock	—	—	860,490	1	399	—	—	400
Stock-based compensation expense	—	—	—	—	4,456	—	—	4,456
Unrealized gain on investments	—	—	—	—	—	325	—	325
Net loss	—	—	—	—	—	—	(75,305)	(75,305)
Balances at December 31, 2019	212,642,857	537,781	4,037,476	4	8,715	325	(189,482)	(180,438)
Issuance of common stock upon exercise of stock options	—	—	85,845	—	351	—	—	351
Vesting of restricted common stock	—	—	210,516	—	98	—	—	98
Stock-based compensation expense	—	—	—	—	1,455	—	—	1,455
Unrealized gain on investments	—	—	—	—	—	1,069	—	1,069
Net loss	—	—	—	—	—	—	(24,886)	(24,886)
Balances at March 31, 2020 (unaudited)	212,642,857	537,781	4,333,837	4	10,619	1,394	(214,368)	(202,351)
Conversion of Series A-C convertible preferred stock upon completion of initial public offering	(212,642,857)	(537,781)	61,992,534	62	537,719	—	—	537,781
Pro forma balances at March 31, 2020 (unaudited)	—	$ —	66,326,371	$ 66	$ 548,338	$ 1,394	$ (214,368)	$ 335,430

Relay Therapeutics, Inc.
Consolidated Statements of Cash Flows
(In thousands)

	Year Ended December 31,		Three Months Ended March 31,	
	2018	2019	2019	2020
			(unaudited)	
Cash flows from operating activities:				
Net loss	$ (48,785)	$ (75,305)	$ (14,182)	$ (24,886)
Adjustments to reconcile net loss to net cash used in operating activities:				
Stock-based compensation expense	2,887	4,456	820	1,455
Depreciation expense	2,154	2,845	667	859
Net amortization of premiums and discounts on investments	—	(2,495)	—	(321)
Loss on sale of equipment	9	56	56	—
Changes in assets and liabilities:				
Prepaid expenses and other current assets	(1,280)	(2,123)	(208)	261
Lease assets and liabilities, net	(466)	1,233	622	105
Accounts payable	1,232	3,000	(16)	(2,338)
Accrued expenses and other liabilities	114	2,200	1,425	2,531
Net cash used in operating activities	(44,135)	(66,133)	(10,816)	(22,334)
Cash flows from investing activities:				
Purchases of property and equipment	(1,687)	(8,002)	(3,144)	(1,020)
Proceeds from sale of equipment	7	20	—	—
Purchases of investments	—	(553,517)	—	(55,609)
Proceeds from maturities of investments	—	242,475	—	107,000
Net cash provided by (used in) investing activities	(1,680)	(319,024)	(3,144)	50,371
Cash flows from financing activities:				
Proceeds from issuance of convertible preferred stock, net of issuance costs	394,255	4,993	5,018	—
Proceeds from issuance of common stock upon exercise of stock options	—	613	29	351
Issuance of restricted common stock	799	—	—	—
Repurchase of restricted common stock	(82)	—	—	—
Net cash provided by financing activities	394,972	5,606	5,047	351
Net increase (decrease) in cash, cash equivalents and restricted cash	349,157	(379,551)	(8,913)	28,388
Cash, cash equivalents and restricted cash at beginning of period	73,226	422,383	422,383	42,832
Cash, cash equivalents and restricted cash at end of period	$422,383	$ 42,832	$413,470	$ 71,220
Supplemental disclosure of non-cash investing and financing activities:				
Property and equipment additions included in accounts payable and accrued expenses	$ 1,224	$ 745	$ 697	$ 51
Reclassification of restricted stock liability to additional paid in capital	$ 356	$ 400	$ 101	$ 98
Issuance costs for convertible preferred included in accounts payable and accrued expenses	$ 668	$ —	$ —	$ —
Recognition of right of use asset upon adoption of ASU 2018-11	$ 1,400	—	$ —	$ —
Right of use asset obtained in exchange for lease obligation	$ —	24,936	$ 24,936	$ —

Relay Therapeutics, Inc.

Notes to Consolidated Financial Statements

(In thousands, except share and per share data)

1. Nature of Business and Basis of Presentation

Relay Therapeutics, Inc. (the Company) was incorporated in Delaware on May 4, 2015. The Company is a clinical-stage precision medicines company transforming the drug discovery process with an initial focus on enhancing small molecule therapeutic discovery in targeted oncology. The Company is built upon unparalleled insights into protein motion and how this dynamic behavior relates to protein function. The Company's Dynamo platform integrates an array of leading edge experimental and computational approaches, which allows the Company to apply the understanding of protein structure and motion to drug discovery. The Company is advancing its lead product candidates, RLY-4008 and RLY-1971, and a development candidate selection for a PI3Kα selective mutant program (RLY-PI3K1047 program) for the treatment of patients with advanced solid tumors. The Company initiated a Phase 1 clinical trial for RLY-1971 in patients with advanced solid tumors in the first quarter of 2020.

The Company is subject to risks common to companies in the biotechnology industry including, but not limited to, new technological innovations, protection of proprietary technology, dependence on key personnel, compliance with government regulations and the need to obtain additional financing. Product candidates currently under development will require significant additional research and development efforts, including extensive pre-clinical and clinical testing and regulatory approval, prior to commercialization. These efforts require significant amounts of additional capital, adequate personnel infrastructure and extensive compliance-reporting capabilities.

The Company's product candidates are in development. There can be no assurance that the Company's research and development will be successfully completed, that adequate protection for the Company's intellectual property will be obtained, that any products developed will obtain necessary government regulatory approval or that any approved products will be commercially viable. Even if the Company's product development efforts are successful, it is uncertain when, if ever, the Company will generate significant revenue from product sales. The Company operates in an environment of rapid change in technology and substantial competition from pharmaceutical and biotechnology companies. In addition, the Company is dependent upon the services of its employees and consultants.

The Company has devoted substantially all of its resources to developing our product candidates, including RLY-1971 and RLY-4008, and a RLY-PI3K1047 program developing its innovative experimental and computational approaches on protein motion platform, building its intellectual property portfolio, business planning, raising capital and providing general and administrative support for these operations. Through December 31, 2019 and March 31, 2020 (unaudited), the Company had received gross proceeds of $519,825 from sales of its preferred stock and the issuance of convertible debt.

The Company has experienced negative operating cash flows and had an accumulated deficit of $189,482 and $214,368 as of December 31, 2019 and March 31, 2020 (unaudited), respectively.

The Company expects that its cash, cash equivalents and investments at March 31, 2020 (unaudited) of $334,203 will enable it to fund its operating expenses and capital expenditure requirements for at least one year from the date of the issuance of these consolidated financial statements, May 22, 2020.

The future viability of the Company is dependent on its ability to generate cash from operating activities or to raise additional capital to finance its operations. The Company's failure to raise capital as and when needed could have a negative impact on its financial condition and ability to pursue its business strategies.

Relay Therapeutics, Inc.

Notes to Consolidated Financial Statements

(In thousands, except share and per share data)

1. Nature of Business and Basis of Presentation (continued)

The Company is seeking to complete an initial public offering of its common stock. Upon the closing of a qualified public offering, the Company's outstanding convertible preferred stock will automatically convert into shares of common stock (see Note 7).

The Company expects to seek funding from the proposed initial public offering of its common stock and follow-on public equity financings or in the event the initial public offering is not competed, through private equity financings. The Company may also seek funding through debt financing, collaboration agreements or government grants until it can generate sufficient operating cash flows from its operations. The Company may not be able to obtain financing on acceptable terms, or at all, and the Company may not be able to enter into collaboration arrangements or obtain government grants. The terms of any financing may adversely affect the holdings or the rights of the Company's stockholders. If the Company is unable to obtain funding, the Company could be forced to delay, reduce or eliminate its research and development programs, product portfolio expansion or commercialization efforts, which could adversely affect its business prospects. Although management continues to pursue these plans, there is no assurance that the Company will be successful in obtaining sufficient funding on terms acceptable to the Company to fund continuing operations, if at all.

2. Significant Accounting Policies

Basis of presentation

The accompanying consolidated financial statements have been prepared in conformity with accounting principles generally accepted in the United States of America ("GAAP"). The Company's consolidated financial statements include the accounts of Relay Therapeutics, Inc. and its wholly-owned subsidiary, Relay Therapeutics Securities Corporation. All intercompany balances and transactions have been eliminated.

Use of Estimates

The preparation of financial statements in conformity with GAAP requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities, the disclosure of contingent assets and liabilities at the date of the consolidated financial statements and the reported amounts of expenses during the reporting periods. Significant estimates and assumptions reflected in these consolidated financial statements include, but are not limited to, the accrual of research and development and manufacturing expenses, the valuation of equity instruments, the probability of achieving milestones for performance-based vesting of equity awards, and the incremental borrowing rate for determining the operating lease asset and liability. Estimates are periodically reviewed in light of changes in circumstances, facts and experience.

The full extent to which the COVID-19 pandemic will directly or indirectly impact the Company's business, results of operations and financial condition, including expenses, clinical trials and research and development costs, will depend on future developments that are highly uncertain, including as a result of new information that may emerge concerning COVID-19 and the actions taken to contain or treat COVID-19, as well as the economic impact on local, regional, national and international markets. The Company has made estimates of the impact of COVID-19 within its financial statements and there may be changes to those estimates in future periods. Actual results could differ from the Company's estimates.

2. Significant Accounting Policies (continued)

Unaudited Interim Financial Information

The accompanying condensed consolidated balance sheet as of March 31, 2020, the condensed consolidated statements of operations and comprehensive loss and of cash flows for the three months ended March 31, 2019 and 2020, and the condensed consolidated statements of convertible preferred stock and stockholders' equity (deficit) for the three months ended March 31, 2020 are unaudited. The unaudited condensed consolidated interim financial statements have been prepared on the same basis as the audited annual consolidated financial statements and, in the opinion of management, reflect all adjustments, which include only normal recurring adjustments, necessary for the fair statement of the Company's consolidated financial position as of March 31, 2020 and the consolidated results of its operations and cash flows for the three months ended March 31, 2019 and 2020. The consolidated financial data and other information disclosed in these notes related to the three months ended March 31, 2019 and 2020 are unaudited. The consolidated results for the three months ended March 31, 2020 are not necessarily indicative of results to be expected for the year ending December 31, 2020, any other interim periods, or any future year or period.

Unaudited Pro Forma Information

The accompanying unaudited pro forma condensed consolidated balance sheet and statement of convertible preferred stock and stockholders' equity (deficit) as of March 31, 2020 has been prepared to give effect to (i) the reduction in the conversion price of the Series C preferred stock from $3.21 to $3.027603, which became effective on July 8, 2020, as if the change in conversion price had occurred on March 31, 2020 and (ii) the conversion of all outstanding shares of the Company's preferred stock into an aggregate of 61,992,534 shares of common stock as if the conversion had occurred on March 31, 2020.

In the accompanying consolidated statements of operations and comprehensive loss, unaudited pro forma basic and diluted net loss per share for the year ended December 31, 2019 and the three months ended March 31, 2020 have been prepared to give effect to the (i) the reduction in the conversion price of the Series C preferred stock from $3.21 to $3.027603 as if the change in conversion price had occurred on the later of the first day of the period presented or the issuance date of the convertible preferred stock and (ii) the conversion of all outstanding shares of convertible preferred stock into shares of common stock as if the conversion had occurred on the later of the first day of the period presented or the issuance date of the convertible preferred stock.

The changes to the conversion feature for the Series C preferred stock are considered to be substantial changes to material terms of the instrument, and therefore the Company will account for the changes as an extinguishment and reissuance of a new instrument, consistent with the Company's accounting policy. The loss on extinguishment will be recognized on July 8, 2020, and is therefore not reflected in the pro forma adjustments as of March 31, 2020 or for the year ended December 31, 2019 or three months ended March 31, 2020.

Segment Information

The Company manages its operations as a single segment for the purposes of assessing performance and making operating decisions. The Company's singular focus is on using innovative experimental and computational approaches on protein motion for making medicines against intractable precision medicine targets. No significant revenue has been generated since inception, and all tangible assets are held in the United States.

2. Significant Accounting Policies (continued)

Cash Equivalents

The Company considers all short-term, highly liquid investments with original maturities of 90 days or less at acquisition date to be cash equivalents. Cash equivalents, which consist of money market funds, are stated at fair value.

Restricted Cash

The Company deposited cash of $878 as of December 31, 2018 and 2019 and March 31, 2020 (unaudited) to secure a letter of credit in connection with the lease of the Company's facilities (see Note 14). The Company has classified the restricted cash as a noncurrent asset on its consolidated balance sheets.

Investments

Investments in marketable debt securities are classified as available-for-sale. Available-for-sale debt securities are measured and reported at fair value using quoted prices in active markets for similar securities. Unrealized gains and losses on available-for-sale debt securities are reported as a separate component of stockholders' equity (deficit). Premiums or discounts from par value are amortized to investment income over the life of the underlying investment.

The cost of securities sold is determined on a specific identification basis, and realized gains and losses are included in other income (expense) within the consolidated statement of operations and comprehensive loss. If any adjustment is required to reflect a decline in the value of the investment that the Company considers to be "other than temporary', the Company recognizes a charge to the consolidated statement of operations and comprehensive loss. No such adjustments were necessary during the periods presented.

Concentration of Credit Risk and Significant Suppliers

Financial instruments that potentially expose the Company to concentrations of credit risk consist primarily of cash, cash equivalents and investments. From time to time, the Company has maintained all of its cash, cash equivalents and investments at certain accredited financial institutions in amounts that exceed federally insured limits. The Company generally invests its excess capital in money market funds, U.S. treasury bonds, U.S. treasury bills, and agency bonds that are subject to minimal credit and market risk. Management has established guidelines relative to credit ratings and maturities intended to safeguard principal balances and maintain liquidity. The investment portfolio is maintained in accordance with the Company's investment policy, which defines allowable investments, specifies credit quality standards and limits the credit exposure of any single issuer.

The Company is dependent on third-party suppliers for research and development activities of its programs, including preclinical and clinical testing. In particular, the Company relies and expects to continue to rely on a small number of these suppliers, including D. E. Shaw Research, LLC as discussed in Note 13, to meet its requirements for its programs. These programs could be adversely affected by a significant interruption in pre-clinical and clinical testing and a supply of active pharmaceutical ingredients and formulated drugs.

Deferred Offering Costs

The Company capitalizes certain legal, professional accounting and other third-party fees that are directly associated with in-process financings as deferred offering costs until such financings are consummated. After consummation of the financing, these costs are recorded as a reduction of the proceeds received from the

2. Significant Accounting Policies (continued)

financing. If a planned financing is abandoned, the deferred offering costs are expensed immediately as a charge to operating expenses in the consolidated statement of operations and comprehensive loss.

There were no deferred offering costs on the Company's consolidated balance sheets at December 31, 2018 and 2019 and March 31, 2020 (unaudited).

Fair Value Measurements

Certain assets and liabilities are carried at fair value under GAAP. Fair value is defined as the exchange price that would be received for an asset or paid to transfer a liability (an exit price) in the principal or most advantageous market for the asset or liability in an orderly transaction between market participants on the measurement date. Valuation techniques used to measure fair value must maximize the use of observable inputs and minimize the use of unobservable inputs.

Financial assets and liabilities carried at fair value are to be classified and disclosed in one of the following three levels of the fair value hierarchy, of which the first two are considered observable and the last is considered unobservable:

- Level 1—Quoted prices in active markets for identical assets or liabilities.
- Level 2—Observable inputs (other than Level 1 quoted prices), such as quoted prices in active markets for similar assets or liabilities, quoted prices in markets that are not active for identical or similar assets or liabilities, or other inputs that are observable or can be corroborated by observable market data.
- Level 3—Unobservable inputs that are supported by little or no market activity and that are significant to determining the fair value of the assets or liabilities, including pricing models, discounted cash flow methodologies and similar techniques.

Lease Agreements

Under ASC 842 *Leases*, which was adopted January 1, 2018, the Company determines if an arrangement is or contains a lease at inception. For leases with a term of 12 months or less, the Company does not recognize a right-of-use asset or lease liability. The Company's operating leases are recognized on its consolidated balance sheets as other noncurrent assets, other current liabilities, and other noncurrent liabilities. The Company does not have any finance leases.

Right-of-use assets represent the Company's right to use an underlying asset for the lease term and lease liabilities represent the Company's obligation to make lease payments arising from the lease. Operating lease right-of-use assets and liabilities are recognized at the lease commencement date based on the present value of lease payments over the lease term. As the Company's leases typically do not provide an implicit rate, the Company uses an estimate of its incremental borrowing rate based on the information available at the lease commencement date in determining the present value of lease payments. Operating lease right-of-use assets also include the effect of any lease payments made and excludes lease incentives. The lease terms may include options to extend or terminate the lease when it is reasonably certain that the Company will exercise that option. Lease expense is recognized on a straight-line basis over the lease term.

The Company has lease agreements with lease and non-lease components, which are accounted for as a combined element.

Relay Therapeutics, Inc.

Notes to Consolidated Financial Statements

(In thousands, except share and per share data)

2. Significant Accounting Policies (continued)

Property and Equipment

Property and equipment are stated at cost less accumulated depreciation. Depreciation expense is recognized using the straight-line method over the useful life of the asset. Laboratory and computer equipment are depreciated over three years. Furniture and fixtures are depreciated over five years. Leasehold improvements are amortized over the shorter of the lease term or the estimated useful life of the related asset. Expenditures for repairs and maintenance of assets are charged to expense as incurred. Upon retirement or sale, the cost and related accumulated depreciation of assets disposed of are removed from the accounts and any resulting gain or loss is included in loss from operations.

Impairment of Long-Lived Assets

The Company continually evaluates long-lived assets for potential impairment when events or changes in circumstances indicate the carrying value of the assets may not be recoverable. Recoverability is measured by comparing the book values of the assets to the expected future net undiscounted cash flows that the assets are expected to generate. If such assets are considered to be impaired, the impairment to be recognized is measured by the amount by which the book values of the assets exceed their fair value. The Company did not recognize any impairment losses for the years ended December 31, 2018 and 2019 and the three months ended March 31, 2019 and 2020 (unaudited).

Classification and Accretion of Convertible Preferred Stock

The Company's convertible preferred stock is classified outside of stockholders' equity (deficit) on the consolidated balance sheet because the holders of such shares have liquidation rights in the event of a deemed liquidation that, in certain situations, are not solely within the control of the Company and would require the redemption of the then-outstanding convertible preferred stock. The convertible preferred stock is not redeemable, except in the event of a deemed liquidation (see Note 7). Because the occurrence of a deemed liquidation event is not currently probable, the carrying values of the convertible preferred stock are not being accreted to their redemption values. Subsequent adjustments to the carrying values of the convertible preferred stock would be made only when a deemed liquidation event becomes probable.

Stock-Based Compensation

The Company measures all stock options and other stock-based awards granted to employees and non-employees based on the fair value on the date of the grant and recognizes compensation expense of those awards over the requisite service period, which is generally the vesting period of the respective award. The Company records expense for awards with service-based vesting using the straight-line method and awards with performance conditions utilizing an accelerated attribution method. The Company recognizes the impact of forfeiture of awards as the forfeitures occur.

The Company classifies stock-based compensation expense in its consolidated statement of operations and comprehensive loss in the same manner in which the award recipient's payroll costs are classified or in which the award recipient's service payments are classified.

The fair value of each stock option grant is estimated on the date of grant using the Black-Scholes option-pricing model. As there is no active market for the Company's common stock, the Company estimates the fair value of common stock on the date of grant based on the then current facts and circumstances. The Company historically

2. Significant Accounting Policies (continued)

has been a private company and lacks company-specific historical and implied volatility information. Therefore, it estimates its expected stock volatility based on the historical volatility of a publicly traded set of guideline companies and expects to continue to do so until such time as it has adequate historical data regarding the volatility of its own traded stock price. The expected term of the Company's stock options has been determined utilizing the "simplified" method for awards that qualify as "plain-vanilla" options. The expected term of stock options granted to non-employees is equal to the contractual term of the option award. The risk-free interest rate is determined by reference to the U.S. Treasury yield curve in effect at the time of grant of the award for time periods approximately equal to the expected term of the award. Expected dividend yield is based on the fact that the Company has never paid cash dividends and does not expect to pay any cash dividends in the foreseeable future.

The Company has granted certain options with performance-based vesting conditions whereby the service inception date precedes the accounting grant date and therefore the Company applies variable accounting such that the stock-based compensation expense to be recognized for the options will ultimately be based on the fair value of the awards on the accounting grant date. Expense is recognized over the implied service period when achievement of the performance based milestones is deemed probable. The Company uses judgement to determine whether and, if so, how many awards are deemed probable of vesting at each reporting period.

Research and Development Costs

Research and development costs are expensed as incurred. Research and development expenses include salaries, stock-based compensation and benefits of employees, third-party license fees and other operational costs related to the Company's research and development activities, including allocated facility-related expenses and external costs of outside vendors engaged to conduct both pre-clinical studies and clinical trials. Nonrefundable advance payments for goods and services that will be used in future research and development activities are expensed when the activity has been performed or when the goods have been received rather than when the payment is made.

Research and Manufacturing Contracts

The Company has entered into various research and development contracts with research institutions and other companies, whose costs are included in research and development expense in the accompanying consolidated statements of operations and comprehensive loss. These agreements are generally cancelable, and related payments are recorded as research and development expenses as the underlying services are performed. When evaluating the adequacy of the expense recognized, the Company analyzes progress of the services, including the phase or completion of events, invoices received and contracted costs. Significant judgments and estimates are made in determining the expense recognized, and the related prepaid or accrued balances at the end of any reporting period. Actual results could differ from the Company's estimates. The Company's historical estimates have not been materially different from the actual costs.

Patent Costs

All patent-related costs incurred in connection with filing and prosecuting patent applications are expensed as incurred due to the uncertainty about the recovery of the expenditure. Amounts incurred are classified as general and administrative expenses.

Relay Therapeutics, Inc.

Notes to Consolidated Financial Statements

(In thousands, except share and per share data)

2. Significant Accounting Policies (continued)

Income Taxes

The Company recognizes deferred tax assets and liabilities for the expected future tax consequences of events that have been recognized in the Company's financial statements or tax returns. Under this method, deferred tax assets and liabilities are determined based on differences between the financial statement carrying amounts and the tax bases of the assets and liabilities using the enacted tax rates in effect in the years in which the differences are expected to reverse. A valuation allowance against deferred tax assets is recorded if, based on the weight of the available evidence, it is more likely than not that some or all of the deferred tax assets will not be realized.

The Company accounts for uncertainty in income taxes recognized in the financial statements by applying a two-step process to determine the amount of tax benefit to be recognized. First, the tax position must be evaluated to determine the likelihood that it will be sustained upon external examination by the taxing authorities. If the tax position is deemed more-likely-than-not to be sustained, the tax position is then assessed to determine the amount of benefit to recognize in the financial statements. The amount of the benefit that may be recognized is the largest amount that has a greater than 50% likelihood of being realized upon ultimate settlement. The provision for income taxes includes the effects of any resulting tax reserves, or unrecognized tax benefits, that are considered appropriate as well as the related net interest and penalties.

Comprehensive Loss

Comprehensive loss includes net loss as well as other changes in stockholders' equity (deficit) that result from transactions and economic events other than those with stockholders. For the year ended December 31, 2019 and the three months ended March 31, 2020 (unaudited), other comprehensive income consisted of changes in unrealized gains from available-for-sale debt investments. There was no difference between net loss and comprehensive loss for the year ended December 31, 2018 and the three months ended March 31, 2019 (unaudited).

Net Loss Per Common Share

The Company's net loss is equivalent to net loss attributable to common stockholders for all periods presented. Basic net loss per share is computed using the weighted average number of common shares outstanding during the period. Diluted net loss per share is computed using the sum of the weighted average number of common shares outstanding during the period and the effect of dilutive securities.

The Company applies the two-class method to calculate its basic and diluted net loss per share as the Company has issued shares that meet the definition of participating securities. The two-class method is an earnings allocation formula that treats a participating security as having rights to earnings that otherwise would have been available to common stockholders. The Company's participating securities contractually entitle the holders of such shares to participate in dividends; but do not contractually require the holders of such shares to participate in losses of the Company. Accordingly, in periods in which the Company reports a net loss, such losses are not allocated to such participating securities.

Accordingly, in periods in which the Company reports a net loss, diluted net loss per share is the same as basic net loss per share, since dilutive common shares are not assumed to have been issued if their effect is anti-dilutive.

(In thousands, except share and per share data)

2. Significant Accounting Policies (continued)

Recently Adopted Accounting Pronouncements

The Company adopted Accounting Standards Update ("ASU") No. 2016-18, *Statement of Cash Flows, Restricted Cash* ("ASU 2016-18"), as of January 1, 2019 to retrospectively include restricted cash and restricted cash equivalents with cash and cash equivalents when reconciling the beginning of period and end of period total amounts on the statement of cash flows. A reconciliation of the cash, cash equivalents, and restricted cash reported within the balance sheet that sum to the total of the same amounts shown in the statement of cash flows is as follows:

	December 31, 2018	December 31, 2019	March 31, 2019	March 31, 2020 (unaudited)
Cash and cash equivalents	$ 421,505	$ 41,954	$ 412,592	$ 70,342
Restricted cash	878	878	878	878
Total cash, cash equivalents and restricted cash as shown on the consolidated statements of cash flows	$ 422,383	$ 42,832	$ 413,470	$ 71,220

In addition, the Company adopted ASU No 2016-15, *Statement of Cash Flow* ("ASU 2016-15") in 2019. The guidance reduces diversity in how certain cash receipts and cash payments are presented and classified in the consolidated statements of cash flows. The adoption of ASU 2016-15 did not have a material effect on the Company's consolidated financial statements.

The Company adopted ASU No. 2018-13, *Fair Value Measurement (Topic 820): Disclosure Framework—Changes to the Disclosure Requirements for Fair Value Measurement* on January 1, 2020. This standard modifies certain disclosure requirements on fair value measurements. The adoption of this standard did not have a material impact on the Company's disclosures.

Recently Issued Accounting Pronouncements Not Yet Adopted

In June 2016, the FASB issued ASU No. 2016-13, *Financial Instruments—Credit Losses (Topic 326): Measurement of Credit Losses on Financial Instruments*. This standard requires that credit losses be reported using an expected losses model rather than the incurred losses model that is currently used, and it establishes additional disclosure requirements related to credit risks. For available-for-sale debt securities with expected credit losses, this standard now requires allowances to be recorded instead of reducing the amortized cost of the investment. This guidance was originally effective for fiscal years beginning after December 15, 2019, including interim periods within those fiscal years, and early adoption was permitted. In November 2019, the FASB subsequently issued ASU 2019-10, *Financial Instruments—Credit Losses (Topic 326), Derivatives and Hedging (Topic 815), and Leases (Topic 842): Effective Dates*, whereby the effective date of this standard for smaller reporting companies was deferred to fiscal years beginning after December 15, 2022, including interim periods within those fiscal years, and early adoption is still permitted.

From time to time, new accounting pronouncements are issued by the FASB or other standard setting bodies that the Company adopts as of the specified effective date. The Company qualifies as an "emerging growth company" as defined in the Jumpstart Our Business Startups Act of 2012 and has elected not to "opt out" of the extended

(In thousands, except share and per share data)

2. Significant Accounting Policies (continued)

transition related to complying with new or revised accounting standards, which means that when a standard is issued or revised and it has different application dates for public and nonpublic companies, the Company can adopt the new or revised standard at the time nonpublic companies adopt the new or revised standard and can do so until such time that the Company either (i) irrevocably elects to "opt out" of such extended transition period or (ii) no longer qualifies as an emerging growth company.

3. Fair Value of Financial Assets

The following tables present information about the Company's financial assets measured at fair value on a recurring basis and indicate the level of the fair value hierarchy utilized to determine such fair values:

	Fair Value Measurements as of December 31, 2018 using:			
	Level 1	Level 2	Level 3	Total
Assets				
Cash equivalents:				
Money market funds	$421,017	$ —	$ —	$421,017
Total	$421,017	$ —	$ —	$421,017

	Fair Value Measurements as of December 31, 2019 using:			
	Level 1	Level 2	Level 3	Total
Assets				
Cash equivalents:				
Money market funds	$41,658	$ —	$ —	$ 41,658
Investments:				
US treasury bills	—	232,604	—	232,604
US agency securities	—	81,258	—	81,258
Total investments	—	313,862	—	313,862
Total	$41,658	$313,862	$ —	$355,520

Relay Therapeutics, Inc.

Notes to Consolidated Financial Statements

(In thousands, except share and per share data)

3. Fair Value of Financial Assets (continued)

	Fair Value Measurements as of March 31, 2020 using:			
	Level 1	Level 2	Level 3	Total
		(unaudited)		
Assets				
Cash equivalents:				
Money market funds	$69,844	$ —	$ —	$ 69,844
Investments:				
US treasury bills	—	186,856	—	186,856
US agency securities	—	77,005	—	77,005
Total investments	—	263,861	—	263,861
Total	$69,844	$263,861	$ —	$333,705

As of December 31, 2018 and 2019 and March 31, 2020 (unaudited), the Company's cash equivalents were invested in money market funds and were valued based on Level 1 inputs. As of December 31, 2019 and March 31, 2020 (unaudited), the Company's investments were made in U.S Treasury and agency securities and were valued based on Level 2 inputs. In determining the fair value of its investments at each date presented above, the Company relied on quoted prices for similar securities in active markets or using other inputs that are observable or can be corroborated by observable market data. All available-for-sale securities have contractual maturities of less than one year. The Company did not have any financial assets or liabilities during any of the periods presented in the accompanying consolidated financial statements that required Level 3 inputs.

4. Investments

The fair value of available-for-sale investments by type of security was as follows:

	December 31, 2019			
	Amortized Cost	Unrealized Gains	Unrealized Losses	Fair Value
Investments:				
U.S treasury bills	$232,336	$ 268	$ —	$232,604
U.S agency securities	81,201	57	—	81,258
Total investments	$313,537	$ 325	$ —	$313,862

	March 31, 2020			
	Amortized Cost	Unrealized Gains	Unrealized Losses	Fair Value
		(unaudited)		
Investments:				
U.S treasury bills	$185,797	$ 1,059	$ —	$186,856
U.S agency securities	76,670	335	—	77,005
Total investments	$262,467	$ 1,394	$ —	$263,861

As of December 31, 2018, the Company had no available-for-sale investments.

Relay Therapeutics, Inc.

Notes to Consolidated Financial Statements

(In thousands, except share and per share data)

5. Property and Equipment, Net

Property and equipment, net consisted of the following:

	December 31, 2018	2019	March 31, 2020 (unaudited)
Property and equipment:			
Laboratory equipment	$ 6,688	$12,003	$ 12,643
Leasehold improvements	443	860	886
Computer equipment	394	827	827
Furniture and fixtures	161	895	895
Construction in process	455	490	151
	8,141	15,075	15,402
Less: accumulated depreciation	(4,649)	(6,981)	(7,841)
Total property, plant and equipment, net	$ 3,492	$ 8,094	$ 7,561

The Company recorded $2,154, $2,845, $667 and $859 of depreciation expense for the years ended December 31, 2018 and 2019 and the three months ended March 31, 2019 and 2020 (unaudited), respectively.

6. Accrued Expenses and Other Current Liabilities

Accrued expenses and other current liabilities consist of the following:

	December 31, 2018	2019	March 31, 2020 (unaudited)
External research and development	$1,291	$3,077	$ 4,718
Professional services	573	336	518
Payroll and related	—	—	844
Other	118	333	198
Total accrued expenses and other current liabilities	$1,982	$3,746	$ 6,278

7. Convertible Preferred Stock

The Company has issued Series A, Series B and Series C (collectively, the “Convertible Preferred Stock”). Upon issuance of each class of Convertible Preferred Stock, the Company assessed the embedded conversion and liquidation features of the shares and determined that such features did not require the Company to separately account for these features. The Company also concluded that no beneficial conversion feature existed on the issuance date of each class of Convertible Preferred Stock.

Prior to January 1, 2018, the Company issued a total of 56,824,740 shares of Series A convertible preferred stock (“Series A preferred stock”) and 31,188,115 shares of Series B convertible preferred stock (“Series B preferred stock”) in exchange for net proceeds of $56,692 and $62,876, respectively.

During the year ended December 31, 2018, the Company issued 122,850,909 shares of Series C convertible preferred stock (“Series C preferred stock”) at a per share price of $3.21 for proceeds of $393,587, net of issuance costs.

Relay Therapeutics, Inc.

Notes to Consolidated Financial Statements

(In thousands, except share and per share data)

7. Convertible Preferred Stock (continued)

During the year ended December 31, 2019, the Company issued an additional 1,779,093 shares of Series C preferred stock at a per share price of $3.21 for proceeds of $5,661, net of issuance costs.

Convertible Preferred Stock consisted of the following:

	December 31, 2018				
	Preferred Shares Authorized	Preferred Shares Issued and Outstanding	Carrying Value	Liquidation Preference	Common Stock Issuable Upon Conversion
Series A preferred stock	56,824,740	56,824,740	$ 75,657	$ 56,825	16,002,820
Series B preferred stock	31,188,115	31,188,115	62,876	63,000	8,783,102
Series C preferred stock	249,260,004	122,850,909	393,587	394,290	34,596,923
Total convertible preferred stock	337,272,859	210,863,764	$ 532,120	$ 514,115	59,382,845

	December 31, 2019				
	Preferred Shares Authorized	Preferred Shares Issued and Outstanding	Carrying Value	Liquidation Preference	Common Stock Issuable Upon Conversion
Series A preferred stock	56,824,740	56,824,740	$ 75,657	$ 56,825	16,002,820
Series B preferred stock	31,188,115	31,188,115	62,876	63,000	8,783,102
Series C preferred stock	249,260,004	124,630,002	399,248	400,000	35,097,955
Total convertible preferred stock	337,272,859	212,642,857	$ 537,781	$ 519,825	59,883,877

	March 31, 2020				
	Preferred Shares Authorized	Preferred Shares Issued and Outstanding	Carrying Value	Liquidation Preference	Common Stock Issuable Upon Conversion
			(unaudited)		
Series A preferred stock	56,824,740	56,824,740	$ 75,657	$ 56,825	16,002,820
Series B preferred stock	31,188,115	31,188,115	62,876	63,000	8,783,102
Series C preferred stock	249,260,004	124,630,002	399,248	400,000	35,097,955
Total convertible preferred stock	337,272,859	212,642,857	$ 537,781	$ 519,825	59,883,877

The holders of the Convertible Preferred Stock have the following rights and preferences:

Voting

The holders of the Convertible Preferred Stock have voting rights equivalent to the number of shares of common stock into which their shares of preferred stock convert. So long as any of the Convertible Preferred Stock is outstanding, a requisite vote of the Convertible Preferred Stockholders, which is defined as a majority of the

7. Convertible Preferred Stock (continued)

Convertible Preferred Stockholders, is required to affirm certain corporate actions, which include, but are not limited to the disposal of assets, the acquisition of assets or a business, and the authorization of additional shares of the Company's capital. In addition, such actions require a requisite vote of the Series C preferred stockholders and a majority vote of the Series B preferred stockholders, as long as any of the respective preferred stock is outstanding.

Dividends

The holders of the Convertible Preferred Stock are entitled to receive noncumulative dividends when and if declared by the Company's board of directors. If the Company declares, pays or sets aside, on the same date, a dividend on shares of more than one class or series of capital stock of the Company, the dividend payable to the holders of the Convertible Preferred Stock are entitled to the same dividend based on the number of common shares the Convertible Preferred Stock would convert into. No dividends have been declared or paid during the years ended December 31, 2018 or 2019 and during the three months ended March 31, 2020 (unaudited).

Liquidation Rights

In the event of any voluntary or involuntary liquidation, dissolution or winding up of the corporation, holders of the Series C preferred stock then outstanding shall be entitled to be paid out of the assets of the Corporation available for distribution to its stockholders before any payment shall be made to the holders of Series A and B preferred stock or common stock by reason of their ownership thereof, an amount per share equal to the greater of (i) the Series C preferred stock original issue price ($3.21), plus any accrued but unpaid dividends declared, and (ii) an amount per share if the Series C preferred stock had been converted prior to the liquidation event.

Next, the holders of the Series A preferred stock then outstanding together with holders of Series B preferred stock shall be entitled to be paid out of the assets of the Corporation available for distribution to its stockholders before any payment shall be made to the common stockholders by reason of their ownership thereof, an amount per share equal to the greater of (i) their original issue price, which is $1.00 and $2.02 for Series A and B preferred stock, respectively, plus any accrued but unpaid dividends declared, and (ii) an amount per share if the Series A and B preferred stock, respectively, had been converted prior to the liquidation event.

Conversion

The Convertible Preferred Stock is convertible into common stock at any time at the option of the holder, and is subject to automatic conversion upon the closing of a firm commitment underwritten public offering with either a price per share of at least $22.80 and proceeds of at least $100,000 or approval by a specified vote of the Convertible Preferred Stockholders. As of December 31, 2019 and March 31, 2020 (unaudited), the Convertible Preferred Stock is convertible into 59,382,845 shares of common stock.

Protective Rights

As long as any of the Series C preferred stock is outstanding, a requisite vote of the Convertible Preferred Stockholders, is required to affirm a liquidation, dissolution, a merger or consolidation or any other deemed liquidation event if the per share proceeds to the holders of the Series C preferred stock would be equal to or greater than $22.80 per share. In addition, both a requisite vote of the Convertible Preferred Stockholders and a majority of the Series C preferred stockholders is required to affirm a liquidation, dissolution, a merger or consolidation or any other deemed liquidation event if the per share proceeds to the holders of the Series C preferred stock would be less than $22.80 per share.

Relay Therapeutics, Inc.

Notes to Consolidated Financial Statements

(In thousands, except share and per share data)

8. Common Stock

Each share of common stock entitles the holder to one vote on all matters submitted to a vote of the Company's stockholders. Common stockholders are entitled to receive dividends, as may be declared by the Company's board of directors, however, holders of convertible preferred stock are entitled to any dividend received by the common shareholders if each preferred share were converted into common stock. As of December 31, 2018 and 2019 and March 31, 2020 (unaudited), no dividends had been declared.

The Company has issued restricted shares of common stock to its founders and non-employees. In addition, the Company has issued restricted shares of common stock upon the early exercise of stock options under the Company's 2016 Plan. The restrictions on the common shares generally lapse over four years. The Company has included the proceeds from the sale of the restricted shares of common stock as restricted stock liability in the accompanying consolidated balance sheets. Amounts are reclassified to additional paid in capital as the restrictions lapse. The Company has the right to repurchase any unvested shares of restricted common stock at the original cost in the event of termination.

The following table summarizes the restricted stock activity for the year ended December 31, 2019 and the three months ended March 31, 2020 (unaudited):

	Shares	Weighted-Average Purchase Price
Unvested at December 31, 2018	1,545,993	$ 0.36
Vested	(860,490)	0.46
Cancelled	(6,345)	0.00
Unvested at December 31, 2019	679,158	0.21
Vested (unaudited)	(210,516)	0.46
Cancelled (unaudited)	(14,844)	0.04
Unvested at March 31, 2020 (unaudited)	453,798	0.14

The fair value of shares that vested during the year ended December 31, 2019 and the three months ended March 31, 2020 (unaudited) was $4,369 and $1,099, respectively.

The Company has reserved the following shares of common stock:

	December 31, 2018	December 31, 2019	March 31, 2020 (unaudited)
Conversion of Series A preferred stock	16,002,820	16,002,820	16,002,820
Conversion of Series B preferred stock	8,783,102	8,783,102	8,783,102
Conversion of Series C preferred stock	34,596,923	35,097,955	35,097,955
Shares reserved under the compensation plan	8,579,793	8,407,169	8,336,169
Total shares of common stock reserved for issuance	67,962,638	68,291,046	68,220,046

Relay Therapeutics, Inc.

Notes to Consolidated Financial Statements

(In thousands, except share and per share data)

9. Share-Based Payments

In 2016, the Company adopted the Relay Therapeutics, Inc. Stock Option and Grant Plan (the Plan). All of the Company's employees, officers, directors, consultants and advisors are eligible to be granted options, restricted stock units, or RSUs, and other stock-based awards under the terms of the Plan. The Plan initially provided for the grant of awards for up to 2,783,785 shares of common stock. During the year ended December 31, 2017, the Company increased the number of shares issuable for grant by 1,899,808 to 4,683,593. During the year ended December 31, 2018, the Company increased the number of shares issuable under the Plan by 6,267,562 to 10,951,155. There were 3,100,839 and 946,235 share-based awards available for grant at December 31, 2019 and March 31, 2020 (unaudited), respectively.

The following table summarizes the stock option activity under the Plan for the year ended December 31, 2019:

	Number of Stock Options	Weighted-Average Exercise Price	Weighted-Average Remaining Term (years)	Aggregate Intrinsic Value
Outstanding at December 31, 2018	2,672,298	$ 3.91	9.36	$ 3,068
Granted	3,087,711	5.04		
Exercised	(178,969)	3.44		318
Cancelled	(274,864)	3.30		
Outstanding at December 31, 2019	5,306,176	4.62	8.99	3,214
Granted (unaudited)	2,276,381	5.22		
Exercised (unaudited)	(85,845)	4.08		97
Cancelled (unaudited)	(106,942)	4.86		
Outstanding at March 31, 2020 (unaudited)	7,389,770	4.80	9.11	3,081
Vested at December 31, 2019	939,176	4.08	8.47	1,080
Vested at March 31, 2020 (unaudited)	1,216,298	4.26	8.40	1,172
Non-vested at December 31, 2019	4,347,000	4.72	9.11	2,134
Non-vested at March 31, 2020 (unaudited)	6,173,472	4.90	9.25	1,908

During the three months ended March 31, 2020, the Company's board of directors approved the issuance of options with performance-based vesting conditions to purchase 1,960,547 shares of common stock, which are included in the table above. The commencement of vesting is based on the achievement of certain scientific and operational milestones during a two-year period, for which the achievement is discretionary and subject to the approval of the Company's board of directors. As a result, the Company has concluded a grant date for accounting purposes will not be determined until the date achievement of the specified milestones is approved by the Board of Directors. The Company will therefore apply variable accounting for these awards. The service inception date precedes the grant date for these awards as the awards have been authorized, the recipients are providing service prior to the grant date, and there is a performance condition that, if not met by the accounting grant date, would result in the forfeiture of the award. Therefore, the stock-based compensation expense to be recognized for the options will ultimately be based on the fair value of the awards on the accounting grant date. The Company's board of directors had not approved the vesting of any of these awards as of March 31, 2020.

Relay Therapeutics, Inc.

Notes to Consolidated Financial Statements

(In thousands, except share and per share data)

9. Share-Based Payments (continued)

The Company estimated the fair value of its stock options using the following assumptions:

	Year Ended December 31,		Three Months Ended March 31,	
	2018	2019	2019	2020
			(unaudited)	
Risk-free interest rate	2.3 – 3.1%	1.5 – 2.5%	2.5%	0.6 – 1.8%
Expected term (in years)	6.3	6.3	6.3	6.3
Expected volatility	67.6 – 70.2%	72.8 – 73.47%	73.2%	73.5 – 75.7%
Expected dividend yield	0%	0%	0%	0%

The weighted average grant date fair value of stock options granted during the years ended December 31, 2018 and 2019 and the three months ended March 31, 2019 and 2020 (unaudited) was $2.95 per share, $3.34 per share, $3.37 per share and $3.44 per share, respectively.

Stock-based compensation expense included in the Company's consolidated statements of operations and comprehensive loss is as follows:

	Year Ended December 31,		Three Months Ended March 31,	
	2018	2019	2019	2020
			(unaudited)	
Research and development expenses	$ 1,839	$ 2,687	$ 555	$ 897
General and administrative expenses	1,048	1,769	265	558
	$ 2,887	$ 4,456	$ 820	$ 1,455

As of December 31, 2019, total unrecognized compensation cost related to the unvested stock-based awards was $20,662, which is expected to be recognized over a weighted average period of 3.09 years. As of March 31, 2020 (unaudited), total unrecognized compensation cost related to the unvested stock-based awards was $20,280, which is expected to be recognized over a weighted average period of 3.24 years. The Company did not recognize any stock-based compensation expense on the performance-based awards as of March 31, 2020 as achievement of the underlying milestones was not deemed probable. The amount of stock-based compensation expense for these awards is variable and the Company will ultimately recognize stock-based compensation expense for the performance-based awards based on the fair value of the awards on the date the Company's board of directors approves the vesting of such options.

The four year vesting term of these awards will commence upon the board of director's approval of the achievement of the specified milestones.

10. Income Taxes

During the years ended December 31, 2018 and 2019 and the three months ended March 31, 2019 and 2020 (unaudited), the Company recorded no income tax benefits due to the losses incurred due to the uncertainty of future taxable income.

(In thousands, except share and per share data)

10. Income Taxes (continued)

A reconciliation of the expected income tax (benefit) computed using the federal statutory income tax rate to the Company's effective income tax rate is as follows for the year ended December 31, 2018 and 2019:

	December 31,	
	2018	2019
Income tax computed at federal statutory rate	21.0%	21.0%
State taxes, net of federal benefit	5.8%	7.0%
Change in valuation allowance	(29.6)%	(31.0)%
R&D credit carryovers	3.7%	4.1%
Permanent differences	(0.9)%	(1.1)%
Total	0.0%	0.0%

The Company's deferred tax assets at December 31, 2018 and 2019, consist of the following:

	December 31,	
	2018	2019
Deferred tax assets:		
Net operating losses	$ 24,280	$ 42,647
Tax credit carryforwards	2,952	6,309
Lease liability	—	6,542
Intangibles	623	1,498
Stock-based compensation	212	534
Depreciation and amortization	146	188
Other	17	13
Total gross deferred tax asset	28,230	57,731
Valuation allowance	(28,230)	(51,537)
Net deferred tax asset	—	6,194
Deferred tax liability		
Operating lease assets	—	(6,194)
Total deferred tax liability	—	(6,194)
	$ —	$ —

The Company has incurred net operating losses (NOL) since inception. As of December 31, 2019, the Company had federal NOL carryforwards of $154,262 available to reduce taxable income, of which $43,127 expire beginning in 2035 and $111,135 do not expire. The Company has state NOL carryforwards of $162,217 as of December 31, 2019 available to reduce future state taxable income, which expire at various dates beginning in 2035.

As of December 31, 2019, the Company also had available federal research and development tax credit carryforwards of $4,806 available to reduce future tax liabilities which begin to expire beginning in 2035. The Company also has state research and development tax credit carryforwards of $1,903, available to reduce future state tax liabilities and which expire at various dates beginning in 2030.

10. Income Taxes (continued)

Utilization of the NOL carryforwards and research and development tax credit carryforwards may be subject to a substantial annual limitation under Section 382 of the Internal Revenue Code of 1986 due to ownership changes that have occurred previously or that could occur in the future. These ownership changes may limit the amount of carryforwards that can be utilized annually to offset future taxable income. In general, an ownership change, as defined by Section 382, results from transactions increasing the ownership of certain shareholders or public groups in the stock of a corporation by more than 50% over a three-year period. The Company has not conducted a study to assess whether a change of control has occurred or whether there have been multiple changes of control since inception due to the significant complexity and cost associated with such a study. If the Company has experienced a change of control, as defined by Section 382, at any time since inception, utilization of the net operating loss carryforwards or research and development tax credit carryforwards would be subject to an annual limitation under Section 382, which is determined by first multiplying the value of the Company's stock at the time of the ownership change by the applicable long-term tax-exempt rate, and then could be subject to additional adjustments, as required. Any limitation may result in expiration of a portion of the net operating loss carryforwards or research and development tax credit carryforwards before utilization. Further, until a study is completed and any limitation is known, no amounts are being presented as an uncertain tax position.

The Company has recorded a valuation allowance against its deferred tax assets for the years ended December 31, 2018 and 2019, because the Company's management believes that it is more likely than not that these assets will not be realized. The valuation allowance increased by approximately $14,439 and $23,307 for the years ended December 31, 2018 and 2019, respectively, primarily as a result of operating losses generated with no corresponding financial statement benefit.

The Company had no unrecognized tax benefits as of December 31, 2018 and 2019 and March 31, 2020 (unaudited).

The Company files tax returns as prescribed by the tax laws of the jurisdictions in which it operates. In the normal course of business, the Company is subject to examination by federal and state jurisdictions, where applicable. There are currently no pending tax examinations. The Company's tax years are still open under statute from inception to the present.

In response to the COVID-19 pandemic, the Coronavirus Aid, Relief and Economic Security Act (CARES Act) was signed into law in March 2020. The CARES Act lifts certain deduction limitations originally imposed by the Tax Cuts and Jobs Act of 2017 (2017 Tax Act). Corporate taxpayers may carryback NOLs originating during 2018 through 2020 for up to five years, which was not previously allowed under the 2017 Tax Act. The CARES Act also eliminates the 80% of taxable income limitations by allowing corporate entities to fully utilize NOL carryforwards to offset taxable income in 2018, 2019 or 2020. Taxpayers may generally deduct interest up to the sum of 50% of adjusted taxable income plus business interest income (30% limit under the 2017 Tax Act) for tax years beginning January 1, 2019 and 2020. The CARES Act allows taxpayers with alternative minimum tax credits to claim a refund in 2020 for the entire amount of the credits instead of recovering the credits through refunds over a period of years, as originally enacted by the 2017 Tax Act.

In addition, the CARES Act raises the corporate charitable deduction limit to 25% of taxable income and makes qualified improvement property generally eligible for 15-year cost-recovery and 100% bonus depreciation. The enactment of the CARES Act did not result in any adjustments to the Company's income tax provision for the

Relay Therapeutics, Inc.

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(In thousands, except share and per share data)

10. Income Taxes (continued)

three months ended March 31, 2020 (unaudited), or to the Company's net deferred tax assets as of March 31, 2020 since the Company has not recorded any U.S. federal or state income tax benefits for the net losses incurred in any year due to our uncertainty of realizing a benefit from those items.

11. Net Loss Per Share

The following table summarizes the computation of basic and diluted net loss per share of the Company:

	Year Ended December 31,		Three Months Ended March 31,	
	2018	2019	2019	2020
			(unaudited)	
Net loss	$ (48,785)	$ (75,305)	$ (14,182)	$ (24,886)
Weighted average common stock outstanding, basic and diluted	2,485,163	3,450,000	3,087,779	4,153,791
Net loss per share – basic and diluted	$ (19.63)	$ (21.82)	$ (4.59)	$ (5.99)

The Company's potentially dilutive securities, which include convertible preferred stock, options to purchase common stock and unvested restricted stock, have been excluded from the computation of diluted net loss per share as the effect would be to reduce the net loss per share. Therefore, the weighted average number of common shares outstanding used to calculate both basic and diluted net loss per share is the same. The Company excluded the following potential common shares, presented based on amounts outstanding at each period end, from the computation of diluted net loss per share for the periods indicated because including them would have had an anti-dilutive effect:

	Year Ended December 31,		Three Months Ended March 31,	
	2018	2019	2019	2020
			(unaudited)	
Convertible preferred stock	59,382,845	59,883,877	59,883,877	59,883,877
Options to purchase common stock	2,672,298	5,306,176	3,039,812	7,389,770
Unvested restricted stock	1,545,993	679,158	1,546,111	453,798
	63,601,136	65,869,211	64,469,800	67,727,445

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12. Pro Forma Net Loss Per Share (unaudited)

Pro forma net loss per common share, basic and diluted, for the year ended December 31, 2019 and the three months ended March 31, 2020 is calculated as follows:

	Year Ended December 31, 2019	Three Months Ended March 31, 2020
Numerator:		
Net loss	$ (75,305)	$ (24,886)
Denominator:		
Weighted average common shares outstanding – basic and diluted	3,450,500	4,153,791
Add: Conversion of convertible preferred stock	61,978,021	61,992,534
Pro forma weighted average common shares outstanding	65,428,521	66,146,325
Pro forma net loss per common share – basic and diluted	$ (1.15)	$ (0.38)

13. Commitments and Contingencies

Intellectual Property License

The Company has a Collaboration and License Agreement with D. E. Shaw Research, LLC (“D. E. Shaw Research”), which holds 9,999,999 shares of Series A and 1,557,875 shares of Series C Preferred Stock in the Company at December 31, 2019. The agreement provides that the parties will jointly conduct research efforts with the goal of identifying and developing product candidates. The term of the agreement is three years and requires the Company to pay an annual fee of $1,000. The Company is also obligated to pay potential development milestone payments under the terms of the agreement up to $7,300 per target, plus sales milestones and royalties, upon the achievement of certain specified contingent events. The Company assessed the milestone and royalty events at December 31, 2018 and 2019 and March 31, 2020 (unaudited), and concluded no such payments were required. The Company recorded research and development expense of $1,000, $1,500, $250 and $250 under this agreement in the years ended December 31, 2018 and 2019 and the three months ended March 31, 2019 and 2020 (unaudited), respectively. At December 31, 2018 and 2019 and March 31, 2020 (unaudited), the Company had an accrued expense balance to D. E. Shaw Research of approximately $372, $372 and $622, respectively.

Other Research Arrangements

The Company has certain other research and license arrangements with third-parties, which provide the Company with research services with the goal of identifying and developing product candidates. The Company is obligated to pay development milestone payments for up to four targets, each in the range of $4,000 to $7,000 upon the achievement of certain specified contingent events. The Company assessed the milestones at December 31, 2018 and 2019 and March 31, 2020 (unaudited) and concluded no such milestone payments were due. The Company incurred approximately $881, $3,493, $246 and $1,195 of research and development expense under these agreements in the years ended December 31, 2018 and 2019 and the three months ended March 31, 2019 and 2020 (unaudited), respectively.

Relay Therapeutics, Inc.

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(In thousands, except share and per share data)

14. Leases

215 First Street

The Company leased office and laboratory space at 215 First Street in Cambridge, Massachusetts ("First Lease") under an operating lease, which commenced in November 2015 and was originally set to expire in December 2020. As discussed below, the Company executed a lease at 399 Binney Street ("Binney Lease") whereby the Company vacated the 215 First Street lease in January 2019 and the future lease commitments terminated at no cost once the Binney Lease commenced. The lease included certain tenant improvement allowances, which the Company amortized through January 2019, the termination of the lease.

399 Binney Street

In December 2017, the Company entered into a facility lease agreement for approximately 44,336 square feet of office and laboratory space at 399 Binney Street, Cambridge, Massachusetts. The Company did not have access to and did not control the facility at any time in 2018 and therefore, no operating lease asset or liability amounts associated with this lease were recorded in the accompanying consolidated balance sheet as of December 31, 2018. The Company gained control of the space in January 2019 and the lease expires in April 2029, subject to certain renewal options, which have not been included in the Company's right of use asset and liability.

As discussed in Note 2, the Company provided a letter of credit in the amount of $878 with a financial institution, which expires September 30, 2028.

The following table summarizes the presentation in the Company's consolidated balance sheets of its operating leases:

	Balance sheet location	December 31, 2018	December 31, 2019
Assets:			
Operating lease assets	Operating lease assets	$ 139	$ 23,560
Liabilities:			
Current operating lease liability	Operating lease liability	$ 178	$ 1,249
Non-current operating lease liability	Operating lease liability, net of current portion	—	23,583
	Total lease liabilities	$ 178	$ 24,832

The following table summarizes the effect of lease costs in the Company's consolidated statements of operations and comprehensive loss for the years ended December 31, 2018 and 2019:

	Statement of operations and comprehensive loss location	Year Ended December 31 2018	Year Ended December 31, 2019
Operating lease costs	Research and development	$646	$3,216
	General and administrative	170	581
	Total operating lease cost	$816	$3,797

(In thousands, except share and per share data)

14. Leases (continued)

The following table summarizes the effect of lease costs in the Company's consolidated statements of operations and comprehensive loss for the three months ended March 31, 2019 and 2020 (unaudited):

	Statement of operations and comprehensive loss location	Three Months Ended March 31 2019	Three Months Ended March 31, 2020
			(unaudited)
Operating lease costs	Research and development	$703	$827
	General and administrative	117	169
	Total operating lease cost	$820	$996

The Company made cash payments of $1,290, $2,602, $203 and $924 under the lease agreements during the years ended December 31, 2018 and 2019 and the three months ended March 31, 2019 and 2020 (unaudited), respectively.

The minimum lease payments as of December 31, 2019 for the next five years and thereafter is expected to be as follows:

Year Ending December 31,	Amount
2020	$ 3,767
2021	3,875
2022	3,987
2023	4,102
2024	4,221
Thereafter	19,733
Total lease payments	39,685
Less: interest	14,853
Present value of operating lease liabilities	$ 24,832

The weighted average remaining lease term and weighted average discount rate of our operating leases were 9.3 years and 10.4%, respectively, at December 31, 2019. The weighted average discount rate was not material to the Company's consolidated financial statements at December 31, 2018 since the lease expired in January 2019. The weighted average remaining lease term and weighted average discount rate of our operating leases were 9.1 years and 10.4%, respectively, at March 31, 2020 (unaudited).

15. Employee Benefits

In 2016, the Company established a defined-contribution plan under Section 401(k) of the Internal Revenue Code (the "401(k) Plan"). The 401(k) Plan covers all employees who meet defined minimum age and service requirements and allows participants to defer a portion of their annual compensation on a pre-tax basis. The Company is not required to make and has not made any matching contributions to the 401(k) Plan for the years ended December 31, 2018 and 2019 and the three months ended March 31, 2019 and 2020 (unaudited).

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(In thousands, except share and per share data)

16. Related Party Transactions

From inception to December 31, 2019, the Company received consulting and management services from Third Rock Ventures LLP ("TRV"), an entity affiliated with certain of the Company's investors. The Company incurred approximately $100 and $200 for these services during the years ended December 31, 2018 and 2019, respectively. At December 31, 2019, $80 was due to TRV for these services. There were no amounts due for these services as of December 31, 2018 and March 31, 2020 (unaudited).

17. Subsequent Events

In preparing the financial statements as of and for the year ended December 31, 2019 the Company has evaluated subsequent events for recognition and measurement purposes through May 22, 2020, the date the consolidated financial statements were issued, and July 9, 2020, the date the revised consolidated financial statements were issued. In preparing the condensed consolidated interim financial statements as of March 31, 2020 and for the three-month period then ended (unaudited), the Company has evaluated subsequent events for recognition and measurement purposes through June 24, 2020, the date the condensed consolidated interim financial statements were issued and July 9, 2020, the date the revised condensed consolidated financial statements were issued. The Company has concluded that no events or transactions have occurred that require disclosure in the accompanying consolidated financial statements, other than the following.

(a) D. E. Shaw Research Agreement Amendment (unaudited)

On June 15, 2020, the Company and D.E. Shaw Research agreed to amend the Collaboration and License Agreement (Amended and Restated Collaboration and License Agreement) discussed in Note 13. The Amended and Restated Collaboration and License Agreement extended the term of the agreement to August 16, 2025 and increased the annual fee from $1,000 to $7,900, commencing on August 16, 2020. The Amended and Restated Collaboration and License Agreement automatically renews for successive one year periods unless either party provides at least one year notice of non-renewal, and the annual fee during each of the one year renewal terms is subject to the mutual agreement of the Company and D.E. Shaw Research.

(b) Performance-Based award vesting approval (unaudited)

On June 23, 2020, the Company's board of directors, in its discretion, determined that the performance milestones related to 25% of the performance-based awards, as discussed in Note 9, had been achieved. The four year vesting term of awards to purchase 490,136 shares of common stock therefore commenced on June 23, 2020.

(c) Authorization of Preferred Stock (unaudited)

On June 23, 2020, the Company's board of directors approved the authorization of 10,000,000 shares of blank check preferred stock with a par value of $0.001, which was approved by the Company's stockholders on July 8, 2020.

(d) Increase in Authorization of Common Stock (unaudited)

On July 8, 2020, the Company's stockholders approved a decrease in the number of authorized shares of common stock from 260,000,000 to 150,000,000.

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(In thousands, except share and per share data)

17. Subsequent Events (continued)

(e) Amendments to Convertible Preferred Stock

On July 8, 2020, the Company's board of directors and its Series C preferred stockholders approved a reduction in the conversion price of the Series C preferred stock from $3.21 to $3.027603 and the Series C preferred stockholders relinquished their protective right with respect to the approval of an automatic conversion of preferred stock in a firm commitment underwritten public offering if the per share price is less than $22.80. As a result of the change in the conversion price, the outstanding shares of Series C preferred stock are convertible into 37,206,604 shares of common stock. The changes to the conversion feature are considered to be substantial changes to material terms of the instrument, and, therefore, the Company will account for the changes as an extinguishment and reissuance of a new instrument for accounting purposes.

In addition on July 8, 2020, the required Convertible Preferred Stockholders authorized the automatic conversion of all shares of Convertible Preferred Stock in an initial public offering, regardless of the price per share or total proceeds raised, as long as the initial public offering is completed on or before September 30, 2020.

(f) Reverse Stock Split

On July 8, 2020, the Company effected a one-for-3.55092 reverse stock split of its issued and outstanding shares of common stock and a proportional adjustment to the existing conversion ratios for each series of the Company's Preferred Stock. Accordingly, all share and per share amounts for all periods presented in the accompanying financial statements and notes thereto have been adjusted retroactively, where applicable, to reflect this reverse stock split and adjustment of the preferred stock conversion ratios.

(g) 2020 Stock Option and Incentive Plan (unaudited)

On July 8, 2020, the Company's shareholders approved the 2020 Stock Option and Incentive Plan (the 2020 Stock Plan), was will become effective on the date immediately prior to the effectiveness of Company's registration statement on Form S-1 for its proposed IPO. The 2020 Stock Plan provides for the issuance of up to 8,376,080 of share-based awards.

(h) Employee Stock Purchase Plan (unaudited)

On July 8, 2020, the Company's shareholders approved the 2020 Employee Stock Purchase Plan (the ESPP). The ESPP will become effective on the date immediately prior to the effectiveness of Company's registration statement on Form S-1 for its proposed IPO. The ESPP provides for the issuance of up to 1,092,532 of share-based awards.

20,000,000 Shares

Common Stock

PROSPECTUS

Joint Book-Running Managers

J.P. Morgan **Goldman Sachs & Co. LLC** **Cowen** **Guggenheim Securities**

Until August 9, 2020, 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.

July 15, 2020