UNITED STATES
SECURITIES AND EXCHANGE COMMISSION

Washington, D.C. 20549

FORM 10-K

(Mark One)

☒ **ANNUAL REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934**

For the fiscal year ended December 31, 2022

OR

☐ **TRANSITION REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934**
FOR THE TRANSITION PERIOD FROM TO

Commission File Number: 001-39385

RELAY THERAPEUTICS, INC.

(Exact name of Registrant as specified in its Charter)

Delaware	**47-3923475**
(State or other jurisdiction of incorporation or organization)	**(I.R.S. Employer Identification No.)**
399 Binney Street, 2nd Floor Cambridge, MA	**02139**
(Address of principal executive offices)	**(Zip Code)**

Registrant's telephone number, including area code: (617) 370-8837

Securities registered pursuant to Section 12(b) of the Act:

Title of each class	Trading Symbol(s)	Name of each exchange on which registered
Common Stock, par value $0.001 per share	**RLAY**	**NASDAQ Global Market**

Securities registered pursuant to Section 12(g) of the Act: **None**

Indicate by check mark if the Registrant is a well-known seasoned issuer, as defined in Rule 405 of the Securities Act. YES ☒ NO ☐

Indicate by check mark if the Registrant is not required to file reports pursuant to Section 13 or 15(d) of the Act. YES ☐ NO ☒

Indicate by check mark whether the Registrant: (1) has filed all reports required to be filed by Section 13 or 15(d) of the Securities Exchange Act of 1934 during the preceding 12 months (or for such shorter period that the Registrant was required to file such reports), and (2) has been subject to such filing requirements for the past 90 days. YES ☒ NO ☐

Indicate by check mark whether the Registrant has submitted electronically every Interactive Data File required to be submitted pursuant to Rule 405 of Regulation S-T (§232.405 of this chapter) during the preceding 12 months (or for such shorter period that the Registrant was required to submit such files). YES ☒ NO ☐

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

Large accelerated filer	☒	Accelerated filer	☐
Non-accelerated filer	☐	Smaller reporting company	☐
		Emerging growth company	☐

If an emerging growth company, indicate by check mark if the Registrant has elected not to use the extended transition period for complying with any new or revised financial accounting standards provided pursuant to Section 13(a) of the Exchange Act. ☐

Indicate by check mark whether the Registrant has filed a report on and attestation to its management's assessment of the effectiveness of its internal control over financial reporting under Section 404(b) of the Sarbanes-Oxley Act (15 U.S.C. 7262(b)) by the registered public accounting firm that prepared or issued its audit report. ☒

If securities are registered pursuant to Section 12(b) of the Act, indicate by check mark whether the financial statements of the Registrant included in the filing reflect the correction of an error to previously issued financial statements. ☐

Indicate by check mark whether any of those error corrections are restatements that required a recovery analysis of incentive-based compensation received by any of the Registrant's executive officers during the relevant recovery period pursuant to §240.10D-1(b). ☐

Indicate by check mark whether the Registrant is a shell company (as defined in Rule 12b-2 of the Exchange Act). YES ☐ NO ☒

The aggregate market value of common stock held by non-affiliates of the Registrant based on the closing price of the Registrant's common stock as reported on the Nasdaq Global Market on June 30, 2022, the last business day of the Registrant's most recently completed second quarter, was approximately $1.8 billion. In determining the market value of non-affiliate common stock, shares of the Registrant's common stock beneficially owned by officers, directors and affiliates have been excluded. This determination of affiliate status is not necessarily a conclusive determination for other purposes.

The number of shares of Registrant's Common Stock outstanding as of February 17, 2023 was 121,384,719.

DOCUMENTS INCORPORATED BY REFERENCE

The Registrant intends to file a definitive proxy statement pursuant to Regulation 14A relating to the 2023 Annual Meeting of Stockholders within 120 days of the end of the registrant's fiscal year ended December 31, 2022. Portions of such definitive proxy statement are incorporated by reference into Part III of this Annual Report on Form 10-K to the extent stated herein.

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SUMMARY OF THE MATERIAL RISKS ASSOCIATED WITH OUR BUSINESS

- We have never successfully completed any clinical trials, and we may be unable to do so for any product candidates we develop. We may incur additional costs or experience delays in completing, or ultimately be unable to complete, the development and commercialization of our product candidates.

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

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

- Our current or future clinical trials may reveal significant adverse events not seen in our preclinical or nonclinical studies or early clinical data and may result in a safety profile that would inhibit regulatory approval or market acceptance of any of our product candidates.

- 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.

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

- If we are not able to obtain, or if delays occur 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.

- Under our Amended and Restated Collaboration and License Agreement, or the DESRES Agreement, with D. E. Shaw Research, LLC, or D. E. Shaw Research, 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.

- We rely on third parties to conduct our ongoing clinical trials of RLY-4008 and RLY-2608 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 have and may enter into other collaborations with third parties for the research, development, manufacture and commercialization of one or more of our programs or product candidates. If these collaborations are not successful, our business could be adversely affected.

- We are a biopharmaceutical company with a limited operating history. We have incurred significant operating losses since our inception and anticipate that we will incur continued losses for the foreseeable future. We have no products approved for commercial sale and have not generated any revenue from product sales.

- 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 ongoing COVID-19 pandemic has impacted our business and any future pandemic, epidemic, or outbreak of an infectious disease could similarly affect our business and our financial results and could cause further disruption to the development of our product candidates.

- Global economic and political conditions, including economic volatility associated with inflation and rising interest rates, as well as political uncertainty relating to the conflict between Russia and Ukraine, are difficult to mitigate and could pose challenges to our growth and profitability.

- 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 will be impaired.

- 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.

SPECIAL NOTE REGARDING FORWARD-LOOKING STATEMENTS

This Annual Report on Form 10-K contains express or implied "forward-looking statements," within the meaning of the Private Securities Litigation Reform Act of 1995, 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 contained in this Annual Report on Form 10-K 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;
- the identification of research priorities and application of 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;
- the potential safety and efficacy of our product candidates and the therapeutic implications of clinical and preclinical data;
- the manufacture of our drug substances, delivery vehicles, and product candidates for preclinical use, for clinical trials and on a larger scale for commercial use, if approved;
- our relationships with our third-party strategic collaborators and their ability to continue research and development activities relating to our development candidates and product candidates;
- the funding for our operations necessary to complete further development and commercialization of our product candidates;
- our plans to seek regulatory approval of our product candidates;
- 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 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 with 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 on our business and programs;
- developments relating to our competitors and our industry;
- the effect of the ongoing COVID-19 pandemic and the current conflict between Russia and Ukraine, 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 current and future clinical trials; and
- other risks and uncertainties, including those listed under the caption "Risk Factors."

In some cases, you can identify forward-looking statements by terminology such as "may," "can," "should," "expects," "intends," "plans," "anticipates," "believes," "estimates," "predicts," "potential," "projects," "will," "might," "could," "continue," or the negative of these terms or other comparable terminology. These statements are only predictions. All statements other than statements of historical facts are statements that could be deemed forward-looking statements. 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 above under "Summary of the Material Risks Associated with Our Business," those listed below under the section titled "Risk Factors" and elsewhere in this Annual Report on Form 10-K. 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 Annual Report on Form 10-K and the documents that we reference in this Annual Report on Form 10-K and have filed with the Securities and Exchange Commission, or the SEC, as exhibits hereto 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 Annual Report on Form 10-K represent our views as of the date of this Annual Report on Form 10-K. 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 Annual Report on Form 10-K.

This Annual Report on Form 10-K also contains estimates, projections and other information concerning our industry, our business and the markets for our product candidates. Information that is based on estimates, forecasts, projections, market research or similar methodologies is inherently subject to uncertainties and actual events or circumstances may differ materially from events and circumstances that are assumed in this information. Unless otherwise expressly stated, we obtained this industry, business, market, and other data from our own internal estimates and research as well as from reports, research surveys, studies, and similar data prepared by market research firms and other third parties, industry, medical and general publications, government data and similar sources. While we are not aware of any misstatements regarding any third-party information presented in this Annual Report on Form 10-K, 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 titled "Risk Factors" and elsewhere in this Annual Report on Form 10-K.

PART I

Except where the context otherwise requires or where otherwise indicated, the terms "Relay Therapeutics," "we," "us," "our," "our company," the "Company," and "our business" refer to Relay Therapeutics, Inc. and its consolidated subsidiaries.

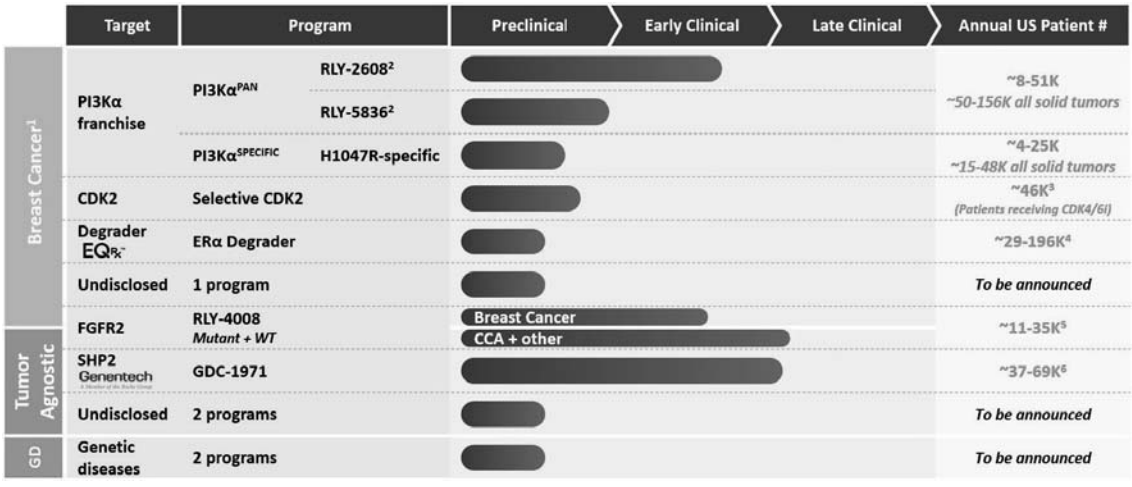
Item 1. Business.

Overview

We are a clinical-stage precision medicine company transforming the drug discovery process by combining leading-edge computational and experimental technologies with the goal of bringing life-changing therapies to patients. As we believe we are among the first of a new breed of biotech created at the intersection of complementary techniques and technologies, we aim to push the boundaries of what's possible in drug discovery. Our Dynamo™ platform integrates an array of leading-edge computational and experimental approaches designed to drug protein targets that have previously been intractable or inadequately addressed. Our initial focus is on enhancing small molecule therapeutic discovery in targeted oncology and genetic disease indications.

We have deployed our technology platform to build a pipeline of product candidates to address targets in precision medicine 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.

We are advancing a pipeline of medicine candidates to address targets in precision oncology and genetic disease, including our lead product candidates, RLY-4008, RLY-2608 and GDC-1971 (formerly known as RLY-1971).



Note: Unless otherwise indicated, patient numbers refer to total annual number of patients in the United States with late-line cancers compared to comprehensive annual incidence that may be amenable to treatment with our programs.

1. Unless otherwise indicated, all breast cancer patient numbers refer to HR+/HER2- breast cancer tumors.

2. RLY-2608 and RLY-5836 cover H1047X, E542X, E545X hot spots, and breast cancer patient range assumes HR+/HER2- population.

3. ~46k HR+/HER2- breast cancer patients expected to receive CDK 4/6 inhibitors in adjuvant setting, first-line setting, and second-line setting in 2023, per Decision Resources Breast Cancer Market Forecast, report dated June 2022.

4. HR+/HER2- US late-line breast cancer patients compared to HR+/HER2- U.S. incident breast cancer patients.

5. FGFR2 altered late-line solid tumors compared to comprehensive annual FGFR2 altered incident solid tumors including additional FGFR gene fusions and rearrangements resulting from truncation of the protein at exon 18.

6. SHP2 combo only includes KRAS G12C in lung cancer and CRC, EGFR mutations in lung cancer, and ALK fusions in lung cancer.

- **RLY-4008.** In the third quarter of 2020, we initiated a first-in-human clinical trial for RLY-4008, or the RLY-4008 ReFocus Trial, a potent, selective and oral small molecule inhibitor of fibroblast growth factor receptor 2, or FGFR2, for patients with advanced or metastatic FGFR2-altered solid tumors. In October 2021, we announced

initial clinical data from this trial, which suggested robust inhibition of FGFR2 in the first 49 subjects that was not observed to be limited by off-target toxicities, including hyperphosphatemia and diarrhea, as of the data cut-off date of September 9, 2021. In December 2021, we initiated expansion cohorts at a continuous 70 mg once-daily, or QD, dose, and in January 2022, the U.S. Food and Drug Administration, or FDA, granted orphan drug designation to RLY-4008 for the treatment of cholangiocarcinoma, or CCA. In the first half of 2022, we conducted an end-of-Phase 1 meeting with the FDA to discuss next steps for the clinical development of RLY-4008. Based on discussions with the FDA, we have decided to move forward with a single-arm trial design for pan-FGFR, or FGFRi, treatment-naïve, FGFR2-fusion CCA at 70 mg QD to potentially support accelerated approval. In June 2022, we announced the anticipated registrational path for RLY-4008 in CCA and the interim clinical data with a data cut-off date of April 19, 2022 that was shared with the FDA to support that potential registrational path. In September 2022, we announced additional interim clinical data for RLY-4008 with a data cut-off date of August 1, 2022 that was presented at the European Society for Medical Oncology Congress 2022. This interim clinical data, which showed an interim overall response rate, or ORR, of 88% from the FGFRi treatment-naïve FGFR-2-fusion CCA patients treated at the pivotal dose of 70 mg QD and an interim ORR of 63% across all dose levels and schedules, are discussed below in "Our Product Pipeline and Programs —Our Clinical Stage Programs—RLY-4008, a selective inhibitor of FGFR2 – Interim clinical data." In October 2022, the European Medicines Agency, or EMA, adopted a positive opinion on the orphan drug designation application for RLY-4008 for the treatment of biliary tract cancer.

- **RLY-2608.** In December 2021, we dosed the first patient in a first-in-human clinical trial for RLY-2608, or the RLY-2608 ReDiscover Trial, the first known allosteric, pan-mutant (H1047X, E542X and E545X) and isoform-selective phosphoinostide 3 kinase alpha, or PI3Kα, inhibitor in clinical development. In April 2022, we initiated the second arm of the dose escalation part of this trial, evaluating RLY-2608 in combination with fulvestrant for patients with HR+, HER2–, PI3Kα-mutated, locally advanced or metastatic breast cancer. RLY-2608 is the lead program of multiple efforts in our PI3Kα franchise to discover and develop mutant selective inhibitors of PI3Kα. In the fourth quarter of 2021, we announced preclinical data for RLY-2608, in which we observed that RLY-2608 preferentially bound to mutant PI3Kα at a novel allosteric site discovered by the Dynamo platform. The data also suggest that projected clinically relevant doses of RLY-2608 achieved tumor regression in PIK3CA mutant in vivo xenograft mouse models representing H1047R and E545K mutations with significantly reduced impact on glucose metabolism compared to non-mutant selective active site inhibitors. The data further suggest that in preclinical models, RLY-2608 combined with standard of care therapies resulted in regressions in ER+/HER2- breast cancer.

- **GDC-1971 (formerly known as RLY-1971).** In the first quarter of 2020, we initiated a Phase 1a clinical trial for RLY-1971, our inhibitor of Src homology region 2 domain-containing phosphatase-2, or SHP2, as a monotherapy in patients with advanced or metastatic solid tumors. We completed enrollment of this trial in 2022. In December 2020, we entered into a global collaboration and license agreement with Genentech, Inc., a member of the Roche Group, or Genentech, for the development and commercialization of RLY-1971 (now referred to as GDC-1971), or the Genentech Agreement. Genentech initiated the cohort of GDC-1971 in combination with GDC-6036, its KRAS G12C inhibitor, in a Phase 1b trial in July 2021, and a Phase 1b trial of GDC-1971 in combination with atezolizumab, its PD-L1 antibody, in August 2022.

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 indications. In addition to the three lead product candidates described above, we announced three discovery stage programs in June 2022 as part of our HR+/HER2- breast cancer franchise, including a selective cyclin dependent kinase 2, or CDK2, inhibitor, a rationally designed estrogen receptor alpha, or ERα, degrader and a selective and chemically distinct pan-mutant PI3Kα inhibitor, RLY-5836. We also have five additional discovery stage programs across both 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 or inadequately addressed using conventional drug discovery tools. While conventional approaches are well-suited to solving some drug discovery problems such as orthosteric site kinase inhibitors, their reliance on static images of protein fragments limit their ability to gain accurate insights into the dynamic behavior of proteins in their natural state, which in turn limits their 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®.

In 2016, 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 establishment of our Dynamo platform. 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 and experience to-date, to integrate these solutions into Motion-Based Drug Design to create medicines that will make a transformative difference for patients.

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 Motion-Based Drug Design discovery, our unique Dynamo platform has the potential to address previously intractable or inadequately addressed precision medicine targets. To accomplish this, we intend to continue building a team that shares our commitment to patients, continue to enhance our platform and 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-4008 and RLY-2608, 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. RLY-4008 is currently being evaluated in the RLY-4008 Refocus Trial in patients with advanced or metastatic FGFR2-altered solid tumors with a single arm, potentially registration-enabling cohort for FGFRi treatment-naïve, FGFR2-fusion CCA. In January 2022, the FDA granted orphan drug designation to RLY-4008 for the treatment of CCA. Additionally, in the first half of 2022, we conducted an end-of-Phase 1 meeting with the FDA to discuss next steps for the clinical development of RLY-4008. Based on discussions with the FDA, we have decided to move forward with a single-arm trial design for FGFRi treatment-naïve, FGFR2-fusion CCA at 70 mg QD to potentially support accelerated approval. In June 2022, we announced the anticipated registrational path for RLY-4008 in CCA. In September 2022, we announced additional interim clinical data for RLY-4008 with a data cut-off date of August 1, 2022 that we presented at the European Society for Medical Oncology Congress 2022. In December 2021, we dosed the first patient in the RLY-2608 ReDiscover Trial, and in April 2022, we initiated the second arm of the dose escalation part of this trial, evaluating RLY-2608 in combination with fulvestrant for patients with HR+, HER2–, PI3Kα-mutated, locally advanced or metastatic breast cancer. RLY-2608 is the lead program in our emerging PI3Kα franchise, for which we continue to explore additional molecules to augment this foundation. We plan to continue to conduct our clinical studies in genetically-defined patient populations. To potentially mitigate development risks, we will continue to 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 believe we have validated our Dynamo platform and approach with the encouraging interim clinical data for RLY-4008 that we have announced over the course of 2021 and 2022, with RLY-2608 also currently in clinical development, and three additional discovery stage programs announced in June 2022 in connection with our HR+/HER2- breast cancer franchise. We believe we have built significant advantage by accumulating extensive curated clean data sets across the continuum of drug discovery that span both computational and experimental domains. In April 2021, we acquired ZebiAI Therapeutics, Inc., or ZebiAI, to augment our platform with additional computational and machine learning capabilities as well as an extensive experimental DNA-encoded library, or DEL, data sets, consisting of billions of data points across a broad set of proteins, that have trained validated machine learning models deployed in hit finding and optimization of novel molecules. We are committed to continuously integrating new computational and experimental tools, technologies and capabilities to enhance the power of our Dynamo platform. We intend to do this through a combination of internal innovation, external collaboration and other strategic transactions.

Harness the insights and data generated from our platform against intractable or inadequately addressed precision medicine targets, with current focus on oncology and genetic disease indications. We are committed to deploying our Dynamo platform against genetically validated targets, taking on some of the toughest technical drug discovery challenges and creating novel medicines against those targets that can rapidly attain clinical proof-of-concept and address significant unmet medical needs. Our initial focus is on precision oncology where there are clear genetic driver alterations in the tumor genome, and genetic disease where the causal mutations are present at birth. However, we believe our platform also has potential to address targets in genetically-defined subpopulations of more common diseases in other therapeutic areas.

Selectively enter into strategic collaborations to maximize the value of our platform and pipeline. 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. For example, in December 2020, we entered into the Genentech Agreement, a global collaboration and license agreement with Genentech for the development and commercialization of GDC-1971. In August 2021, we entered into a discovery collaboration agreement with EQRx, Inc., or EQRx, to discover, develop and commercialize novel medicines against validated oncology targets, or the Discovery Collaboration Agreement, and we are currently collaborating on our ERα degrader program pursuant to this agreement. Outside of these two collaborations, we currently retain full development and commercialization rights to our current pipeline of precision medicine programs.

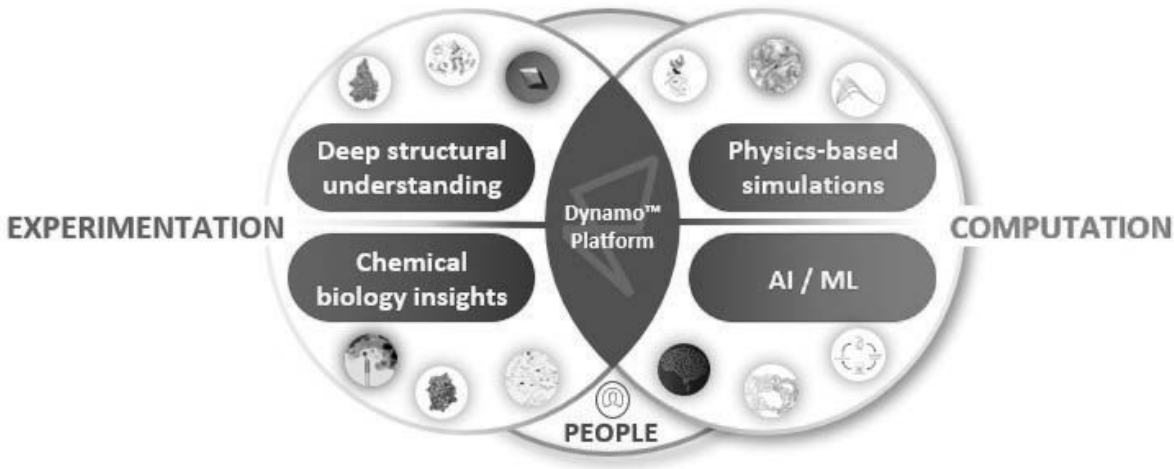
Our Dynamo™ Platform

The continued and rapid development of new experimental techniques, such as cryo-electron microscopy, or Cryo-EM, and ambient-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 approaches, which are based on static structures and often rely on incomplete protein fragments, to a novel drug-discovery paradigm based on fundamental insights into protein motion, which we term Motion-Based Drug Design®. 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.

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 and the establishment of our Dynamo platform. We believe we are uniquely positioned to consolidate these advances and, when combined with our world-class team of experimental and computational experts and experience to-date, to integrate these solutions in Motion-Based Drug Design.

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

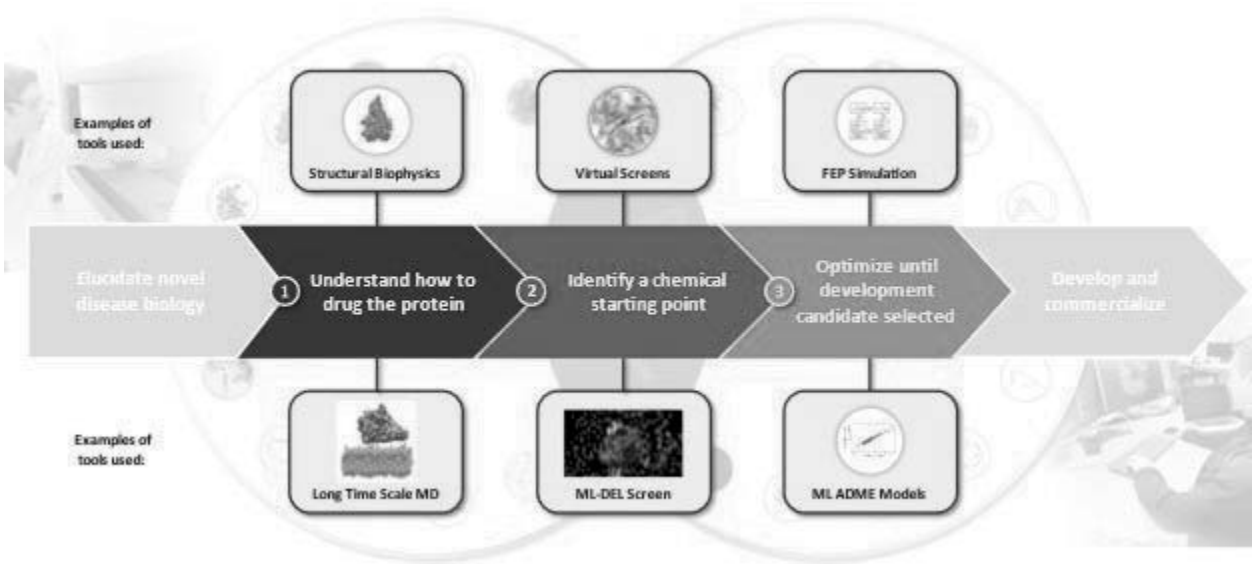
Figure 1: The Dynamo drug-discovery platform is the integration of people, techniques, and tools at the intersection of experimentation and computation.



Key Drug Discovery Steps of our Dynamo Platform

We deploy the power of our Dynamo platform in three key phases of Motion-Based Drug Design discovery (**Figure 2**). We first understand how to drug the protein 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, which allows us to generate a modulation hypothesis. Our platform then aids in efficient hit identification, or the identification of chemical starting points through an integrated system of experimental and virtual screens. This enables rapid lead optimization until a development candidate is selected by computationally prioritizing compounds for experimental evaluation. As 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 with the goal of accelerating drug discovery.



Modulation Hypothesis

Our first step is to understand how to drug 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 a target modulation hypothesis. First, we synthesize full length proteins through our protein engineering expertise. Next, we use a range of protein visualization methods such as Cryo-EM and ambient temperature X-ray crystallography to generate a rich experimental understanding of the dynamic conformations of the target protein of interest. We then deploy these experimental data sets in our computational platform to generate virtual simulations (molecular dynamics) of the full-length protein moving over long, biologically relevant timescales. We use these insights to develop unique motion-based hypotheses for how best to modulate a protein's behavior, and to identify potential novel allosteric binding sites for new therapeutic agents.

Hit Identification

Once we have identified potential binding pockets and established a target modulation hypothesis, we then transition into hit finding and lead generation to identify a chemical starting point. The integration of our computational and experimental capabilities affords a deeper functional understanding of our targets and enables the design of physiologically relevant activity-based, ligand-centric and computational screens. The data from these screens provide input for the machine learning components of the Dynamo platform, which enable us to rapidly identify starting points for our drug discovery programs. As an example of tools we deploy to identify these starting points, we have a proprietary capability, our machine learning powered DNA encoded library platform, what we term "REL-DEL" (Relay DEL). Our approach, focused on this integration of computation and experimentation, yields a larger number of chemical series and potential therapies to proceed into lead optimization.

Lead Optimization

Once we have identified a chemical starting point and a lead compound, optimization is necessary to obtain a molecule that has the desired characteristics. Our Dynamo platform combines advanced machine learning models and molecular dynamics simulations 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. We believe that this allows us to optimize molecules more rapidly and effectively. Due to the integration of computation and experimentation and, unlike traditional drug discovery approaches, our approach is not wholly dependent on the conventional highly iterative process in the experimental wet laboratory, which is both time consuming and expensive.

Our Product Pipeline and Programs

While our Dynamo platform could potentially be applied to a wide range of disease-associated protein targets, we focus on precision medicine targets, currently specifically in oncology and genetic disease indications, 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.

To date, we have entered into strategic partnerships with two of our programs, specifically our collaboration with Genentech for the development and commercialization of GDC-1971 and our collaboration with EQRx for the development of our ERα degrader. Other than these partnered programs, we retain full development and commercialization rights to the rest of our current pipeline of precision medicine programs.

See "—Overview" above for a table that summarizes our current portfolio of product candidates and programs.

Our Clinical Stage Programs

We have three product candidates that are in the early clinical development stage: RLY-4008, RLY-2608 and GDC-1971.

RLY-4008, a selective inhibitor of FGFR2

Overview

RLY-4008 is a potent, selective and oral small molecule inhibitor of 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 is currently being evaluated in the RLY-4008 ReFocus Trial in patients with advanced or metastatic FGFR2-altered solid tumors.

In October 2021, we announced initial clinical data from this trial, which suggested robust inhibition of FGFR2 in the first 49 subjects that was not observed to be limited by off-target toxicities, including hyperphosphatemia and diarrhea, as of the data cut-off date of September 9, 2021. In December 2021, we initiated expansion cohorts at a continuous 70 mg QD dose, and in January 2022, the FDA granted orphan drug designation to RLY-4008 for the treatment of CCA. In the first half of 2022, we conducted an end-of-Phase 1 meeting with the FDA to discuss next steps for the clinical development of RLY-4008. Based on discussions with the FDA, we have decided to move forward with a single-arm trial design for FGFRi treatment-naïve, FGFR2-fusion CCA at 70 mg QD to potentially support accelerated approval. In June 2022, we announced the anticipated registrational path for RLY-4008 in CCA and the interim clinical data with a data cut-off date of April 19, 2022 that was shared with the FDA to support that potential registrational path. In September 2022, we announced additional interim clinical data for RLY-4008 with a data cut-off date of August 1, 2022 that we presented at the European Society for Medical Oncology Congress 2022. This interim clinical data, which showed an interim ORR of 88% from the FGFRi treatment-naïve FGFR-2-fusion CCA patients treated at the pivotal dose of 70 mg QD and an interim ORR of 63% across all dose levels and schedules, are discussed below in "– Interim clinical data." In October 2022, the EMA adopted a positive opinion on the orphan drug designation application for RLY-4008 for the treatment of biliary tract cancer.

Consistent with the preclinical profile of RLY-4008, the early clinical data support our belief that RLY-4008 has broad therapeutic potential across FGFR2 alterations and tumor types.

We believe FGFR2-mediated cancers affect approximately 11,000 late-line patients annually in the United States. In the future, if RLY-4008 advances to earlier lines of treatment, we believe it could potentially address approximately 35,000 patients annually in the United States. These numbers reflect the inclusion of patients with additional FGFR2 gene fusions and rearrangements that result from truncation of the protein at exon 18 based on recently published research suggesting that patients with these truncations should be considered for FGFR-targeted therapies.

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. To our knowledge, to date, four non-selective FGFR inhibitors have been approved, with three on the market (erdafitinib, pemigatinib and futibatinib) and one removed from the market (infigratinib), 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.

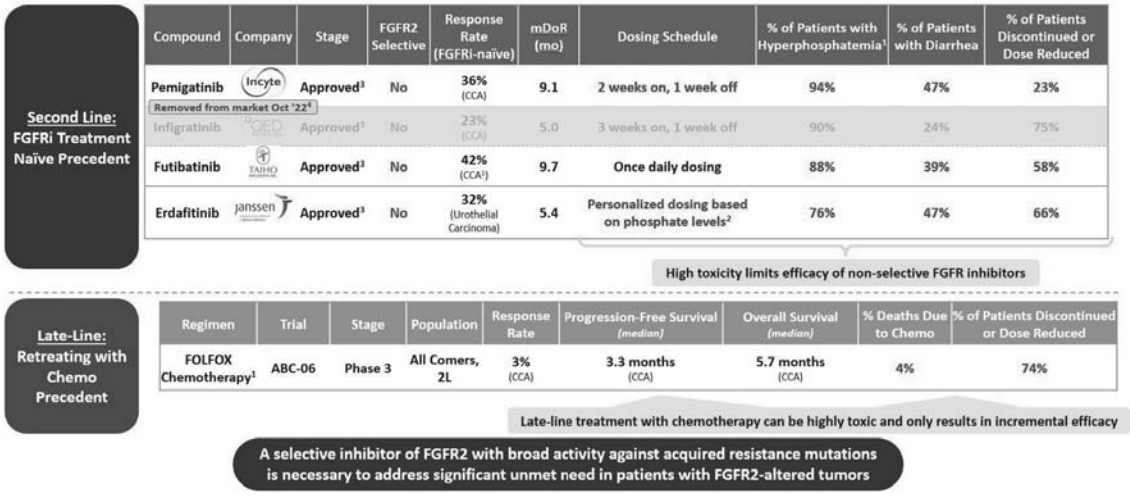
We believe that the toxicity attributable to inhibition of other FGFR family members, and other closely related kinases, limits the ability of the non-selective FGFR inhibitors to achieve optimal and durable inhibition of FGFR2, limiting the efficacy of these agents in patients with FGFR2-altered tumors. 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 cholangiocarcinoma, or CCA, 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 CCA, 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 42% (**Figure 3)**. A key limiting factor for existing FGFR therapies is that, as a class, they are associated with dose-limiting side effects such as hyperphosphatemia, which has been shown to be caused by FGFR1 inhibition, and diarrhea, which has been shown to be caused by FGFR4 inhibition. Additionally, we believe a selective inhibitor of FGFR2 with broad activity against acquired resistance mutations is necessary to address a significant unmet need in patients with FGFR2-altered tumors.

Figure 3: Hyperphosphatemia and diarrhea are dose-limiting adverse events associated with non-selective FGFR inhibitors.



Sources: Pemigatinib – Prescribing information; Futibatinib – Prescribing Information; Erdafitinib – Prescribing information; FOLFOX – ABC-06 Publication in Lancet Oncology 2021

1. As defined by increased serum phosphate; FOLFOX response rate, median progression-free survival, and overall survival from FOLFOX chemotherapy ABC-06 trial are for biliary tract cancer.

2. Initial dose (8 mg QD) adjusted to 9 mg QD only in absence of hyperphosphatemia.

3. Currently have accelerated approval.

4. As reported on the Current Report on Form 8-K filed by BridgeBio Pharma, Inc. on Sept 23, 2022; rate, median progression-free survival, and overall survival from FOLFOX chemotherapy ABC-06 trial are for biliary tract cancer.

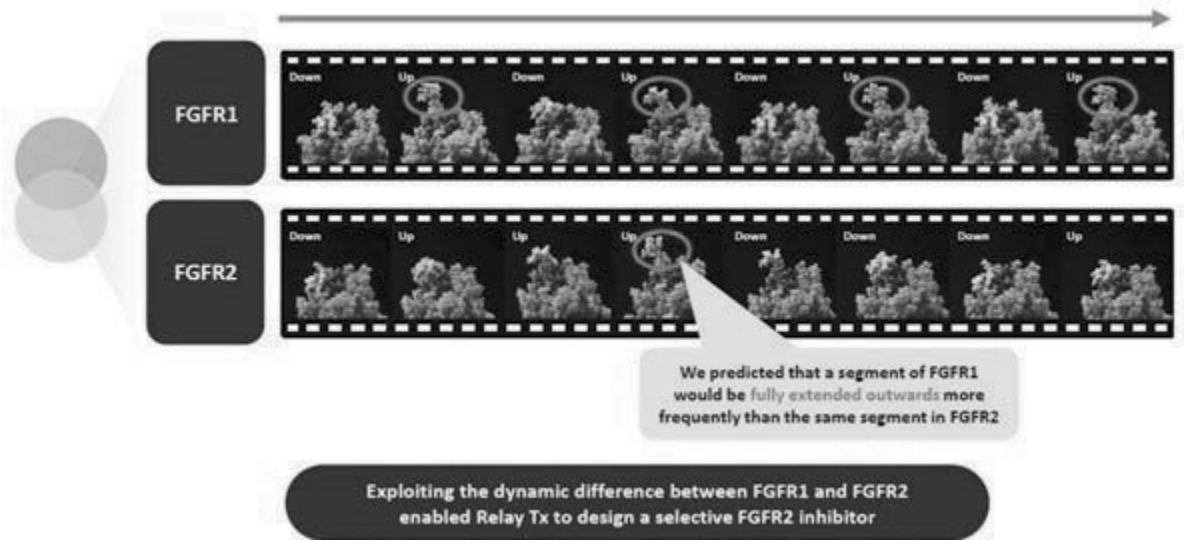
Our solution, RLY-4008

RLY-4008 is an oral, irreversible, 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 4**). We predicted these dynamic differences could be exploited to achieve selective inhibition of FGFR2.

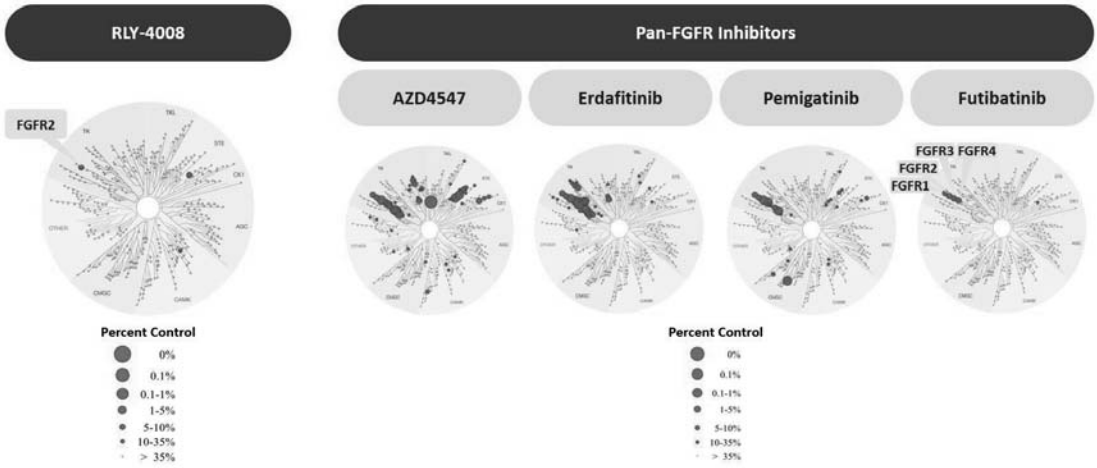
Figure 4: Using MD simulations, we predicted that a segment in FGFR1 was more dynamic than FGFR2, as represented by the schematic below where the segment opens "Up" more frequently in FGFR1 compared to FGFR2.



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.

Our preclinical studies have shown that RLY-4008 displayed selectivity not only within the FGFR family, but across the kinome generally, in contrast to the pan-FGFR inhibitors that are all equipotent against FGFR 1, 2 and 3, as well as many other off-target kinases, which narrow their therapeutic window (**Figure 5**).

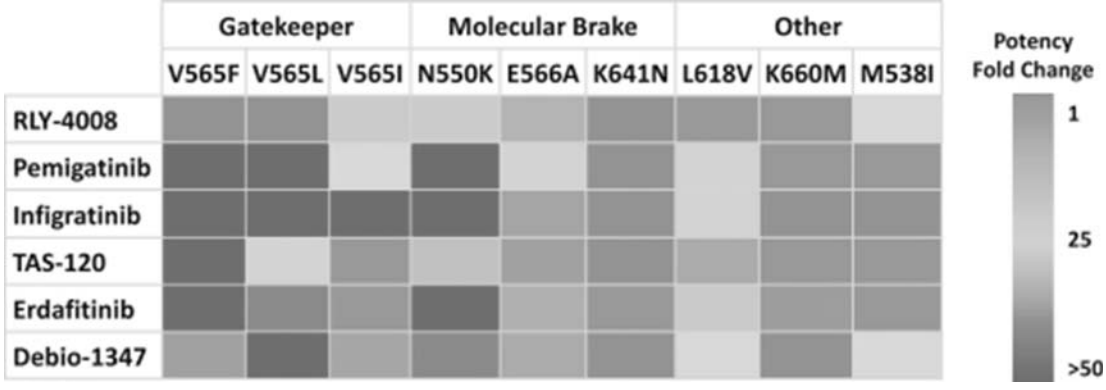
Figure 5: RLY-4008 is a highly selective and irreversible inhibitor.



These kinome scans are based on a single experiment that tested each compound run at 500nM against 468 targets in the absence of adenosine triphosphate (ATP) and without preincubation.
Source: KINOMEscan™ by Eurofins DiscoverX.

Another unique feature of RLY-4008 is that it was designed to exhibit broad coverage against the spectrum of FGFR2 resistance mutations, including the gatekeeper position at V565 and the molecular brake position at N550, some of which can also be de novo mutations. With respect to 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 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 6)**.

Figure 6: RLY-4008 retains potency against common FGFR2 resistance mutations.



This heatmap shows fold change in potency (IC50) on FGFR2 mutations compared to FGFR2 WT. FGFR2 WT or mutants were expressed in HEK-293 cells and potency on FGFR2 was determined using a pFGFR2 HTRF assay. Colors indicate the fold loss in potency for the mutant form vs wildtype. 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. Numbering of mutant residues refers to the FGFR2 IIIb isoform. Fold-change of 1 indicates equivalent potency on FGFR2 WT and the indicated FGFR2 mutant.

Our clinical development plan

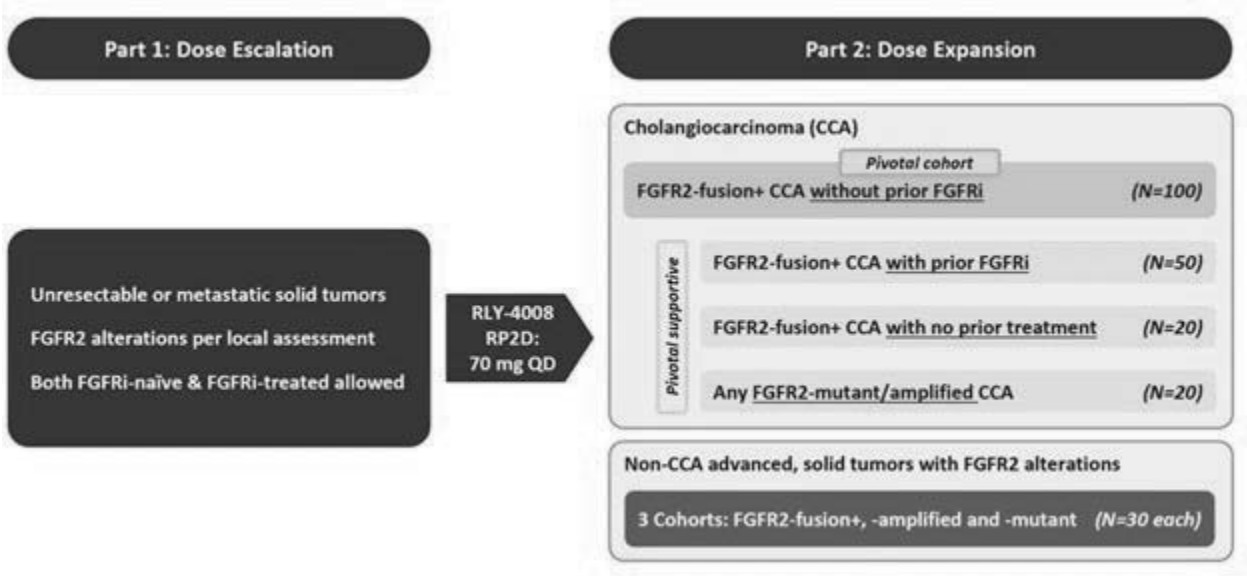
The RLY-4008 clinical development plan seeks to leverage the unique potential for enhanced tolerability and broad FGFR2 mutational coverage to rapidly generate proof-of-concept in molecularly defined patient subsets.

RLY-4008 is currently being evaluated in a first-in-human clinical trial in patients with advanced or metastatic FGFR2-altered solid tumors with a single arm, potentially registration-enabling cohort for FGFRi treatment-naïve, FGFR2-fusion CCA. The RLY-4008 ReFocus Trial is designed to evaluate the safety, tolerability, pharmacokinetics, pharmacodynamics and anti-tumor efficacy of RLY-4008 and consists of three parts: a dose escalation (part 1), a dose expansion (part 2), and an extension (part 3). The dose escalation part of the trial has been completed, with a 70 mg QD selected as the registrational dose, and the expansion cohorts were initiated in December 2021.

In January 2022, the FDA granted orphan drug designation to RLY-4008 for the treatment of CCA. Additionally, in the first half of 2022, we conducted an end-of-Phase 1 meeting with the FDA to discuss next steps for the clinical development of RLY-4008. Based on discussions with the FDA, we decided to move forward with a single arm trial design for FGFRi- treatment-naïve, FGFR2-fusion CCA at 70 mg QD to potentially support accelerated approval. We also added additional supportive CCA cohorts, including frontline, FGFRi-experienced and FGFR2 mutation and amplification patients that could potentially facilitate a line and alteration agnostic label if the submission is approved.

The RLY-4008 ReFocus Trial now has seven different cohorts based on FGFR2 alteration and tumor type. (Figure 7).

Figure 7: RLY-4008 ReFocus Trial Design



Development of RLY-4008 requires identification of appropriate patients for treatment with FGFR2 alterations using molecular diagnostic tests. In early phase clinical trials, patients have been identified using local testing performed at clinical trial sites, with retrospective centralized testing to confirm the tumor genetic status. In later phase trials, we have collaborated with diagnostic partners 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. In September 2022, we engaged Foundation Medicine, Inc. to develop its FoundationOne®CDx as a companion diagnostic for RLY-4008, which we are using to identify patients with FGFR2 fusions, amplifications and mutations and select rearrangements in CCA who may be appropriate for treatment with RLY-4008.

Interim clinical data

In September 2022, we announced interim clinical data for the RLY-4008 ReFocus Trial that was presented at the European Society for Medical Oncology, or ESMO, Congress 2022.

The interim clinical data were based on an August 1, 2022 data cut-off date from both the dose escalation and dose expansion phases of the RLY-4008 ReFocus Trial. The interim clinical data included a safety database of 195 patients, with 89 patients treated at the pivotal dose of 70 mg QD, of which 17 were FGFRi treatment-naïve, FGFR2-fusion CCA patients eligible for efficacy evaluation (patients with measurable disease who had opportunity for two or more tumor assessments to confirm response or discontinued treatment with less than two tumor assessments).

Key interim clinical data include:

- 15 out of 17 of the efficacy evaluable patients at the pivotal dose experienced a partial response resulting in an 88% interim ORR, with 14 confirmed partial responses and one unconfirmed partial response in an ongoing patient.
    - 13 out of 15 responders remained on treatment as of August 1, 2022; one responder came off study to be resected with curative intent.
    - The two patients with the best response of stable disease remained on treatment as of August 1, 2022.
- More broadly across all dose levels and schedules, 38 FGFRi treatment-naïve, FGFR2-fusion CCA patients were eligible for efficacy evaluation, of which 24 experienced a partial response resulting in a 63% interim ORR, with 22 confirmed partial responses and 2 unconfirmed partial responses.

The interim safety analysis as of the August 1, 2022 data cut-off date was generally consistent with our analysis of the interim clinical data for RLY-4008 as of April 19, 2022 that was shared with the FDA as well as our initial clinical data for RLY-4008 as of September 9, 2021 that was announced in October 2021. In particular:

- Most treatment emergent adverse events were expected FGFR2 on-target, low-grade, monitorable, manageable and largely reversible.
- There were no observed Grade 4 or 5 adverse events.
- Off-target toxicities of hyperphosphatemia and diarrhea continued to be clinically insignificant.

RLY-2608 and our mutant-PI3Kα inhibitor program

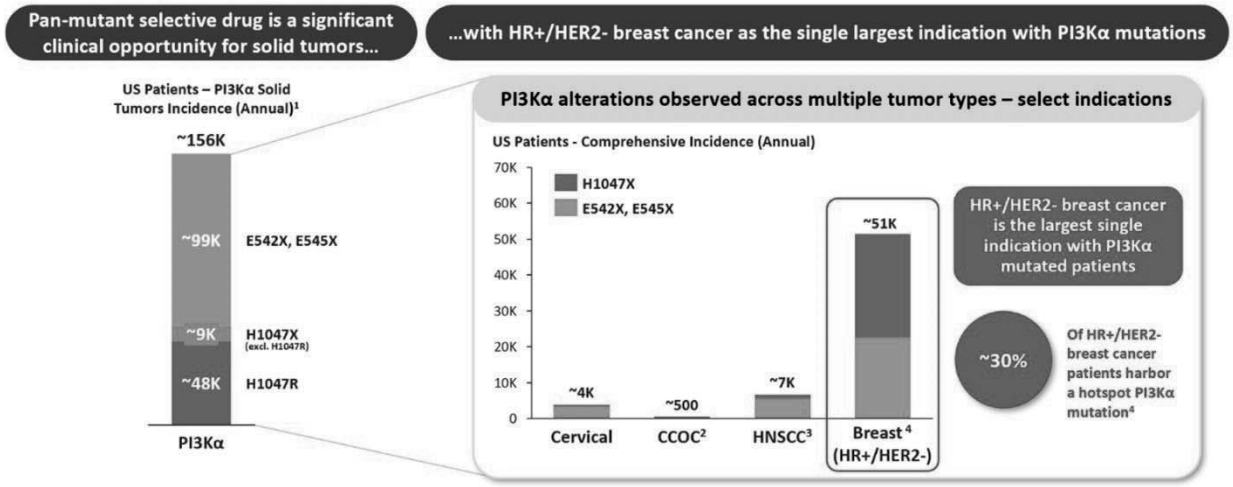
Overview

RLY-2608 is the lead program of multiple efforts to discover and develop mutant selective inhibitors of PI3Kα. PI3Kα is the most frequently mutated kinase in all cancers, with oncogenic mutations detected in about 13% of patients with solid tumors. Traditionally, the development of PI3Kα inhibitors has focused on the active, or orthosteric, site. The therapeutic index of orthosteric inhibitors is limited by the lack of clinically meaningful selectivity for mutant versus wild-type PI3Kα and off-isoform activity. Toxicity related to inhibition of wild-type PI3Kα and other PI3K isoforms results in sub-optimal inhibition of mutant PI3Kα with reductions in dose intensity and frequent discontinuation. The Dynamo platform enabled the discovery of RLY-2608, what we believe to be the first known allosteric, pan-mutant (H1047X, E542X and E545X), and isoform-selective PI3Kα inhibitor designed to overcome these limitations. By solving the full-length Cryo-EM structure of PI3Kα and performing computational long time-scale molecular dynamic simulations to elucidate conformational differences between wild-type and mutant PI3Kα, we were able to leverage these insights to support the design of RLY-2608.

In the fourth quarter of 2021, we announced preclinical data for RLY-2608. The preclinical data show that in preclinical models, RLY-2608 preferentially binds to mutant PI3Kα at a novel allosteric site discovered by our Dynamo platform, which is discussed in further detail below in "—Our solution, RLY-2608". We dosed the first patient in the RLY-2608 ReDiscover Trial in December 2021 and, in April 2022, initiated the second arm of the dose escalation part of this trial, evaluating RLY-2608 in combination with fulvestrant for patients with HR+, HER2–, PI3Kα-mutated, locally advanced or metastatic breast cancer.

RLY-2608 has the potential to address approximately 50,000 to 156,000 patients per year in the United States, one of the largest patient populations for a precision oncology medicine (**Figure 8**). Selectivity for all three mutation hot spots (H1047X, E542X and E545X) has the potential to effectively double the addressable patient population compared to selectivity for only H1047X.

Figure 8: PI3Kα addressable patient populations.



Sources: Internal analysis based on third-party industry data.

1. *Annual incidence of solid tumors with PI3Kα H1047R, PI3Kα H1047X, PI3Kα E542X + E545X alterations.*
2. *Clear Cell Ovarian Cancer.*
3. *Head & Neck Squamous Cell Carcinoma.*
4. *HR+/HER2- breast cancer patient population with a PI3Kα hotspot alteration; alterations include: H1047X, E542X, E545X.*

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 can also inhibit other isoforms of PI3K, including PI3Kδ, which can result in further toxicity, such as gastrointestinal toxicity. Our belief is that selectively targeting mutant PI3Kα only could result in improved target inhibition and increased clinical efficacy.

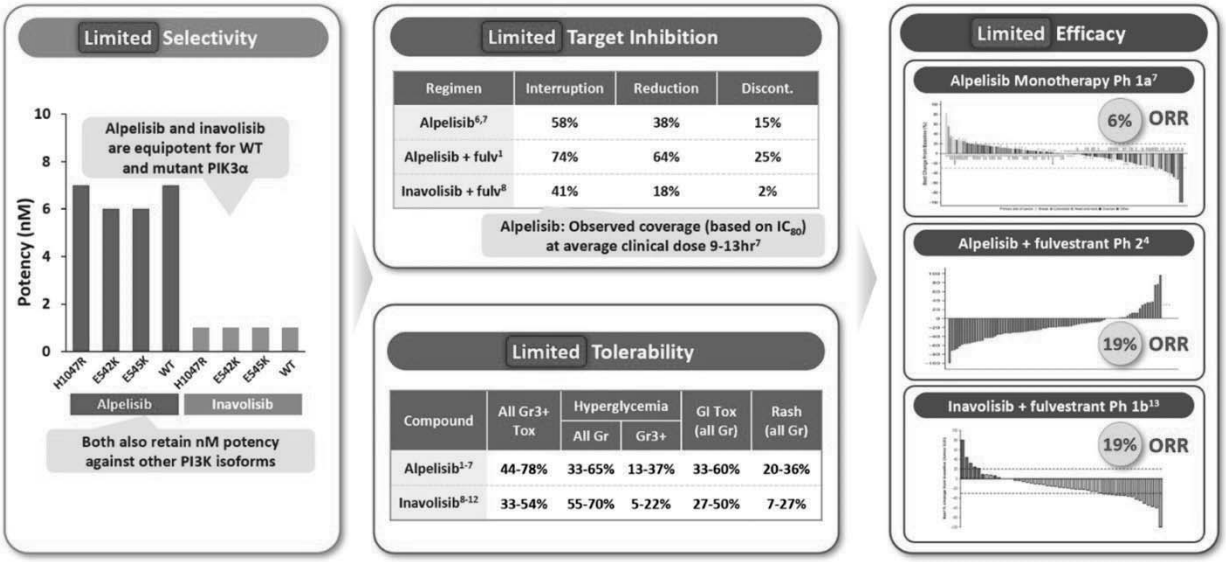
Leveraging our structural biology capabilities, we solved what we believe to be the first full-length structure of PI3Kα using Cryo-EM and utilized a range of experimental techniques to understand both H1047R mutant and wild-type conformations. We used this rich experimental data set to power molecular 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. RLY-2608 was designed to exploit these dynamic differences and bind to a novel allosteric site to achieve heightened mutant selectivity.

Limitations of current PI3Kα inhibitors

Approximately 60%-70% of the mutations in PI3Kα cluster at three amino acids (H1047, E542, and E545). Traditionally, the development of PI3Kα inhibitors has focused on the active, or orthosteric site. This site and its location make selectivity for PI3Kα over other PI3K isoforms and for mutant PI3Kα over wild-type PI3Kα difficult, and they do not enable pan-mutant coverage. Though these existing inhibitors have shown clinical activity in breast cancer as both monotherapy and in combination with hormonal therapy, as well as anecdotal monotherapy responses in patients with PI3Kα mutations in other tumor types, the therapeutic index of such orthosteric inhibitors is limited by the lack of clinically meaningful selectivity for mutant versus wild-type PI3Kα and off-isoform activity. Toxicity related to inhibition of wild-type PI3Kα and other PI3K isoforms results in sub-optimal inhibition of mutant PI3Kα with reductions in dose intensity and frequent discontinuation (**Figure 9**). These agents are generally limited by high rates of severe hyperglycemia, which is an on-target toxicity, and by gastrointestinal toxicity, which may be related to inhibition of other PI3K family members, including PI3Kδ.

RLY-2608, what we believe to be the first known allosteric, pan-mutant (H1047X, E542X and E545X), and isoform-selective PI3Kα inhibitor, was designed to overcome these limitations.

Figure 9: Existing inhibitors establish proof-of-concept but could be limited in efficacy by their safety profiles.



Note: fulv = fulvestrant; BC= breast cancer; all referenced studies are for their patient populations which are analogous to ongoing patient populations within RLY-2608 clinical trials; Alpelisib and fulvestrant are FDA-approved, Inavolisib is in Phase 3 clinical trials.
Sources: Alpelisib – 1. SOLAR-1: Andre 2019 N Engl J Med 380:1929, 2. Ph 1b: SABCS 2013 P2-16-14, 3. Ph 1b: SABCS 2014 PD5-5, 4. Ph 2 ByLIEVE: Rugo 2021 Lancet Oncol 22:489, SABCS 2021 #P1-18-03, 5. Ph 1b mono: Annals of Oncol 25 2014 (suppl 4), 6. Ph 2 mono: Savas Cancer Discov 2022 Sep 12:2058, 7. Ph 1a mono: Juric 2018 J Clin Oncol 36:1291; Inavolisib – 8. ASCO 2022 #1052, 9. SABCS 2020 #PS11-11, 10. AACR 2020 CT109, 11. SABCS 2019 OT1-08-04; 12. SABCS 2019 P1-19-46, 13. SABCS 2021 #P5-17-05.

Our solution, RLY-2608

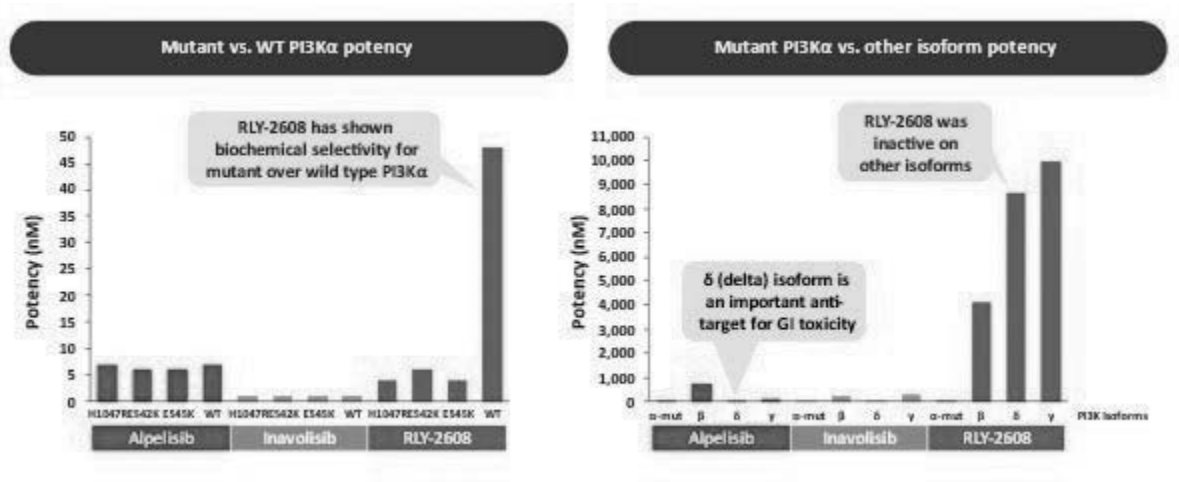
Given the existence of mutations in PI3Kα with different biological mechanisms underlying aberrant activity, we believe there are multiple opportunities to develop inhibitors of PI3Kα, both "pan-mutant" inhibitors as well as distinct mutant selective inhibitors, which could lead to the opportunity for "double-drugging" certain PI3Kα mutations such as H1047R. 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. RLY-2608 is the first lead molecule derived from these efforts and is the first known allosteric, pan-mutant (H1047X, E542X and E545X) and isoform-selective PI3Kα inhibitor in clinical development.

In October 2021, we shared preclinical data at the virtual AACR-NCI-EORTC Molecular Targets Conference and in December 2021, we shared additional preclinical data at the San Antonio Breast Cancer Symposium and dosed the first patient in the RLY-2608 ReDiscover Trial. In April 2022, we initiated the second arm of the dose escalation part of this trial, evaluating RLY-2608 in combination with fulvestrant for patients with HR+, HER2–, PI3Kα-mutated, locally advanced or metastatic breast cancer.

The preclinical data shared in 2021 show that in preclinical models, RLY-2608 preferentially binds to mutant PI3Kα at a novel allosteric site discovered by the Dynamo platform. The data also show that in biochemical and cellular assays, RLY-2608 inhibited the three major classes of PI3Kα oncogenic mutations (H1047X, E542X and E545X) while sparing wild-type PI3Kα, and in biochemical assays, RLY-2608 shows potency comparable to alpelisib on the three most commonly seen PI3Kα mutants, but unlike alpelisib and inavolisib, two other PI3Kα inhibitors, RLY-2608 is significantly less potent against wild-type PI3Kα.

The data indicate RLY-2608 is also highly specific for PI3Kα, without residual activity on other PI3K family members which could contribute to the toxicity of non-selective PI3K inhibitors (**Figure 10**).

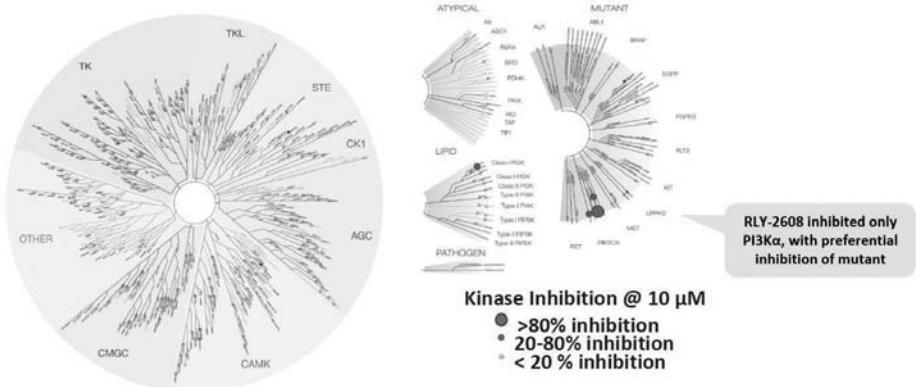
Figure 10: RLY-2608 has shown mutant and isoform biochemical selectivity.



Biochemical inhibition of PI3K isoforms including hotspot mutants of PI3Kα by RLY-2608 and orthosteric inhibitors was assessed using the ADP-Glo assay (Promega). The readout measures the adenosine diphosphate generated upon phosphorylation of a soluble PIP2 surrogate substrate by PI3K in the presence of adenosine triphosphate with a 120-minute preincubation period.

The data further suggest that RLY-2608 is also highly selective against other PI3K family members and exquisitely selective across the kinome (**Figure 11**).

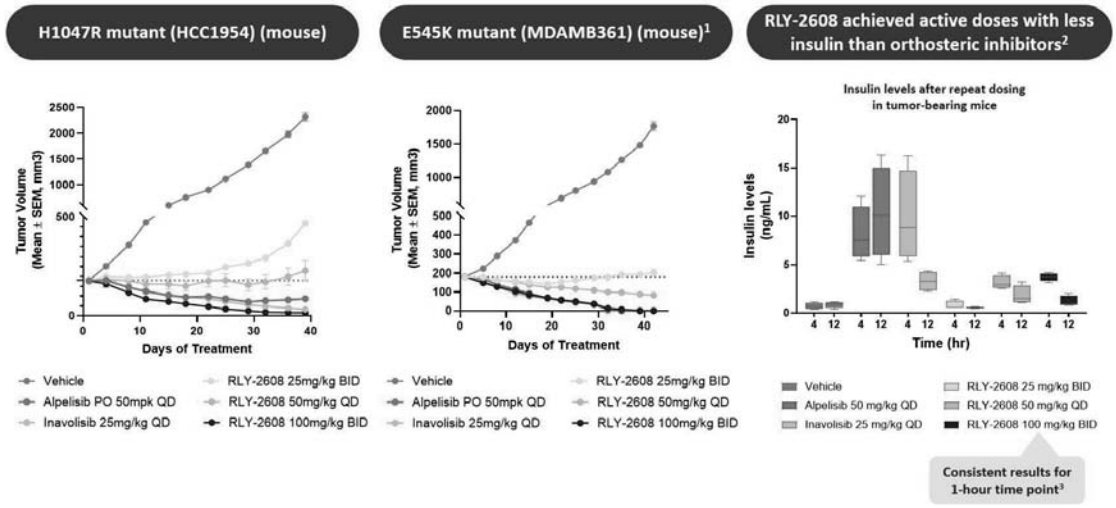
Figure 11: RLY-2608 is selective across the kinome.



RLY-2608 was evaluated against a panel of 321 human kinases and disease-relevant mutant variants in the Thermo Fisher Scientific SelectScreen Profiling Service fluorescence resonance energy transfer assays. The legend represents various degrees of inhibition at the test concentration of 10 µM.

The data suggest that projected clinically relevant doses of RLY-2608 achieved tumor regression in PIK3CA mutant in vivo xenograft mouse models representing H1047R and E545K mutations with significantly reduced impact on glucose metabolism compared to non-mutant selective active site inhibitors. In higher species, dosing of RLY-2608 resulted in exposures exceeding 90% inhibition of mutant PI3Kα in cells without resulting in elevated glucose levels or histopathological changes associated with dysregulation of glucose metabolism that are seen with non-mutant selective inhibitors (**Figure 12**).

Figure 12: In vivo regressions across both mutation hotspots.

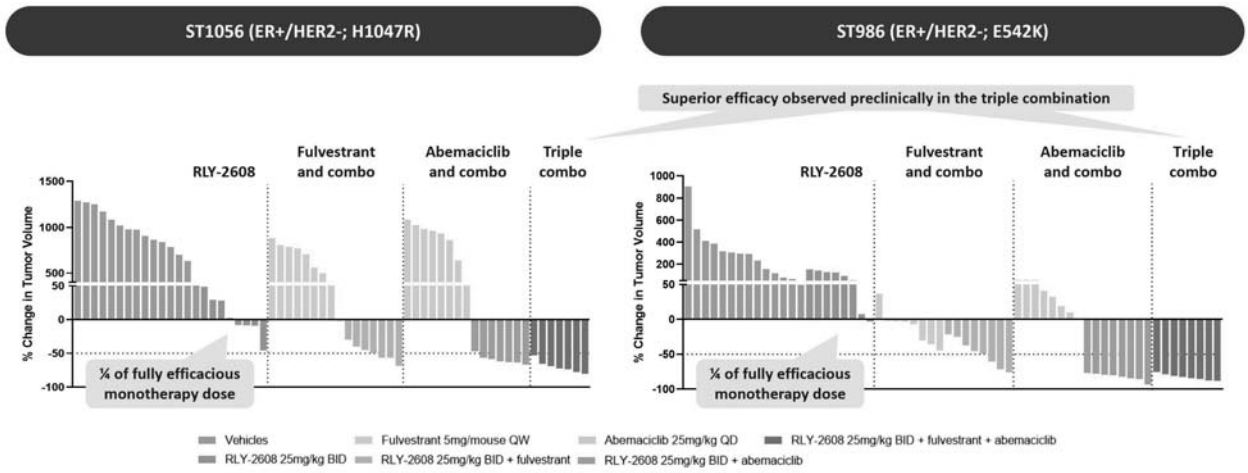


Activity of RLY-2608 and orthosteric inhibitors in xenograft models harboring PIK3CA hotspot mutations. RLY-2608 was administered orally once a day (QD) or twice a day (BID) for the duration of the study as indicated on the x-axis (n=8). At end of study, serum samples were collected at two timepoints and evaluated by ELISA for insulin levels. All models were grown in Balb/c nude female mice.

1. *This model also carries a second mutation at K567R.*
2. *HSC2 model, 24 days.*
3. *Similar results observed in the same background strain at 1hr timepoint in the MCF7 (E545K) model.*

The data show RLY-2608 is active as monotherapy in patient-derived xenograft breast cancer models, including both H1047R and E542K-mutant tumors. The data further indicate RLY-2608 also synergizes with fulvestrant (an estrogen receptor inhibitor) and abemaciclib (a CDK4/6 inhibitor), which are standard of care therapies in breast cancer, in cell viability assays in PIK3CAmut/ER+/HER2- cell lines. Oral administration of RLY-2608 in combination with fulvestrant or abemaciclib led to improved activity compared to either agent alone in ER+/HER2- xenograft models representing the most commonly observed PIK3CA mutations in breast cancer (H1047R, E542K, E545K). The triple combination of all three agents resulted in deep regressions across all models. Additionally, the combination models had similar tolerability to monotherapy models. (**Figure 13**)

Figure 13: RLY-2608 combined with standard of care therapies facilitated regressions in ER+/HER2- breast cancer models.



Combination efficacy of RLY-2608 and fulvestrant and abemaciclib in ER+/HER2- patient derived xenograft models mutant for PIK3CA. RLY-2608 was administered orally twice daily (BID) at 25 mg/kg, a quarter of the full efficacious dose either alone or in combination with fulvestrant (subcutaneous injection of 5mg/mouse, weekly) and/or abemaciclib (daily oral administration of 25 mg/kg). Each bar in the waterfall plot represents an individual tumor response (percent change relative to initial tumor volume) at end of study. All mice were supplemented with estradiol to enable tumor growth.

These results support advancement of RLY-2608 into clinical development as a differentiated mechanism of mutant PI3Kα inhibition.

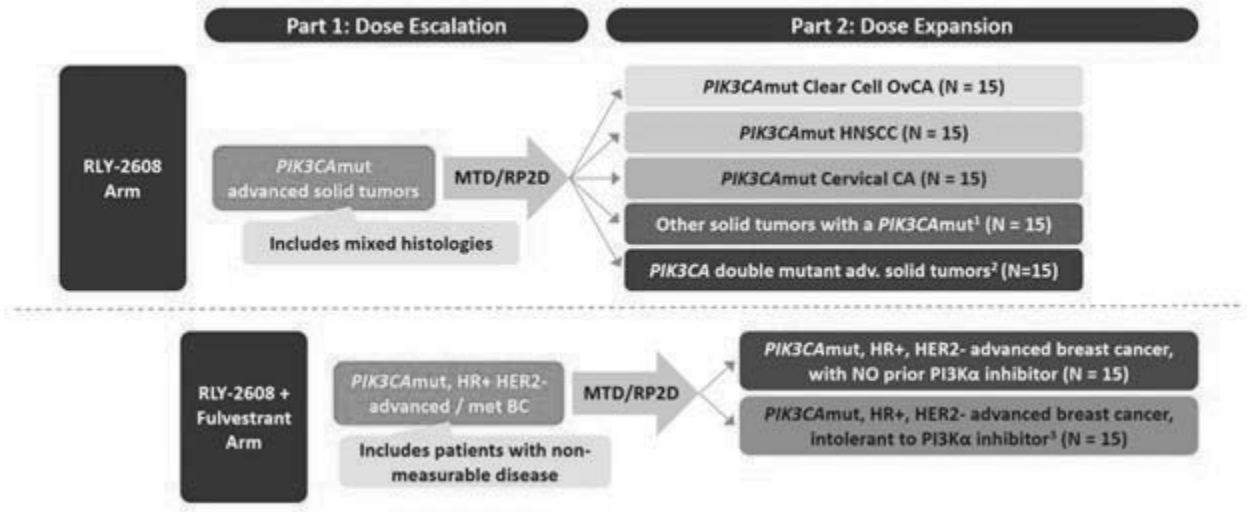
RLY-2608 has the potential to address approximately 50,000 to 156,000 patients per year in the United States, one of the largest patient populations for a precision oncology medicine. Selectivity for all three mutation hot spots (H1047X, E542X and E545X) has the potential to effectively double the addressable patient population compared to selectivity for only H1047X.

Our clinical development plan

The RLY-2608 ReDiscover Trial is designed to evaluate the safety, tolerability, pharmacokinetics, pharmacodynamics and preliminary antitumor activity of RLY-2608, and consists of two separate arms (**Figure 14**). The first arm assesses RLY-2608 as a single agent for patients with unresectable or metastatic solid tumors with PI3Kα mutation, while the second arm evaluates RLY-2608 in combination with fulvestrant for patients with PI3Kα-mutant, HR+, HER2– locally advanced or metastatic breast cancer. Each arm has two parts, a dose escalation (part 1) to determine the maximum tolerated dose and/or recommended Phase 2 dose, followed by a dose expansion (part 2) to evaluate RLY-2608 in genomically defined populations.

In the dose expansion part of the trial for RLY-2608 as a single agent, patients with the following unresectable or metastatic solid tumors with a PI3Kα mutation per local assessment continue to be enrolled in the following groups: (1) clear cell ovarian cancer; (2) head and neck squamous cell carcinoma; (3) cervical cancer; (4) other solid tumors; and (5) unresectable or metastatic solid tumors with PIK3CA double mutations defined as major (E542X, E545X, or H1047X), plus ≥1 additional PI3Kα mutations. In the dose expansion part of the trial for RLY-2608 in combination with fulvestrant, men or postmenopausal women with HR+, HER2– advanced or metastatic breast cancer with PI3Kα mutations continue to be enrolled in the following groups: (1) patients who have not received prior treatment with a PI3Kα inhibitor; and (2) patients who are intolerant to PI3Kα inhibitors. The RLY-2608 ReDiscover Trial is designed to enroll approximately 190 patients between both arms.

Figure 14: RLY-2608 ReDiscover Trial Design.



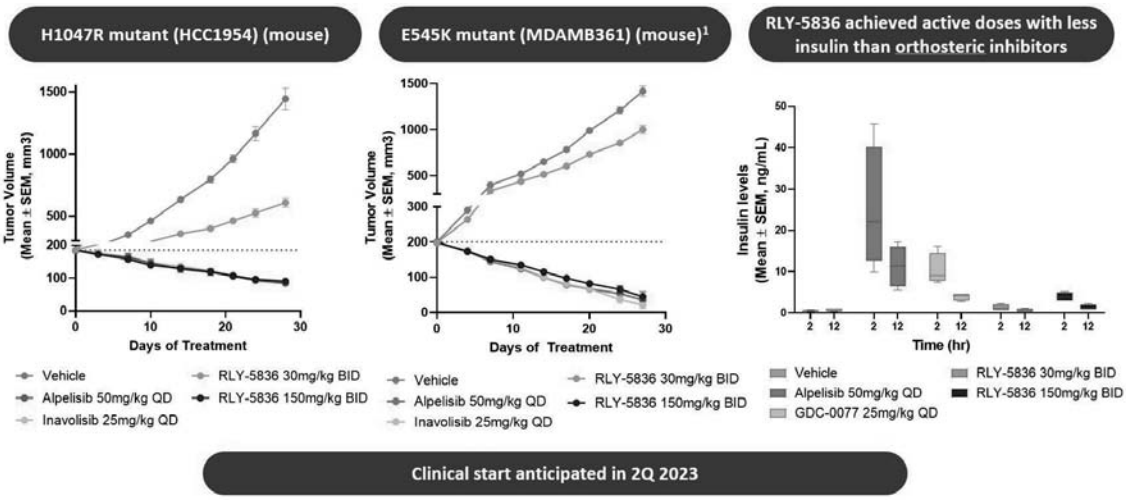
1. *Excludes PIK3CAmut clear cell OvCA, HNSCC, and Cervical cancer patients.*
2. *Double mutation defined as one major PIK3CA mutation (E542X, E545X, H1047X) + ≥1 additional PI3KCA mutation per local assessment.*
3. *Intolerance to PI3Kα inhibitors is defined as treatment discontinuation due to treatment-related adverse event (e.g., hyperglycemia, rash, diarrhea, stomatitis) other than severe hypersensitivity reaction and/or life-threatening reactions, such as anaphylaxis and Stevens-Johnson syndrome.*

RLY-5836, a second and chemically distinct pan-mutant PI3Kα inhibitor

As a demonstration of our commitment to PI3Kα as a target, we have also developed a second preclinical molecule, RLY-5836. Developed leveraging our existing structural understanding of PI3Kα, this molecule is similar to RLY-2608 in that it is also an allosteric, pan-mutant (H1047X, E542X and E545X) and isoform-selective PI3Kα inhibitor. However, it is chemically distinct to RLY-2608 and serves as another molecule within our PI3Kα franchise.

Preclinical data suggest that projected clinically relevant doses of RLY-5836 were associated with tumor regression in PIK3CA mutant xenograft mouse models representing H1047R and E545K mutations, the same models evaluated with RLY-2608 (**Figure 15**).

Figure 15: RLY-5836: In vivo regressions across both mutation hotspots.



Activity of RLY-5836 and orthosteric inhibitors in xenograft models harboring PIK3CA hotspot mutations. RLY-5836 was administered orally twice a day (BID) for the duration of the study as indicated on the x-axis (n=8). At end of study, serum samples were collected at two timepoints and evaluated by ELISA for insulin levels. All models were grown in Balb/c nude female mice.

1. *This model also carries a second mutation at K567R.*

GDC-1971 (formerly known as RLY-1971), an inhibitor of SHP2

Overview

GDC-1971 is 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 RTKs. Additionally, activating SHP2 mutations results 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 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. In the first quarter of 2020, we initiated a Phase 1a clinical trial for GDC-1971 as a monotherapy in patients with advanced or metastatic solid tumors. We completed enrollment of this trial in 2022. In December 2020, we entered into the Genentech Agreement, a global collaboration and license agreement with Genentech for the clinical development and commercialization of GDC-1971. Genentech initiated the cohort of GDC-1971 in combination with GDC-6036, its KRAS G12C inhibitor, in a Phase 1b trial in July 2021, and a Phase 1b trial of GDC-1971 in combination with atezolizumab, its PD-L1 antibody, in August 2022. Given the range of cancers that are related to SHP2 dependence, we believe GDC-1971 has the potential to serve as a combination backbone therapy.

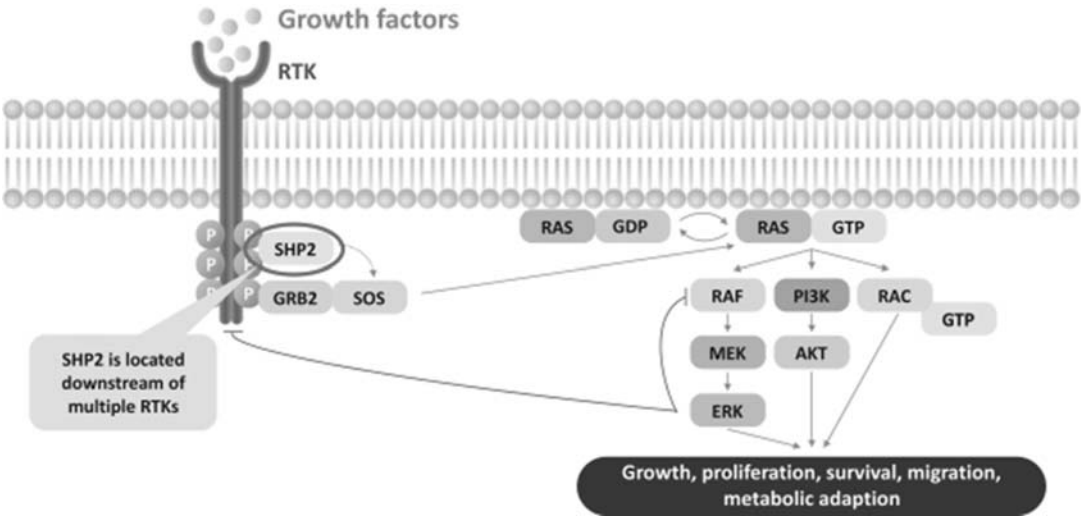
We estimate there are approximately 37,000 patients annually in the United States with advanced lung cancer or colorectal cancer who might benefit from a combination of GDC-1971 with another targeted inhibitor. In the future, if GDC-1971 advances to earlier lines of combination treatment for lung cancer or colorectal cancer, we believe it could be applied in the treatment of approximately 69,000 patients annually in the United States. The subset of patients with KRAS G12C mutations in lung cancer and colorectal cancer who could potentially benefit from the combination of GDC-1971 with GDC-6036 is approximately 17,000 to 32,000 annually in the United States.

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 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.

A key feature of SHP2 as an oncology target is its ability to regulate cell signaling that arises from multiple RTKs (**Figure 16**). 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, the 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 16: SHP2 regulates the activity of multiple receptor tyrosine kinases (RTKs).



Our solution, GDC-1971

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

Our preclinical data for GDC-1971 showed minimal inhibition of targets other than SHP2. GDC-1971 has bioavailability suitable for oral dosing, was metabolically stable, and demonstrated favorable pharmacokinetic properties in preclinical *in vivo* models. We do not predict that GDC-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 GDC-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 GDC-1971 will be amenable to continuous once daily dosing at relatively low active doses

Combination benefit for SHP2 inhibition has been demonstrated with KRAS G12C inhibitors in cancer xenograft models harboring KRAS G12C mutations. 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.

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 and ALK, combination therapy with GDC-1971 represents a potential significant therapeutic opportunity.

In addition to the therapeutic opportunity associated with combining with other targeted therapies, we believe GDC-1971 has the potential to be a combination partner with the product candidates in our own precision oncology portfolio, RLY-4008, RLY-2608 and RLY-5836.

Our clinical development plan

We initiated a Phase 1a clinical trial for GDC-1971 as a monotherapy in patients with advanced or metastatic solid tumors in the first quarter of 2020 with the primary objectives being to determine the maximum tolerated dose (MTD)/recommended Phase 2 dose (RP2D), and to define the overall safety profile of GDC-1971. The secondary objectives were to assess the pharmacokinetics and pharmacodynamics of GDC-1971, and to explore preliminary anti-tumor activity of GDC-1971. Patients received GDC-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. We completed enrollment of this trial in 2022. In December 2020, we entered into the Genentech Agreement with Genentech for the development and commercialization of GDC-1971. Pursuant to the Genentech Agreement, development for GDC-1971 is governed by a joint development team between us and Genentech. In July 2021, Genentech initiated the cohort of GDC-1971 in combination with GDC-6036, its KRAS G12C inhibitor, in a Phase 1b trial, and in August 2022, Genentech initiated a Phase 1b trial of GDC-1971 in combination with atezolizumab, its PD-L1 antibody.

Our Discovery Programs

We are deploying our Dynamo platform to advance discovery-stage programs across both precision oncology and genetic disease indications. As with our lead programs, our precision oncology programs leverage insights into protein conformational dynamics to address high-value, genetically validated oncogenes that previously have been intractable to, or inadequately addressed by, conventional drug-discovery approaches. With respect to our genetic disease programs, we are also leveraging the power of our Dynamo platform to address genetically validated targets in monogenic diseases where genetic alterations lead to disease-causing defects in protein conformational dynamics. We announced three of these discovery stage programs in June 2022 as part of our HR+/HER2- breast cancer franchise, including RLY-5836, a selective CDK2 inhibitor, and a rationally designed ERα degrader. See "Our Clinical Stage Programs—RLY-5836, a second and chemically distinct pan-mutant PI3Kα inhibitor" above for more information about RLY-5836.

- CDK2 Inhibitor: CDK2 is a common cause of resistance to approximately 46,000 patients a year in the U.S. on CDK4/6 inhibitors and potentially an important PI3Kα combination partner. We progressed from first compound synthesized to an advanced CDK2 lead compound with robust selectivity over other CDK family members in less than a year.
- ERα Degrader: Leveraging the Dynamo platform, we are moving from the traditional empirical design of bi-functional degraders to rationally designed molecules. We are currently collaborating with EQRx on our ERα degrader program pursuant to the Discovery Collaboration Agreement.

We also have five additional discovery stage programs across both precision oncology and genetic disease indications.

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 any of 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-4008

While there are currently no approved products that selectively target FGFR2, we are aware of other companies developing therapeutics that selectively target FGFR2, including, but 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), Janssen Pharmaceuticals, Inc. (erdafitinib), Otsuka Holdings Co., Ltd. through its subsidiary Taiho Pharmaceutical Co., Ltd. (futibatinib), Debiopharm Group (zoligratinib), Eisai Co., Ltd. (tasurgratinib), InnoCare Pharma Limited (gunagratinib), Kinnate BioPharma (KIN-3248), and Tyra Biosciences, Inc. (TYRA-200).

The development of RLY-4008 focuses on solid tumor patients with FGFR2 alterations, including CCA patients harboring FGFR2 gene fusions. While there are no approved systemic therapies for CCA, 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 CCA including, but not limited to, Merck & Co, AstraZeneca plc, Merck KGaA, and NuCana plc.

RLY-2608 and Mutant-PI3Kα Inhibitor Program

We expect that RLY-2608, RLY-5836 and our mutant-selective PI3Kα inhibitor program generally, 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, Menarini Group, Luoxin Pharma, Shanghai HaiHe Pharma Co. and Celcuity Inc. Loxo Oncology, a subsidiary of Eli Lilly and Company, as well as Scorpion Therapeutics, also have a preclinical development program for mutant-selective PI3Kα inhibitors.

GDC-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, but not limited to, Revolution Medicines, Inc. in partnership with Sanofi S.A., Novartis International AG, Navire Pharma, Inc., Erasca, Inc., Jacobio Pharmaceuticals, Inc. in partnership with AbbVie Inc., Erasca Inc., Pfizer Inc., and InnoCare Pharma Limited.

CDK2 Inhibitor

While there are currently no approved products targeting CDK2, we are aware of other companies in clinical trials developing therapeutics that target CDK2, including, but not limited to, Pfizer Inc, Blueprint Medicines Corporation, and Incyte Corporation, as well as companies with preclinical programs including FogPharma (via Cyclin 1E inhibition), Cedilla Therapeutics, Inc., Monte Rosa Therapeutics, Inc., Aucentra Therapeutics, Plexium, Inc., and Incyclix Bio, Inc.

ERα Degrader

While there are currently no approved products targeting degraders of ERα, we are aware of other companies in clinical trials developing therapeutics that degrade ERα, including, but not limited to, Arvinas, Inc., as well as other companies with preclinical programs such as Accutar Biotechnology, Inc., and AstraZeneca plc.

Our Collaborations

Key License Agreements and Strategic Collaborations

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

Our key computational collaboration is with D. E. Shaw Research, LLC, or 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.

We originally entered into a Collaboration and License Agreement with D. E. Shaw Research on August 17, 2016, which has since been amended to extend the term and otherwise modify certain of the provisions thereof. We refer to this agreement, as amended and restated from time to time, 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 certain non-clinical research and development; 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 since we entered into the 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 certain number of Category 1 Targets in any collaboration year. The sum of the number of Category 1 Targets and the number of Category 2 Targets is capped at twenty. The targets associated with all of our current programs in clinical development are Category 1 Targets under the DESRES Agreement.

Work product that we jointly develop with D. E. Shaw Research is initially co-owned with them. Specifically, intellectual property rights covering the composition of matter for GDC-1971 (formerly known as 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 GDC-1971) assigned to us upon issuance of those patents. For each Category 1 Target, there is a limit to the number of core compounds and total compounds, including derivatives of core compounds, that can be designated as solely owned by us, subject to certain adjustments. 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 be similarly restricted with respect to any target that was a Category 1 Target at the end of the initial research term, subject to some exceptions. However, 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 December 31, 2022, we have made cash payments to D. E. Shaw Research totaling $34.3 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 $7.3 million in the aggregate for each of the first three products we develop, and up to $6.3 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 such as our collaboration with Genentech for GDC-1971 discussed below, 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 also initially agreed to pay D. E. Shaw Research an annual collaboration fee of $7.9 million in August of each year during the initial research term, and such fee was increased by mutual agreement of the parties to $9.9 million in May of 2021. Such increased fee is payable each year between 2021 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.

Collaboration and License Agreement with Genentech

On December 11, 2020, we entered into a Collaboration and License Agreement with Genentech, Inc. and F. Hoffmann-La Roche Ltd, collectively referred to as Genentech, which was amended on February 2, 2022, to modify certain terms thereof. We

refer to this agreement, as amended from time to time, as the Genentech Agreement. Pursuant to the Genentech Agreement, we and Genentech will collaborate on the development and commercialization of GDC-1971 (formerly known as RLY-1971).

Genentech will be responsible for conducting any additional clinical development of GDC-1971, including in any combination trials with Genentech's compound, GDC-6036, that directly binds to and inhibits KRAS G12C, or other compounds. Genentech initiated the cohort of GDC-1971 in combination with GDC-6036 in a Phase 1b trial in July 2021, and a Phase 1b trial of GDC-1971 in combination with atezolizumab, its PD-L1 antibody, in August 2022.

We retain the right to develop GDC-1971 or certain other small molecule inhibitors of SHP2 developed under the Genentech Agreement, or a Licensed Candidate, or pharmaceutical product containing a Licensed Candidate, or a Licensed Product, in combination with any of our compounds targeting FGFR2, including RLY-4008, or PI3Kα, including RLY-2608 and RLY-5836, which we refer to as a Relay Combination Product. If we opt into the Profit/Cost Share described below, Genentech may share the development costs of any clinical trial for a Relay Combination Product.

Genentech has the sole right and responsibility to commercialize Licensed Products, in any and all combinations, except that we have the right to co-promote a Licensed Product solely as part of our commercialization of Relay Combination Products. Genentech will be solely responsible for all regulatory matters for all Licensed Candidates and Licensed Products other than with respect to Relay Combination Products.

Under the terms of the Genentech Agreement, we received $75.0 million in an upfront payment in 2021, as well as $30.0 million in milestone payments as of December 31, 2022. We are eligible to receive $5.0 million in additional near-term payments.

We have the option, exercisable one time in our sole discretion, to fund half of the development costs of GDC-1971 in the United States and share half of the net profits or net loss of commercializing GDC-1971 in the United States, which we refer to as the Profit/Cost Share. If we opt into the Profit/Cost Share, we will also be eligible to receive up to an aggregate of an additional $410.0 million upon the achievement of specified commercialization and sales-based milestones for GDC-1971 outside of the United States and tiered royalties ranging from low-to-mid teens on annual net sales of GDC-1971 outside of the United States, on a country-by-country basis, subject to reduction in certain circumstances. At any time prior to the third anniversary of the first commercial sale of GDC-1971 in the United States, we may elect to opt-out of further participation in the Profit/Cost Share. If we elect to opt-out, then Genentech's milestone and royalty payment obligations will revert to the financial terms that would be applicable if we had not opted into the Profit/Cost Share as described below as of the effective opt-out date, with certain adjustments.

If we do not opt into the Profit/Cost Share, Genentech will be responsible for all development costs of GDC-1971, and we will be eligible to receive up to an aggregate of an additional $685.0 million upon the achievement of specified development, commercialization and sales-based milestones for GDC-1971 worldwide. We will also be eligible to receive tiered royalties ranging from low-to-mid teens on annual worldwide net sales of GDC-1971, on a country-by-country basis, subject to reduction in certain circumstances.

In the event of regulatory approval of both GDC-1971 and GDC-6036 in combination, we are eligible to receive additional royalties.

Under the Genentech Agreement, we granted an exclusive, worldwide, royalty-bearing license to Genentech, with the right to sublicense, to develop and commercialize GDC-1971. Between the parties, Genentech has the first right, but not the obligation, to file, prosecute and maintain any patents licensed to it pursuant to the Genentech Agreement, as well as to enforce infringement of or defend claims against such patents that relate to Licensed Candidates and Licensed Products. The parties will share any liabilities or damages arising from the enforcement of such patents or any third-party patent claims.

Other than with respect to Relay Combination Products and other activities in accordance with the Genentech Agreement, we may not, directly or indirectly, conduct any activities related to the research, development, manufacture or commercialization of any SHP2 inhibitor. During the first three years of the term of the Genentech Agreement, Genentech will cause its research and early development organization not to sponsor or conduct a registrational trial for a SHP2 inhibitor other than a Licensed Product.

Unless earlier terminated, the Genentech Agreement will remain in effect until the later of the date on which Genentech is no longer developing or commercializing GDC-1971 in the United States if we have opted into the Profit/Cost Share and have not subsequently opted-out, or the expiration of all Genentech's royalty payment obligations to us. The parties may terminate the Genentech Agreement for the other party's material breach or insolvency or, on a country-by-country basis, the failure to obtain merger control under applicable antitrust laws. Additionally, Genentech may terminate the Genentech Agreement for convenience, and we may terminate the Genentech Agreement for certain patent challenges by Genentech or if Genentech has not conducted any research, development, manufacturing or commercialization activities with respect to any Licensed Candidate or Licensed Product for a specified period.

Other 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 experimental and computational tools and techniques we use in our drug discovery process. Most of our experimental collaborations are focused on the technologies we use to visualize protein structure at the atomic level.

In September 2022, we engaged Foundation Medicine, Inc. to develop its FoundationOne®CDx as a companion diagnostic for RLY-4008, which we are using to identify patients with FGFR2 fusions, amplifications and mutations and select rearrangements in CCA who may be appropriate for treatment with RLY-4008.

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 currently own or 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 United States Patent and Trademark Office, or 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 USPTO 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. The patent term may be inadequate to protect our competitive position on our products for an adequate amount of time.

RLY-4008

As of December 31, 2022, we co-owned with D. E. Shaw Research pending U.S. and foreign patent applications, which relate to our FGFR2 inhibitors. Any U.S. or foreign patents that may issue from this patent family, if granted and all appropriate maintenance fees paid, would be scheduled to expire in 2040, excluding any additional term for patent term adjustment or patent term extension, if applicable.

As of December 31, 2022, we wholly owned a pending U.S. patent application, a pending PCT patent application, and a pending foreign patent application, relating to RLY-4008 salts composition of matter, methods of treatment, solid forms and methods of manufacture. Any U.S. or foreign patents that may issue from this patent family, if granted and all appropriate maintenance fees paid, would be scheduled to expire in 2041, excluding any additional term for patent term adjustment or patent term extension, if applicable.

RLY-2608

As of December 31, 2022, we co-owned with D.E. Shaw Research pending U.S. and foreign patent applications, covering our PI3K program, which are 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 patents that may issue from this patent family, if granted and all appropriate maintenance fees paid, would be scheduled to expire in 2041, excluding any additional term for patent term adjustment or patent term extension, if applicable.

As of December 31, 2022, we wholly owned pending PCT and foreign patent applications relating to RLY-2608 salts composition of matter, methods of treatment, solid forms and methods of manufacture. Any U.S. or foreign patents that may issue from this patent family, if granted and all appropriate maintenance fees paid, would be scheduled to expire in 2042, excluding any additional term for patent term adjustment or patent term extension, if applicable.

RLY-5836

As of December 31, 2022, we wholly owned pending PCT and foreign patent applications covering our PI3K program, which are 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 patents that may issue from this patent family, if granted and all appropriate maintenance fees paid, would be scheduled to expire in 2042, excluding any additional term for patent term adjustment or patent term extension, if applicable.

GDC-1971

As of December 31, 2022, we wholly own a U.S. patent which relates to GDC-1971 composition of matter, that, if all appropriate maintenance fees are paid, is scheduled to expire in 2039, excluding any additional term for patent term adjustment or patent term extension, if applicable. As of December 31, 2022, we co-owned with D.E. Shaw Research pending U.S. and foreign patent applications covering our SHP2 program, which are directed to the composition of matter for drug candidates of the program, analogs thereof, as well as methods of making and using these compounds. Any U.S. or foreign patents that may issue from this patent family, if granted and all appropriate maintenance fees paid, would be scheduled to expire in 2039, excluding any additional term for patent term adjustment or patent term extension, if applicable. As of December 31, 2022, we wholly owned pending non-provisional patent applications which relate to GDC-1971, solid forms and methods of manufacture. Any U.S. or foreign patent that may issue from these patent applications would be scheduled to expire in 2040, excluding any additional term for patent term adjustment or patent term extension, if applicable.

Pursuant to the Genentech Agreement, we have granted an exclusive, worldwide, royalty-bearing license to Genentech, with the right to sublicense, develop and commercialize GDC-1971 and any other SHP2 inhibitors developed under the Genentech Agreement. Genentech has the first right, but not the obligation, to file, prosecute and maintain any patents licensed to it, as well as to enforce infringement of or defend claims against such patents that relate to GDC-1971 or other SHP2 inhibitors. See "—Our Collaborations—Key License Agreements and Strategic Collaborations—Collaboration and License Agreement with Genentech" for more information on the Genentech Agreement.

CDK2 Inhibitor

As of December 31, 2022, we wholly owned pending U.S. provisional, PCT, and foreign patent applications covering our CDK2 program, which are 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.

ERα Degrader

As of December 31, 2022, we wholly owned pending U.S. provisional patent applications covering our ERα program, which are 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. Under the terms of the Discovery Collaboration Agreement, EQRx has the first right to direct filing and prosecution of these patent applications.

Patent 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 twenty years from their earliest non-provisional priority filing date, 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 any of our 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, Genentech, or our potential licensors, obtain with respect to any of our 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 we rely on the specialized equipment of third parties to manufacture our product candidates. 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, or CROs, and contract manufacturers, are and 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 an 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. The FDA must notify the trial 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 the 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 trial 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, the 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 March 2022, the FDA released a final 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 the 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. The 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 drug 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 200,000 or more 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 drug designation must be requested before submitting an NDA. Orphan drug 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 drug 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 drug 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 drug 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.

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 Biologics License Application 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. As a condition of approval, the FDA may require that a sponsor of a drug receiving Accelerated Approval perform adequate and well-controlled post-marketing clinical trials with due diligence and, under the Food and Drug Omnibus Reform Act of 2022, or FDORA, the FDA is now permitted to require, as appropriate, that such trials be underway prior to approval or within a specific time period after the date of approval for a product granted Accelerated Approval. Under FDORA, the FDA has increased authority for expedited procedures to withdraw approval of a drug or an indication approved if, for example, the confirmatory trial fails to verify the predicted clinical benefit of the product. In addition, for products being considered for Accelerated Approval, the FDA generally requires, unless otherwise informed by the agency, pre-approval of promotional materials, which could adversely impact the timing of the commercial launch of the product.

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. Manufacturers and other parties involved in the drug supply chain for prescription drug products and those supplying products, ingredients, and components of them, must also comply with product tracking and tracing requirements and are responsible for notifying the FDA of counterfeit, diverted, stolen and intentionally adulterated products or products that are otherwise unfit for distribution in the United States. 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 document 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

Pharmaceutical companies are subject to additional healthcare regulation and enforcement by the federal government and by authorities in the states and foreign jurisdictions in which they conduct their business that may constrain the financial arrangements and relationships through which we research, as well as sell, market and distribute any products for which we obtain marketing authorization. Such laws include, without limitation, state and federal anti-kickback, fraud and abuse, false claims, and transparency laws and regulations related to drug pricing and payments and other transfers of value made to physicians and other healthcare providers. If our operations are found to be in violation of any of such laws or any other governmental regulations that apply, we may be subject to penalties, including, without limitation, administrative, civil and criminal penalties, damages, fines, disgorgement, the curtailment or restructuring of operations, integrity oversight and reporting obligations, exclusion from participation in federal and state healthcare programs, and responsible individuals may be subject to imprisonment.

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 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, and net prices for our products may also be reduced by any future relaxation of laws that presently restrict imports of drugs from countries where they may be sold at lower prices than in the United States. 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, or ACA, which, among other things, includes changes to the coverage and payment for products under government health care programs. The ACA 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 ACA, and we expect there will be additional challenges and amendments to the ACA in the future. For example, on December 19, 2019, former President Trump signed into law the Further Consolidated Appropriations Act (H.R. 1865), which repealed the Cadillac tax, the health insurance provider tax, and the medical device excise tax. On June 17, 2021, the U.S. Supreme Court dismissed the most recent judicial challenge to the ACA brought by several states without specifically ruling on the constitutionality of the ACA. Prior to the Supreme Court's decision, President Biden issued an executive order to initiate a special enrollment period from February 15, 2021 through August 15, 2021 for purposes of obtaining health insurance coverage through the ACA marketplace. The executive order also instructed certain governmental agencies to review and reconsider their existing policies and rules that limit access to healthcare, including among others, reexamining Medicaid demonstration projects and waiver programs that include work requirements, and policies that create unnecessary barriers to obtaining access to health insurance coverage through Medicaid or the ACA. It is unclear how other healthcare reform measures of the Biden administration or other efforts, if any, to challenge, repeal or replace the ACA will impact our business.

Other legislative changes have been proposed and adopted in the United States since the ACA 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 subsequent legislation, suspended these reductions from May 1, 2020 through March 31, 2021. A 1% payment reduction occurred beginning April 1, 2022 through June 30, 2022, and the 2% payment reduction resumed on July 1, 2022. 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.

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.

The Inflation Reduction Act of 2022, or the IRA, was signed into law in August 2022. The IRA includes several provisions that could impact our business to varying degrees, including provisions that create a $2,000 out-of-pocket cap for Medicare Part D beneficiaries, impose new manufacturer financial liability on all drugs in Medicare Part D, allow the U.S. government to negotiate Medicare Part B and Part D pricing for certain high-cost drugs and biologics without generic or biosimilar competition, require companies to pay rebates to Medicare for drug prices that increase faster than inflation, and delay the rebate rule that would require pass through of pharmacy benefit manager rebates to beneficiaries. The effect of IRA on our business and the healthcare industry in general is not yet known.

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, or EU, 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 EU 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. EU 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 EU 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 EU. 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 EU 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.

Clinical trial approval

In April 2014, the EU adopted the new Clinical Trials Regulation, (EU) No 536/2014 (Clinical Trials Regulation) which replaced the current Clinical Trials Directive 2001/20/EC on January 31, 2022. The Clinical Trials Regulation is directly applicable in all the EU Member States (meaning no national implementing legislation is required). The Clinical Trials Regulation aims to simplify and streamline the approval of clinical trials in the EU. The main characteristics of the Clinical Trials 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 are defined by the Clinical Trials Regulation.

Drug Review and Approval

In the EU, medicinal products must be authorized for marketing by using either the centralized authorization procedure or national authorization procedures.

- *Centralized authorization 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 EU and in the additional Member States of the European Economic Area (Iceland, Liechtenstein and Norway). The centralized procedure is compulsory for human medicines derived from biotechnology processes, advanced therapy medicinal products (i.e. 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 and viral diseases, and products designated as 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 EU, is a significant therapeutic, scientific or technical innovation, or if its authorization would be in the interest of public health in the EU. Under the centralized procedure the maximum timeframe for the evaluation of a marketing authorization application, or 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. Where the CHMP gives a positive opinion, it provides the opinion together with supporting documentation to the European Commission, who makes the final decision to grant a marketing authorization, which is issued within 67 days of receipt of the EMA's recommendation. 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, but it is possible that the CHMP can revert to the standard time limit for the centralized procedure if it considers that it is no longer appropriate to conduct an accelerated assessment.

- *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.

Periods of authorization and renewals

A marketing authorization has an initial validity for five years in principle. The marketing authorization may be renewed after five years on the basis of a re-evaluation of the risk-benefit balance by the EMA or by the competent authority of the EU Member State for a nationally authorized product. Once subsequently definitively renewed, the marketing authorization shall be valid for an unlimited period, unless the European Commission or the national competent authority decides, on justified grounds relating to pharmacovigilance, to proceed with one additional five-year renewal period. Any authorization which is not followed by the actual placing of the medicinal product on the EU market (in the case of the centralized procedure) or on the market of the authorizing EU Member State for a nationally authorized product within three years after authorization, ceases to be valid (the so-called sunset clause).

Drug and market exclusivity

In the EU, innovative 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 referencing the innovator's 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. There is no guarantee that a product will be considered by the EMA to be an innovative medicinal product, and products may not qualify for data exclusivity. Even if a product is considered to be an innovative medicinal product so that the innovator gains the prescribed period of data exclusivity, another company nevertheless could also market another version of the product if such company obtained marketing authorization based on an MAA with a complete independent data package of pharmaceutical tests, preclinical tests and clinical trials.

Pediatric studies and exclusivity

Prior to obtaining a marketing authorization in the EU, applicants must demonstrate compliance with all measures included in an EMA-approved pediatric investigation plan, or PIP, covering all subsets of the pediatric population, unless the EMA has granted a product-specific waiver, a class waiver, or a deferral for one or more of the measures included in the PIP. The respective requirements for all marketing authorization procedures are laid down in Regulation (EC) No 1901/2006, the so-called Pediatric Regulation. This requirement also applies when a company wants to add a new indication, pharmaceutical form or route of administration for a medicine that is already authorized. The Pediatric Committee of the EMA, or PDCO, may grant deferrals for some medicines, allowing a company to delay development of the medicine for children until there is enough information to demonstrate its effectiveness and safety in adults. The PDCO may also grant waivers when development of a medicine for

children is not needed or is not appropriate, such as for diseases that only affect the elderly population. Before an MAA can be filed, or an existing marketing authorization can be amended, the EMA determines that companies actually comply with the agreed studies and measures listed in each relevant PIP. If an applicant obtains a marketing authorization in all EU Member States, or a marketing authorization granted in the centralized procedure by the European Commission, and the study results for the pediatric population are included in the product information, even when negative, the medicine is then eligible for an additional six-month period of qualifying patent protection through extension of the term of the Supplementary Protection Certificate or SPC, provided an application for such extension is made at the same time as filing the SPC application for the product, or at any point up to two years before the SPC expires, even where the trial results are negative. In the case of orphan medicinal products, a two year extension of the orphan market exclusivity may be available. This pediatric reward is subject to specific conditions and is not automatically available when data in compliance with the PIP are developed and submitted.

Orphan drug designation and exclusivity

The criteria for designating an "orphan medicinal product" in the EU are similar in principle to those in the United States. In the EU 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 the necessary investment in its development; 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. A "similar medicinal product" is defined as a medicinal product containing a similar active substance or substances as contained in an authorized orphan medicinal product, and which is intended for the same therapeutic 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 EU are subject to significant regulatory controls.

Regulatory requirements after a marketing authorization has been obtained

In case an authorization for a medicinal product in the EU is obtained, the holder of the marketing authorization is required to comply with a range of requirements applicable to the manufacturing, marketing, promotion and sale of medicinal products. These include:

- Compliance with the EU's stringent pharmacovigilance or safety reporting rules must be ensured. These rules can impose post-authorization studies and additional monitoring obligations.

- The manufacturing of authorized medicinal products, for which a separate manufacturer's license is mandatory, must also be conducted in strict compliance with the applicable EU laws, regulations and guidance, including Directive 2001/83/EC, Directive 2003/94/EC, Regulation (EC) No 726/2004 and the European Commission Guidelines for Good Manufacturing Practice. These requirements include compliance with EU cGMP standards when manufacturing medicinal products and active pharmaceutical ingredients, including the manufacture of active pharmaceutical ingredients outside of the EU with the intention to import the active pharmaceutical ingredients into the EU.

- The marketing and promotion of authorized drugs, including industry-sponsored continuing medical education and advertising directed toward the prescribers of drugs and/or the general public, are strictly regulated in the EU. Direct-to-consumer advertising of prescription medicines is prohibited across the EU.

The aforementioned EU rules are generally applicable in the European Economic Area, or EEA, which consists of the EU Member States, plus Norway, Liechtenstein and Iceland.

Brexit and the regulatory framework in the United Kingdom

On June 23, 2016, the electorate in the United Kingdom, or UK, voted in favor of leaving the EU, commonly referred to as Brexit, and the UK formally left the EU on January 31, 2020. There was a transition period during which EU pharmaceutical laws continued to apply to the UK, which expired on December 31, 2020. However, the EU and the UK have concluded a trade and cooperation agreement, or TCA, which was provisionally applicable since January 1, 2021 and has been formally applicable since May 1, 2021. The TCA includes specific provisions concerning pharmaceuticals, which include the mutual recognition of GMP, inspections of manufacturing facilities for medicinal products and GMP documents issued, but does not foresee wholesale mutual recognition of UK and EU pharmaceutical regulations. At present, Great Britain has implemented EU legislation on the marketing, promotion and sale of medicinal products through the Human Medicines Regulations 2012 (as amended) (under the Northern Ireland Protocol, the EU regulatory framework will continue to apply in Northern Ireland). The regulatory regime in Great Britain therefore currently aligns with EU regulations, however, it is possible that these regimes will diverge in the future now that Great Britain's regulatory system is independent from the EU and the TCA does not provide for mutual recognition of UK and EU pharmaceutical legislation.

Government regulation of the processing of personal data collected outside of the United States

In the event we conduct clinical trials in the EEA and UK, we will be subject to additional data protection restrictions. The collection and use of personal data in the EEA, 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 of data subjects in the EEA 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 sets forth data protection obligations for data controllers of personal data, including stringent requirements relating to notifying data subjects about how their personal data are being handled and how they can exercise their data protection rights, ensuring there is a valid legal basis to process personal data (if this is consent, the requirements for obtaining consent carry a higher threshold), requirements to conduct privacy impact assessments for certain "high risk" processing, requirements to appoint a data protection officer where sensitive personal data are processed on a "large scale," limitations on retention of personal data, mandatory data breach notification in certain circumstances, requirements to ensure appropriate technical measures are in place to safeguard personal data, and "privacy by design" requirements, and also creates direct obligations on service providers acting as data 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. Failure to comply with the requirements of the GDPR and the related national data protection laws of the EEA, 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 to ensure compliance with the new data protection rules. In addition, further to the UK's exit from the EU on January 31, 2020, the GDPR ceased to apply in the UK at the end of the transition period on December 31, 2020. However, as of January 1, 2021, the UK's European Union (Withdrawal) Act 2018 incorporated the GDPR (as it existed on December 31, 2020 but subject to certain UK specific amendments) into UK law, referred to as the UK GDPR. The UK GDPR and the UK Data Protection Act 2018 set forth the UK's data protection regime, which is independent from but aligned to the EU's GDPR. Non-compliance with the UK GDPR may result in monetary penalties of up to £17.5 million or 4% of worldwide revenue, whichever is higher. Although the UK is regarded as a third country under the EU's GDPR, the European Commission has now issued a decision recognizing the UK as providing adequate protection under the EU GDPR and, therefore, transfers of personal data originating in the EU to the UK remain unrestricted. Like the EU GDPR, the UK GDPR restricts personal data transfers outside the UK to countries not regarded by the UK as providing adequate protection. The UK government has confirmed that personal data transfers from the UK to the EEA remain free flowing.

Human Capital Resources

As of December 31, 2022, we had 327 full-time employees. 139 of our employees have M.D. or Ph.D. degrees. Within our workforce, 235 employees are engaged in research and development and 92 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.

We believe that our people are among our greatest assets and that a diverse and inclusive organization is more innovative and higher performing. We are committed to increasing representation of under-represented populations at our company, particularly in leadership roles. As of December 31, 2022, among our employees, 46% were female and 54% were male. Among our leadership (which we define as employees at the vice president level and above), approximately 28% were female. As of December 31, 2022, 32% of our employees and 22% of our leadership identify as being from diverse racial and ethnic groups. On our Board of Directors, five of our eight directors are women and/or from a diverse racial and ethnic group.

As part of our efforts to create a diverse and equitable workplace, our Diversity, Equity, Belonging and Inclusion Council, which is made up of a mix of employees from various functions and positions, provides strategic guidance, senior leader support and an operating budget to fund initiatives related to diversity, equity, belonging and inclusion. In 2022, we deepened our commitment to diversity, equity, belonging and inclusion by delivering programming focused on fostering psychological safety, so that all employees can voice their best ideas, take risks, and learn openly from mistakes. We also honored black history and celebrated Asian American and Pacific Islander heritage by hosting external speakers and leading internal employee-led discussions.

We have two employee resource groups, which are led by our employees and focus on a specific community. Both organizations work in parallel to make our company the most inclusive organization possible, and to give back to the communities in and surrounding Cambridge, Massachusetts, where our primary office and laboratory space is located.

As our workforce grows, we're not only focused on recruiting top talent from a diverse range of backgrounds, industries and experiences, but also focused on retaining, developing and promoting our current employees. While the competition for talent remains strong as the number of biotechnology and pharmaceutical companies in the Cambridge area increases, we believe we can attract and retain the talent we need to be successful. We maintain a robust onboarding program to ensure all new hires are grounded in our business and culture and we conduct periodic talent reviews to identify high performing and high potential talent within the organization. This data is used to inform specific development opportunities for current and future leaders, create custom leadership training, drive meaningful development conversations and enable succession planning for key roles. Additionally, all employees have access to a dedicated career coach to help foster continuous growth. As of December 31, 2022, our company turnover rate is lower than the industry average.

We regularly host company-wide sessions (virtual and onsite) where our employees brainstorm ideas, provide feedback on corporate initiatives, share scientific breakthroughs and recognize each other's contributions and accomplishments. In 2022, we shifted our annual survey of employees to quarterly pulse checks to create a feedback-to-action loop, respond in a more timely fashion, celebrate team milestones and continue to leverage our strengths. These quarterly surveys help us measure employee engagement and inform future talent initiatives.

People are our most valuable resource and we are committed to protecting the health and safety of our workforce. Although we continue to monitor the ongoing COVID-19 pandemic, with the easing of travel and other restrictions, we believe that our operations have largely resumed pre-pandemic norms. We continue to enable our workforce to work remotely and maintain a flexible schedule wherever possible. We regularly update our safety protocols, taking into consideration national and local public health guidelines and input from our employees.

Corporate Information

We were incorporated under the laws of the State of Delaware on May 4, 2015 under the name Allostery, Inc. In December 2015, we changed our name to Relay Therapeutics, 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. Our website and the information contained on, or that can be accessed through, the website will not be deemed to be incorporated by reference in, and are not considered part of, this Annual Report on Form 10-K.

Available Information

Our website address is www.relaytx.com. Our Annual Reports on Form 10-K, Quarterly Reports on Form 10-Q, Current Reports on Form 8-K, including exhibits, proxy and information statements and amendments to those reports filed or furnished pursuant to Sections 13(a), 14, and 15(d) of the Securities Exchange Act of 1934, as amended, or the Exchange Act, are available through the "Investors & Media" portion of our website free of charge as soon as reasonably practicable after we electronically file such material with, or furnish it to, the SEC. Information on our website is not part of this Annual Report on Form 10-K or any of our other filings with the SEC unless specifically incorporated herein or therein by reference. In addition, our filings with the SEC may be accessed through the SEC's Interactive Data Electronic Applications system at www.sec.gov. All statements made in any of our filings with the SEC or documents available on our website, including all forward-looking statements or information, are made as of the date of the document in which the statement is included, and we do not assume or undertake any obligation to update any of those statements or documents unless we are required to do so by law.

Our code of conduct, corporate governance guidelines and the charters of our Audit Committee, Research and Development Committee, Compensation Committee and Nominating and Corporate Governance Committee are available through the "Investors & Media" portion of our website.

Item 1A. 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 Annual Report on Form 10-K, 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. We believe the risks described below include risks that are material to us as well as other risks that may adversely affect 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 may also materially harm our business, financial condition, results of operations and growth prospects and could result in a complete loss of your investment. Consequently, you should not consider the following to be a complete discussion of all potential risks or uncertainties.

Risks Related to Our Product Candidates

Risks Related to Clinical Development

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 have three product candidates, RLY-4008, RLY-2608 and GDC-1971 (formerly known as RLY-1971), in clinical development. We may not be able to file INDs for any of our other product candidates on the timelines we expect, if at all. For example, we may experience manufacturing delays or delays with IND-enabling studies. Moreover, we cannot be sure that once we have submitted an IND, the FDA will allow further clinical trials to begin, or that, once begun, issues will not arise that require us to suspend or terminate clinical trials. The FDA or other regulatory authorities may impose a clinical hold before or after a trial begins for a number of reasons outlined in FDA regulations, including if the FDA believes the study drug raises a significant risk of illness or injury. If the FDA imposes a clinical hold, trials may not commence or recommence without FDA authorization and then only under terms authorized by the FDA. Accordingly, the submission of an IND does not mean the FDA will allow clinical trials to begin and, if and when clinical trials do commence under an active IND, issues may arise that require suspension or termination of such trials. Further, 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. 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 EMA for each product candidate and, consequently, the ultimate approval and commercial marketing of each product candidate. Our RLY-4008 and RLY-2608 first-in-human clinical trials are ongoing, but we do not know whether any of our future clinical trials will begin on time or 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 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 the required 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 and other nonclinical studies and clinical trials have nonetheless failed to obtain marketing approval of their product candidates. Our preclinical and other nonclinical 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 more participants enroll and as data mature. Preliminary or top-line data also remain subject to cleaning 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;
- existing clinical trial sites may drop out of the clinical trial, which may require that we add new clinical trial sites or investigators;
- clinical trials of our product candidates may produce negative or inconclusive results, and we may decide, or regulators may require us, to conduct additional nonclinical 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;
- 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;
- we may not be able to adequately project the timing and quantity of our product candidates or other materials necessary to conduct clinical trials of our product candidates or the supply or quality of these materials 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 clinical trials, or reports may arise from nonclinical studies or clinical testing of other 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 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 clinical 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 or 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 preclinical studies, clinical trials 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 ongoing 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 current 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 developments in connection with the ongoing COVID-19 pandemic, including increased severity or additional variant outbreaks thereof, which are highly uncertain, and we cannot predict the extent and scope of such delays at this point.

In addition to the competitive clinical 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 have engaged and may continue to 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 and RLY-2608 in a specific biomarker-defined population, a companion diagnostic device will be required to ensure their safe and effective use. Although we have engaged Foundation Medicine, Inc. to develop its FoundationOne®CDx as a companion diagnostic for RLY-4008, if any of our current or future third-party companion diagnostic partners is unable or unwilling to obtain or maintain regulatory approval for a companion diagnostic for any of our product candidates, regulatory approval for such product candidates, if obtained at all, may be delayed.

Clinical trial 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 availability of approved products that treat the same indications as our product candidates;
- 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 that may limit patients, principal investigators or staff or clinical site availability, such as uncertain geopolitical conditions or current or future pandemics (e.g., complications due to the current conflict between Russia and Ukraine or the ongoing COVID-19 pandemic).

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

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

Our current or future clinical trials or those of our future collaborators may reveal significant adverse events not seen in our preclinical or other nonclinical studies or early clinical data and may result in a safety profile that would 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 or other nonclinical 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 or other nonclinical 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 preclinical or other 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 clinical trials, or we may be

required to abandon the clinical 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 clinical 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.

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 the DESRES Agreement, we collaborate with 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 or in collaboration with third parties, 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.

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

We intend to develop our current product candidates, 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 regulatory authorities could revoke approval of the therapy used in combination with our product candidates 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 current product candidates 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 regulatory authorities. We will not be able to market and sell any of our product candidates we develop in combination with any such unapproved cancer therapies that do not ultimately obtain marketing approval. Pursuant to the Genentech Agreement, Genentech will assume the development of GDC-1971, including developing GDC-1971 in combination with Genentech's KRAS G12C program and in combination with atezolizumab, its PD-L1 antibody. See "Business – Our Collaborations – Key License Agreements and Strategic Collaborations – Collaboration and License Agreement with Genentech."

If the FDA or similar 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 current product candidates or any product candidate we develop, we may be unable to obtain approval of or market any of the product candidates 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 or other nonclinical studies and clinical trials. Any such events could adversely impact our business prospects, financial condition and results of operations.

We are conducting, or have filed clinical trial applications to 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 are conducting, or have filed clinical trial applications to conduct, additional clinical trials outside the United States, including Australia, the United Kingdom, Europe and Asia and may conduct, or file clinical trial applications to conduct, additional clinical trials in other foreign jurisdictions in the future. 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 clinical 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 clinical 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.

Risks Related to Obtaining Regulatory Approvals

If we are not able to obtain, or if delays occur 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 similar 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 nonclinical 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 similar foreign regulatory authority requires that we perform additional nonclinical studies 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, a 510(k) or other premarket approval application, or PMA, or equivalent application types, may cause delays in the approval or rejection of an application. The FDA and similar 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 nonclinical, 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 similar foreign regulatory authorities may disagree with or change their position regarding 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 similar 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 similar 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 similar foreign regulatory authorities may disagree with our interpretation of data from nonclinical 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 similar 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 similar 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.

Risks Related to Commercialization

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.

In 2022, we completed enrollment of a Phase 1a dose escalation study of GDC-1971 as a monotherapy in patients with advanced or metastatic solid tumors, and pursuant to the Genentech Agreement entered into in December 2020, future development for GDC-1971, including the potential to conduct multiple combination studies, is governed by a joint development team between us and Genentech. Genentech initiated the cohort of GDC-1971 in combination with GDC-6036, its KRAS G12C inhibitor, in a Phase 1b trial in July 2021, and a Phase 1b trial of GDC-1971 in combination with atezolizumab, its PD-L1 antibody, in August 2022. We estimate there are approximately 37,000 patients annually in the United States with advanced lung cancer or colorectal cancer who might benefit from a combination of GDC-1971 with another targeted inhibitor. In the future, if GDC-1971 advances to earlier lines of combination treatment for lung cancer or colorectal cancer, we believe it could be applied in the treatment of approximately 69,000 patients annually in the United States. The subset of patients with KRAS G12C mutations in lung cancer and colorectal cancer who could potentially benefit from the combination of GDC-1971 with GDC-6036 is approximately 17,000 to 32,000 annually in the United States.

We are also evaluating the safety and tolerability of RLY-4008 in a first-in-human clinical trial initiated in September 2020 in patients with advanced or metastatic FGFR2-altered solid tumors with a single arm, potentially registration-enabling cohort for FGFRi treatment-naïve FGFR2-fusion CCA. We believe FGFR2-mediated cancers affect approximately 11,000 late-line patients annually in the United States. In the future, if RLY-4008 advances to earlier lines of treatment, we believe it could potentially address approximately 35,000 patients annually in the United States. These numbers reflect the inclusion of patients with additional FGFR2 gene fusions and rearrangements that result from truncation of the protein at exon 18 based on recently published research suggesting that patients with these truncations should be considered for FGFR-targeted therapies.

In December 2021, we dosed the first patient in a first-in-human clinical trial for RLY-2608, the first known allosteric, pan-mutant (H1047X, E542X and E545X) and isoform-selective PI3Kα inhibitor in clinical development. We believe RLY-2608 has the potential to address approximately 50,000 to 156,000 patients per year in the United States, one of the largest patient populations for a precision oncology medicine.

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-4008, RLY-2608 or GDC-1971, or our other 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, and, 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.

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 computational and experimental 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 earlier 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.

The insurance coverage and reimbursement status of newly-approved products is uncertain. Failure to obtain or maintain adequate coverage and reimbursement for any of our product candidates, if approved, could limit our ability to market those products and decrease our ability to generate revenue.

In the United States and markets in other countries, patients generally rely on third-party payors to reimburse all or part of the costs associated with their treatment. Adequate coverage and reimbursement from governmental healthcare programs, such as Medicare and Medicaid, and commercial payors is critical to new product acceptance. Our ability to successfully commercialize our product candidates will depend in part on the extent to which coverage and adequate reimbursement for these products and related treatments will be available from government health administration authorities, private health insurers and other organizations. Government authorities and third-party payors, such as private health insurers and health maintenance organizations, decide which medications they will pay for and establish reimbursement levels. The availability of coverage and extent of reimbursement by governmental and private payors is essential for most patients to be able to afford treatments. Sales of these or other product candidates that we may identify will depend substantially, both domestically and abroad, on the extent to which the costs of our product candidates will be paid by health maintenance, managed care, pharmacy benefit and similar healthcare management organizations, or reimbursed by government health administration authorities, private health coverage insurers and other third-party payors. If coverage and adequate reimbursement is not available, or is available only to limited levels, we may not be able to successfully commercialize our product candidates. Even if coverage is provided, the approved reimbursement amount may not be high enough to allow us to establish or maintain pricing sufficient to realize a sufficient return on our investment.

There is also significant uncertainty related to the insurance coverage and reimbursement of newly approved products and coverage may be more limited than the purposes for which the medicine is approved by the FDA or similar foreign regulatory authorities. 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.

Factors payors consider in determining reimbursement are based on whether the product is (i) a covered benefit under its health plan; (ii) safe, effective and medically necessary; (iii) appropriate for the specific patient; (iv) cost-effective; and (v) neither experimental nor investigational.

Net prices for drugs may be reduced by mandatory discounts or rebates required by government healthcare programs or private payors and by any future relaxation of laws that presently restrict imports of drugs from countries where they may be sold at lower prices than in the United States. Increasingly, third-party payors are requiring that drug companies provide them with predetermined discounts from list prices and are challenging the prices charged for medical products. We cannot be sure that reimbursement will be available for any product candidate that we commercialize and, if reimbursement is available, the level of reimbursement. In addition, many pharmaceutical manufacturers must calculate and report certain price reporting metrics to the government, such as average sales price, or ASP, and best price. Penalties may apply in some cases when such metrics are not submitted accurately and in a timely manner. Further, these prices for drugs may be reduced by mandatory discounts or rebates required by government healthcare programs.

In addition, in some foreign countries, the proposed pricing for a drug must be approved before it may be lawfully marketed. The requirements governing drug pricing vary widely from country to country. For example, the EU provides options for its Member States to restrict the range of medicinal products for which their national health insurance systems provide reimbursement and to control the prices of medicinal products for human use. To obtain reimbursement or pricing approval, some of these countries may require the completion of clinical trials that compare the cost effectiveness of a particular product candidate to currently available therapies. A Member State may approve a specific price for the medicinal product or it may instead adopt a system of direct or indirect controls on the profitability of the company placing the medicinal product on the market. There can be no assurance that any country that has price controls or reimbursement limitations for pharmaceutical products will allow favorable reimbursement and pricing arrangements for any of our product candidates. Historically, products launched in the EU do not follow price structures of the U.S. and generally prices tend to be significantly lower.

Risks Related to Our Reliance on Third Parties

Under the DESRES Agreement, as amended, 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 with respect to the number of target proteins available under the collaboration (with such number subject to increases or decreases from year to year, and with the number of total targets across categories 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. See " – Risks Related to Our Intellectual Property – Risks Related to Protecting our Intellectual Property." 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, including our collaboration with Genentech pursuant to the Genentech Agreement. 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 ongoing clinical trials of RLY-4008 and RLY-2608 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. 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 prove 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 similar foreign regulatory authorities for any products in clinical development, including the EMA and the Medicines and Healthcare Products Regulatory Agency. These regulatory authorities enforce 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 similar foreign regulatory authorities may require us to perform additional clinical trials before approving our marketing applications. We cannot assure you that, upon inspection, these regulatory authorities 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 first-in-human clinical trials of RLY-4008, RLY-2608 and GDC-1971, and intend to design the future clinical trials for the product candidates that we develop, 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 may be 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 or quality, which could delay, prevent or impair our development or commercialization efforts.

We do not currently own or operate, nor do we have any plans to establish in the future, any manufacturing facilities or personnel. We rely, and expect to continue to rely, on third parties for the manufacture of our product candidates for preclinical development and clinical testing, as well as for the commercial manufacture of our 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 similar 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. Due to capacity constraints at cGMP manufacturers relating to the ongoing COVID-19 pandemic, we have been required to forecast the amount of clinical trial supply needed for our clinical trials further in advance than had typically been required, and there is limited flexibility to adjust our manufacturing needs as our clinical trials progress, which may lead to added costs or delays in our clinical trials.

Any performance failure on the part of our existing or future manufacturers could delay clinical development or marketing approval. We are also unable to predict how the ongoing COVID-19 pandemic or the current conflict between Russia and Ukraine may affect our third-party manufacturers, including any potential disruptions to our global supply chain. If our current contract manufacturers cannot perform as agreed, we may be required to replace such manufacturers, which we may not be able to do on reasonable terms, if at all, or manufacture the materials ourselves, for which we may not have the capabilities or resources. In either scenario, our clinical trials supply could be delayed significantly as we establish alternative supply sources. In some cases, the technical skills required to manufacture our products or product candidates may be unique or proprietary to the original contract manufacturing organization, or CMO, and we may have difficulty, or there may be contractual restrictions prohibiting us from, transferring such skills to a back-up or alternate supplier, or we may be unable to transfer such skills at all. In addition, if we are required to change CMOs for any reason, we will be required to verify that the new CMO maintains facilities and procedures that comply with quality standards and with all applicable regulations. Changes in manufacturers often involve changes in manufacturing procedures and processes, which could require that we conduct bridging studies between our prior clinical supply used in our clinical trials and that of any new manufacturer. We may be unsuccessful in demonstrating the comparability of clinical supplies which could require the conduct of additional clinical trials. We may incur added costs and delays in identifying and qualifying any such replacement. Furthermore, a CMO may possess technology related to the manufacture of our product candidates that such CMO owns independently. This would increase our reliance on such CMO or require us to obtain a license from such CMO in order to have another CMO manufacture our product candidates.

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 ingredients, drug product and starting materials 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, drug product and starting materials used in our product candidates are supplied to us primarily 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, drug product and starting materials 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, drug product or starting materials in the event any of our current suppliers of such API, drug product or starting materials ceases its operations for any reason. If any of our third-party suppliers or manufacturers ceases its operations for any reason or is unable or unwilling to supply API, drug product or starting material in sufficient quantities, on the timelines necessary, or at acceptable prices, to meet our needs, it could impede, delay, limit or prevent our development efforts, which could harm our business, results of operations, financial condition and prospects. We are also unable to predict how changing global economic or political conditions, such as the current conflict between Russia and Ukraine and related global economic sanctions, or potential global health concerns, such as the ongoing 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, drug product and starting materials prior to or after 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, drug product and starting materials 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, drug product and starting materials used in our product candidates, any interruption or delay in the supply of components or materials, or our inability to obtain such API, drug product or starting materials 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 have and may enter into other collaborations with third parties for the research, development, manufacture and commercialization of one or more of our programs or product candidates. If these collaborations are not successful, our business could be adversely affected.

We have entered into and may enter into collaborations with third parties for one or more of our programs or product candidates, such as our Genentech Agreement to develop and commercialize GDC-1971. If we enter into any such arrangements with any third parties, we will likely have limited control over the amount and timing of resources that any future collaborators dedicate to the development or commercialization of our product candidates. Our ability to generate revenue from these arrangements will depend on our collaborators' abilities to successfully perform the functions assigned to them.

Any collaborations we have entered into or will enter into may pose risks, including the following:

- Collaborators may have significant discretion in determining the efforts and resources that they will apply to these collaborations;
- Collaborators may not perform their obligations as expected;
- The clinical trials conducted as part of these collaborations may not be successful;
- Collaborators may not pursue development and/or commercialization of any product candidates that achieve regulatory approval or may elect not to continue or renew development or commercialization programs based on clinical trial results, changes in the collaborators' strategic focus or available funding or external factors, such as an acquisition, that divert resources or create competing priorities;

- Collaborators may delay clinical trials, provide insufficient funding for clinical trials, stop a clinical trial or abandon a product candidate, repeat or conduct new clinical trials or require a new formulation of a product candidate for clinical testing;

- We may not have access to, or may be restricted from disclosing, certain information regarding product candidates being developed or commercialized under a collaboration and, consequently, may have limited ability to inform our stockholders about the status of such product candidates;

- Collaborators could independently develop, or develop with third parties, products that compete directly or indirectly with our product candidates if the collaborators believe that competitive products are more likely to be successfully developed or can be commercialized under terms that are more economically attractive than ours;

- Product candidates developed in collaboration with us may be viewed by any collaborators as competitive with their own product candidates or products, which may cause collaborators to cease to devote resources to the commercialization of our product candidates;

- A collaborator with marketing and distribution rights to one or more of our product candidates that achieve regulatory approval may not commit sufficient resources to the marketing and distribution of any such product candidate;

- Disagreements with collaborators, including disagreements over proprietary rights, contract interpretation or the preferred course of development of any programs or product candidates, may cause delays or termination of the research, development, manufacture or commercialization of such programs or product candidates, may lead to additional responsibilities for us with respect to such programs or product candidates or may result in litigation or arbitration, any of which would be time-consuming and expensive;

- Collaborators may not properly maintain or defend our intellectual property rights or may use our proprietary information in such a way as to invite litigation that could jeopardize or invalidate our intellectual property or proprietary information or expose us to potential litigation. For example, Genentech has the first right to enforce or defend certain of our intellectual property rights under our collaboration, and although we may have the right to assume the enforcement and defense of such intellectual property rights if Genentech does not, our ability to do so may be compromised by Genentech's actions;

- Disputes may arise with respect to the ownership of intellectual property developed pursuant to our collaborations;

- Collaborators may infringe the intellectual property rights of third parties, which may expose us to litigation and potential liability; and

- Collaborations may be terminated for the convenience of the collaborator and, if terminated, we could be required to raise additional capital to pursue further development or commercialization of the applicable product candidates. For example, Genentech may terminate its collaboration with us for convenience after a specified notice period.

If our collaborations do not result in the successful development and commercialization of products, or if one of any future collaborators terminates its agreement with us, we may not receive any milestone or royalty payments under the collaboration. If we do not receive the payments we expect under these agreements, our development of product candidates could be delayed and we may need additional resources to develop our product candidates. All of the risks relating to product development, regulatory approval and commercialization summarized and described in this report also apply to the activities of our collaborators.

In addition, if any collaborator terminates its agreement with us, we may find it more difficult to attract new collaborators and our reputation among the business and financial communities could be adversely affected.

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.

We may be required to pay certain milestones and royalties under our license or collaboration agreements with third-party licensors or collaborators, which may adversely affect the overall profitability of any products that we may seek to commercialize.

Under our current and future license or collaboration agreements, including our DESRES Agreement, we may be required to pay milestones, royalties and other payments based on our revenues, including revenues from product sales, and these milestones and royalty payments could adversely affect the overall profitability of any products that we may seek to commercialize. In order to maintain our rights under these agreements, we may need to meet certain specified milestones in the development of our product candidates. Further, our licensors (or their licensors), licensees or other strategic collaborators may dispute the terms, including amounts, that we are required to pay under the respective license or collaboration agreements. If these claims result in a material increase in the amounts that we are required to pay to our licensors or collaborators, or in the event of a claim of breach of the license, our ability to research, develop and obtain approval of product candidates or to commercialize our products could be significantly impaired.

Risks Related to Our Financial Position and Ability to Raise Additional Capital

Risks Related to Our Operating History

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 $290.5 million, $363.9 million, and $52.4 million for the years ended December 31, 2022, 2021, and 2020, respectively. We had an accumulated deficit of $1.1 billion as of December 31, 2022. 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 Dynamo 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. We will also continue to 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 ongoing COVID-19 pandemic, or unstable political conditions, such as the current conflict between Russia and Ukraine; 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 securities 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 we have not generated any revenue from product sales.

Our ability to become profitable depends upon our ability to generate revenue. To date, we have no products approved for commercial sale, we have not generated any revenue from our product sales 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 precautionary measures to help minimize the risk of COVID-19 or any future pandemics or similar outbreaks 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 may experience significant delays in our commercialization efforts or we may be unable to successfully commercialize our product candidates at all, which would materially harm our business and prospects. In addition, if we do not receive regulatory approvals for our product candidates, we may not be able to continue our operations.

Risks Related to Raising Additional Capital

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 are continuing our clinical trials of our lead product candidates, RLY-4008 and RLY-2608, and advancing our other product candidates through preclinical development. 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, we continue 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 fail to do so 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 our existing cash and cash equivalents and investments will be sufficient to fund our operations through at least the next 12 months. Our future capital requirements will depend on and could increase significantly as a result of 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 ongoing COVID-19 pandemic or similar public health crisis or the changing political conditions such as the current conflict between Russia and Ukraine and related global economic sanctions;
- the scope, progress, results and costs of our current and future clinical trials of RLY-4008 and RLY-2608 and additional preclinical research of our other programs;
- 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 existing or future 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, such as our collaboration with Genentech;
- the achievement of milestones or occurrence of other developments that trigger payments under any existing or future collaboration agreements, if any;
- the extent to which we are obligated to reimburse, or entitled to reimbursement of, clinical trial costs under any existing or future collaboration agreements, if any;
- the costs and timing of future commercialization activities, including 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.

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 may make 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, 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, the ownership interest of our stockholders will be diluted, and the terms of those securities may include liquidation or other preferences that materially adversely affect their rights as a common stockholder. We may offer and sell up to an aggregate amount of $300.0 million of our common stock from time to time in "at the market" offerings pursuant to the sales agreement, or the Sales Agreement, with Cowen and Company, LLC, subject to the limitations thereof. As of December 31, 2022, no shares of common stock have been sold under the Sales Agreement. 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.

Risks Related to COVID-19 and the Global Economy

The ongoing COVID-19 pandemic has impacted our business and any future pandemic, epidemic, or outbreak of an infectious disease could similarly affect our business and our financial results and could cause further disruption to the development of our product candidates.

Public health crises such as pandemics or similar outbreaks could adversely impact our business. The COVID-19 pandemic continues to evolve as new variants of COVID-19 have been identified and spread, which has led to various responses and public health safety measures. The extent to which the ongoing COVID-19 pandemic may continue to affect our operations or those of our third-party partners, including our preclinical or other nonclinical studies or clinical trial operations, will depend on future developments, which are highly uncertain and cannot be predicted with confidence, including the severity and duration of additional variant outbreaks (including acceleration of the spread of more transmissible variants of COVID-19 in the areas in which the we or our third party partners conduct operations), plateauing or stagnant vaccination and booster vaccination rates in geographies where we or our third party partners conduct operations, and the actions to contain COVID-19 or treat its impact, among others. The continued spread of COVID-19 globally could adversely impact our preclinical, other nonclinical or clinical trial operations in the United States, including our ability to obtain slots for IND-enabling studies and recruit and retain patients and principal investigators and site staff who, as healthcare providers, may have heightened exposure to COVID-19 if infection

rates substantially increase. For example, similar to other biopharmaceutical companies, we may experience delays in initiating IND-enabling studies, enrolling our clinical trials, or dosing of patients in our clinical trials as well as in activating new trial sites, and protocol deviations. 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, if any patients enrolled in our clinical trials are infected with COVID-19, they may not be able to complete these 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 ongoing and planned future clinical trials is dependent upon clinical trial sites which could be adversely affected by global health matters, such as pandemics. We conduct clinical trials for our product candidates in geographies which continue to be affected by COVID-19. Some factors from the ongoing COVID-19 pandemic 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 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 clinical trials;

- the potential negative effect on the operations of our third-party manufacturers, suppliers or other collaboration partners, including issues due to worker shortages, supply chain disruptions such as delays in procurement of manufacturing equipment and any related parts, facilities and production suspensions and a sudden increase in demand for certain goods and services, such as medical services and supplies;

- 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 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 cannot presently predict the scope and severity of the planned and potential shutdowns or disruptions of businesses and government agencies, such as the SEC or FDA.

These and other factors arising from the ongoing COVID-19 pandemic could worsen as the pandemic continues to evolve. Any of these factors, and other factors related to any unforeseen disruptions, have had and could continue to 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.

Global economic and political conditions, including the economic uncertainty tied to inflation and rising interest rates as well as political uncertainty relating to Russia and Ukraine, are difficult to mitigate and could pose challenges to our growth and profitability and could adversely affect our business, financial condition or results of operations.

Unstable market and economic conditions may have adverse consequences on our business, financial condition or results of operations. The global economy, in particular the credit and financial markets, has recently experienced significant volatility and disruptions, including diminished liquidity and credit availability, volatility in commodity prices, declines in consumer confidence and economic growth, and supply chain interruptions. Other factors, including rising interest rates and record inflation, may also increase the general cost of doing business. Continued economic uncertainty caused by these and other factors, including political instability, conflicts or crises involving individual countries or regions, such as the current conflict between Russia and Ukraine, and any associated economic sanctions, could result in a variety of risks to our business, including difficulty in enrolling participants in our clinical trials, difficulty in forecasting our financial results and managing inventory

levels, increases in our business costs, which in turn affect our ability to develop our current and future product candidates, and negatively impacting our ability to raise additional capital when needed on acceptable terms, if at all. In addition, political developments impacting government spending and international trade, including changes in trade agreements, potential government shutdowns and trade disputes and tariffs, such as the ongoing trade dispute between the United States and China, may negatively impact markets and cause weaker macroeconomic conditions. These global economic and political factors have also strained and could continue to strain certain of our suppliers and manufacturers, possibly resulting in supply disruptions or increased raw material or manufacturing costs, or adversely impacting their ability to manufacture clinical trial materials for our product candidates. Any of the foregoing could harm our business and prospects and we cannot anticipate all of the ways in which the current economic climate and financial market conditions could adversely impact our operations.

Risks Related to Our Intellectual Property

Risks Related to Protecting 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 will 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. Other than our U.S. patent relating to RLY-1971 (now referred to as GDC-1971) composition of matter, we do not own or in-license any issued patents relating to our platform or our lead product candidates under clinical development.

Pursuant to the Genentech Agreement, we have granted an exclusive, worldwide, royalty-bearing license to Genentech, with the right to sublicense, develop and commercialize GDC-1971 and any other SHP2 inhibitors developed under the Genentech Agreement. Genentech has the first right, but not the obligation, to file, prosecute and maintain any patents licensed to it, as well as to enforce infringement of or defend claims against such patents that relate to GDC-1971 or other SHP2 inhibitors. See "Risks Related to Our Reliance on Third Parties— *We have and may enter into collaborations with third parties for the research, development, manufacture and commercialization of one or more of our programs or product candidates. If these collaborations are not successful, our business could be adversely affected*." for a discussion of risks related to the protection of our intellectual property rights under our collaborations.

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.

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 jointly created by D. E. Shaw Research and us. 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, unless such rights are waived, as is the case for our co-owned SHP2 patent applications. 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.

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 our lead product candidates under clinical development, RLY-4008, RLY-2608, GDC-1971, 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.

We have licensed patent rights, and in the future may license additional patent rights, to or from third parties. For example, we have licensed our patent rights to our SHP2 program to Genentech. These licensed patent rights may be valuable to our business, and we may not have the right to control the preparation, filing and prosecution of patent applications, or to maintain the patents, covering technology or medicines underlying such licenses. We cannot be certain that these patents and applications will be prosecuted and enforced in a manner consistent with the best interests of our business. If any such licensors or licensees fail to maintain such patents, or lose rights to those patents, the rights we have licensed may be reduced or eliminated and our right to develop and commercialize any of our products that are the subject of such licensed rights could be adversely affected.

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.

Our failure to secure trademark registrations could adversely affect our business and our ability to market our products and product candidates.

Our trademark applications in the United States and any other jurisdictions where we may file may not be allowed for registration, and our registered trademarks may not be maintained or enforced. During trademark registration proceedings, we may receive rejections. Although we are given an opportunity to respond to those rejections, we may be unable to overcome such rejections. In addition, in the USPTO and in corresponding foreign agencies, third parties are given an opportunity to oppose pending trademark applications and to seek to cancel registered trademarks. Opposition or cancellation proceedings may be filed against our applications and/or registrations, and our applications and/or registrations may not survive such proceedings. Failure to secure such trademark registrations in the United States and in foreign jurisdictions could adversely affect our business and our ability to market our products and product candidates.

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.

Risks Related to Intellectual Property Litigation

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, PI3K inhibitors, CDK2 inhibitors and ERα degraders. 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.

Risks Related to Enforcement of Our Intellectual Property Rights

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.

Risks Related to Third Party Intellectual Property

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, as amended. 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 D. E. Shaw Research 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.

Risks Related to Intellectual Property Laws

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

Risks Related to Regulatory Approval

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

If the FDA or a similar 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 and applicable product tracking and tracing requirements. Additionally, under FDORA, sponsors of approved drugs must provide six months' notice to the FDA of any changes in marketing status, such as the withdrawal of a drug, and failure to do so could result in the FDA placing the product on a list of discontinued products, which would revoke the product's ability to be marketed. 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 processing and cross-border transfer of personal information and failure to comply with such requirements in jurisdictions where we may conduct clinical trials or enroll subjects in our ongoing or future clinical trials could have a material adverse effect on our business, financial condition or results of operations.

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 data collection restrictions. Privacy and data security have become significant issues in the U.S., Europe and in many other jurisdictions where we conduct or may in the future conduct our operations. The regulatory framework for the collection, use, safeguarding, sharing and transfer of information worldwide is rapidly evolving and is likely to remain uncertain for the foreseeable future. For example, the collection, use, storage, disclosure, transfer, or other processing of personal data of individuals in the EEA, including personal health data, is subject to the 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, providing notice to the individuals to whom the personal data relates regarding data processing activities, implementing safeguards to protect the privacy and security of personal data, implementing processes to handle requests from individuals to exercise their data protection rights, maintaining records of our processing activities and to document data protection impact assessments where there is high risk processing, providing notification of data breaches in certain circumstances, and taking certain measures when engaging third-party processors or sub-processors. The GDPR focuses on accountability of data controllers (such as us) and requires us to put in place all technical and organizational measures (privacy by design and by default) to ensure that we meet our obligations. It also increases substantially the penalties to which we could be subject in the event of any non-compliance, including fines of up to €10,000,000 or up to 2% of our total worldwide annual turnover for certain comparatively minor offenses, or up to €20,000,000 or up to 4% of our total worldwide annual turnover for more serious offenses. In addition, further to the UK's exit from the EU on January 31, 2020, the GDPR ceased to apply in the UK at the end of the transition period on December 31, 2020. However, as of January 1, 2021, the UK's European Union (Withdrawal) Act 2018 incorporated the GDPR (as it existed on December 31, 2020 but subject to certain UK specific amendments) into UK law, referred to as the UK GDPR. The UK GDPR and the UK Data Protection Act 2018, or collectively, UK GDPR, set out the UK's data protection regime, which is independent from but aligned to the EU's data protection regime. Non-compliance with the UK GDPR may result in monetary penalties of up to £17.5 million or 4% of worldwide revenue, whichever is higher. Although the UK is regarded as a third country under the EU's GDPR, the European Commission has now issued a decision recognizing the UK as providing adequate protection under the EU GDPR and, therefore, transfers of personal data originating in the EU to the UK remain unrestricted. Like the EU GDPR, the UK GDPR restricts personal data transfers outside the UK to countries not regarded by the UK as providing adequate protection. The UK government has confirmed that personal data transfers from the UK to the EEA remain free flowing.

Significantly, the GDPR imposes strict rules on the transfer of personal data out of the EEA and UK to the U.S. or other regions that have not been deemed to offer "adequate" privacy protections. In the past, companies in the U.S. were able to rely upon the EU-U.S. UK-U.S. and the Swiss-U.S. Privacy Shield frameworks to legitimize data transfers from the EU and the UK to the U.S. In July 2020, the Court of Justice of the European Union, or CJEU, invalidated the EU-U.S. Privacy Shield on the grounds that the Privacy Shield failed to offer adequate protections to EU personal data transferred to the U.S. The CJEU also ruled that transfers made pursuant to the Standard Contractual Clauses, or SCCs, published by the European Commission, or EC, need to be assessed on a case-by-case basis to ensure the law in the recipient country provides "essentially equivalent" protections to safeguard the transferred personal data as the EU, and required businesses to adopt supplementary measures if such standard is not met. On June 4, 2021, the EC published new versions of the SCCs, which seek to address the issues identified by the CJEU and provide further details regarding the transfer assessments that the parties are required to conduct when implementing the new SCCs. However, there continue to be concerns about whether the SCCs and other mechanisms will face additional challenges. While SCCs provide an alternative to our Privacy Shield certification for EU-U.S. data flows, the decision (and certain regulatory guidance issued in its wake) casts doubt on the legality of EU-U.S. data flows in general.

The UK is not subject to the EC's new SCCs but has published its own transfer mechanism, the International Data Transfer Agreement or International Data Transfer Addendum, or IDTA, which enables transfers from the UK. The new IDTA or the UK addendum must be used for any new contract entered into after September 21, 2022 and implemented in existing contracts that incorporate the prior version of the SCCs by March 21, 2024. On March 25, 2022, the EC and the U.S. announced to have reached a political agreement on a new "Trans-Atlantic Data Privacy Framework", which will replace the invalidated Privacy Shield and on December 13, 2022, the EC published a draft adequacy decision on the Trans-Atlantic Data Privacy Framework. We will be required to implement these new safeguards when these safeguards are used as the basis for transferring personal data out of the EEA and/or UK and doing so may require significant effort and cost.

EEA Member States have adopted implementing national laws to implement the GDPR which may partially deviate from the GDPR and the competent authorities in the EEA Member States may interpret GDPR obligations slightly differently from

country to country, so that we do not expect to operate in a uniform legal landscape in the EU. In addition, the UK has announced plans to reform the country's data protection legal framework in its Data Reform Bill, but these have been put on hold.

If we decide to conduct clinical trials or enroll subjects in our ongoing or future clinical trials in Europe and/or the UK, we are subject to the supervision of local data protection authorities in those jurisdictions where we are monitoring the behavior of individuals in the EEA or UK (i.e., undertaking clinical trials). If we are investigated by a European or UK data protection authority, we may face fines and other penalties. Any such investigation or charges by European or UK data protection authorities could have a negative effect on our business and on our ability to commercialize our products in the future, including with European, UK-based or multi-national pharmaceutical partners.

In addition to European data protection requirements, we may be subject to various privacy laws in the United States at the state and federal level. In the United States, at the state level, for example, California Consumer Privacy Act (CCPA), which took effect on January 1, 2020, imposes sweeping privacy and security obligations on many companies doing business in California and provides for substantial fines for non-compliance and, in some cases, a private right of action to consumers who are victims of data breaches involving their unredacted or unencrypted personal information. While there is currently an exception for protected health information that is subject to HIPAA and clinical trial regulations, as currently written, the CCPA may impact our business activities. The CCPA became enforceable as of July 1, 2020, but there continues to be uncertainty about how the law will be interpreted and enforced. Additionally, the California Privacy Rights Act (CPRA) became effective on January 1, 2023. The CPRA imposes additional obligations on companies covered by the legislation and significantly modifies the CCPA, including by expanding consumers' rights with respect to certain sensitive personal information. The CPRA also creates a new state agency that will be vested with authority to implement and enforce the CCPA and the CPRA. As of January 1, 2023, the privacy protections of the CPRA also apply to personal information of contacts collected in a business to business capacity and from employment applicants, employees and former employees. The effects of the CCPA and the CPRA are potentially significant and may require us to modify our data collection or processing practices and policies and to incur substantial costs and expenses in an effort to comply and increase our potential exposure to regulatory enforcement and/or litigation. Furthermore, four other states have enacted comprehensive consumer privacy laws and many others are considering proposals for such laws.

The increasing number and complexity of regional, country and U.S. state data protection laws, and other changes in laws or regulations across the globe, especially those associated with the enhanced protection of certain types of sensitive data, such as healthcare data or other personal information from our clinical trials, could lead to litigation or government investigations or enforcement actions and significant penalties against us and could have a material adverse effect on our business, financial condition or results of operations.

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, similar 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 have engaged and may continue to 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. For example, we have engaged Foundation Medicine, Inc. to develop its FoundationOne®CDx as a companion diagnostic for RLY-4008. The FDA has indicated that if we continue RLY-4008 and RLY-2608 in a specific biomarker-defined population, a companion diagnostic device will be required to ensure their 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 similar 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 rely and intend to continue 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. In connection with such current and future collaborative agreements, we will be dependent on the sustained cooperation and effort of our 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 current and 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 product candidates.

Risks Related to Anti-bribery, Anti-corruption and Other Government Regulations

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 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.

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 governments of foreign jurisdictions 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. 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 including items or services resulting from a violation of the federal Anti-Kickback Statute constitutes a false or fraudulent claim for purposes of the federal False Claims Act, or FCA, or federal civil money penalties;

- the federal civil and criminal false claims and civil monetary penalties laws, including the 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. 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. In addition, the government may assert that a claim including items and services resulting from a violation of the federal Anti-Kickback Statute constitutes a false or fraudulent claim for purposes of the FCA;

- the federal Health Insurance Portability and Accountability Act of 1996, or HIPAA, imposes criminal and civil liability for executing, or attempting to execute, a scheme to defraud any healthcare benefit program, or knowingly and willfully falsifying, concealing or covering up a material fact or making any materially false statement in connection with the delivery of or payment for healthcare benefits, items or services. Similar to the 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 were extended to include transfers of value made to certain non-physician providers (physician assistants, nurse practitioners, clinical nurse specialists, certified registered nurse anesthetists and anesthesiologist assistants, and certified-nurse midwives);

- HIPAA, as amended by the Health Information Technology for Economic and Clinical Health Act of 2009, or HITECH and its implementing regulations, including the Final Omnibus Rule published in January 2013, which 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 creation, maintenance, receipt, or other use or disclosure of individually identifiable health information, including mandatory contractual terms with business associates, with respect to safeguarding the privacy, security and transmission of individually identifiable health information. HITECH also created new tiers of civil monetary penalties, amended HIPAA to make civil and criminal penalties directly applicable to business associates, and gave state attorneys general new authority to file civil actions for damages or injunctions in federal courts to enforce the federal HIPAA laws and seek attorneys' fees and costs associated with pursuing federal civil actions. In addition, there may be additional federal, state and non-U.S. laws which govern the privacy and security of health and other personal information in certain circumstances, many of which differ from each other in significant ways and may not have the same effect, thus complicating compliance efforts;

- federal government price reporting laws, which require us to calculate and report complex pricing metrics in an accurate and timely manner to government programs;

- federal consumer protection and unfair competition laws, which broadly regulate marketplace activities and activities that potentially harm consumers; 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. In addition, some states have passed laws that require pharmaceutical companies to comply with the April 2003 Office of Inspector General Compliance Program Guidance for Pharmaceutical Manufacturers and/or the Pharmaceutical Research and Manufacturers of America's Code on Interactions with Healthcare Professionals. 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. State and foreign laws, including for example the EU GDPR, which became effective May 2018 also govern the privacy and security of health information and other personal information in some circumstances, many of which differ from each other in significant ways and may not have the same effect, thus complicating compliance efforts. There are ambiguities as to what is required to comply with these state and foreign requirements and if we fail to comply with an applicable state or foreign law requirement we could be subject to penalties. Further, many state laws governing the privacy and security of health information in certain circumstances, differ from each other in significant ways, 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, disgorgement, individual imprisonment, reputational harm, exclusion from government funded healthcare programs, such as Medicare and Medicaid, and the curtailment or restructuring of our operations, as well as additional reporting obligations and oversight if we become subject to a corporate integrity agreement or other agreement to resolve allegations of non-compliance with these laws. Further, defending against any such actions can be costly and time consuming, and may require significant financial and personnel resources. Therefore, even if we are successful in defending against any such actions that may be brought against us, our business may be impaired. If any of the physicians or other providers or entities with whom we expect to do business is found not to be in compliance with applicable laws, they may be subject to

criminal, civil or administrative sanctions, including exclusions from government funded healthcare programs and imprisonment. If any of the above occur, our ability to operate our business and our results of operations could be adversely affected.

Risks Related to Regulatory Review of Certain Drug Development Designations

We may seek priority review designation for one or more of our 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 have obtained orphan drug designation for one of our product candidates. We may seek orphan drug designation for certain of our other product candidates as well, and we may be unsuccessful or may be unable to maintain the benefits associated with orphan drug designation, including the potential for market exclusivity.

In January 2022, the FDA granted orphan drug designation to RLY-4008 for the treatment of cholangiocarcinoma. As part of our business strategy, we may seek orphan drug designation for certain of our other product candidates as well, 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 the EU, the European Commission, upon the recommendation of the EMA's Committee for Orphan Medicinal Products, grants orphan drug designation to promote the development of products 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 the EU and for which no satisfactory method of diagnosis, prevention, or treatment has been authorized for marketing in the EU (or, if a method exists, the product would be of a significant benefit to those affected by the condition). Additionally, designation is granted for products 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 product in the EU would generate sufficient return to justify the necessary investment in developing the product. In the EU, orphan drug designation entitles a party to financial incentives such as reduction of fees or fee waivers. In October 2022, the EMA adopted a positive opinion on the orphan drug designation application for RLY-4008 for the treatment of biliary tract cancer.

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 a later 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 drug 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. We have obtained orphan drug designation for one of our product candidates and while we may seek orphan drug

designation for our other 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. In addition, the FDA may further reevaluate the Orphan Drug Act and its regulations and policies. We do not know if, when, or how the FDA may change the orphan drug regulations and policies in the future, and it is uncertain how any changes might affect our business. Depending on what changes the FDA may make to its orphan drug regulations and policies, our business could be adversely impacted.

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.

We may seek approval of our product candidates, where applicable, under the FDA's accelerated approval pathway. This pathway, 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 in the United States.

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. If granted, accelerated approval is usually contingent on the sponsor's agreement to conduct, in a diligent manner, additional post-approval confirmatory studies to verify and describe the drug's clinical benefit. Under FDORA, the FDA is permitted to require, as appropriate, that a post-approval confirmatory study or studies be underway prior to approval or within a specified time period after the date of approval for a product granted accelerated approval. FDORA also requires sponsors to send updates to the FDA every 180 days on the status of such studies, including progress toward enrollment targets, and the FDA must promptly post this information publicly. FDORA also gives the FDA increased authority to withdraw approval of a drug or biologic granted accelerated approval on an expedited basis if the sponsor fails to conduct such studies in a timely manner, send the necessary updates to the FDA, or if such post-approval studies fail to verify the drug's predicted clinical benefit. Under FDORA, the FDA is empowered to take action, such as issuing fines, against companies that fail to conduct with due diligence any post-approval confirmatory study or submit timely reports to the agency on their progress. In addition, the FDA currently requires, unless otherwise informed by the agency, pre-approval of promotional materials for products receiving accelerated approval, which could adversely impact the timing of the commercial launch of the product. Thus, even if we do seek to utilize the accelerated approval pathway, we may not be able to obtain accelerated approval and, even if we do, we may not experience a faster development, regulatory review or approval process for that product. In addition, receiving accelerated approval does not assure that the product's accelerated approval will eventually be converted to a traditional approval.

Risks Related to Healthcare Legislative Reform

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 United States 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 United States, 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 United States 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 50% (increased to 70% 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.

Since its enactment, there have been numerous judicial, administrative, executive, and legislative challenges to certain aspects of the ACA, and we expect there will be additional challenges and amendments to the ACA in the future. On June 17, 2021, the U.S. Supreme Court dismissed the most recent judicial challenge to the ACA brought by several states without specifically ruling on the constitutionality of the ACA. Prior to the Supreme Court's decision, President Biden issued an executive order to initiate a special enrollment period from February 15, 2021 through August 15, 2021 for purposes of obtaining health insurance coverage through the ACA marketplace. The executive order also instructed certain governmental agencies to review and reconsider their existing policies and rules that limit access to healthcare, including among others, reexamining Medicaid demonstration projects and waiver programs that include work requirements, and policies that create unnecessary barriers to obtaining access to health insurance coverage through Medicaid or the ACA. On December 20, 2019, the Further Consolidated Appropriations Act (H.R. 1865) was signed into law, which repealed the so called "Cadillac" tax on certain high cost employer sponsored insurance plans, 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."

Other legislative changes have been proposed and adopted in the United States 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 2030 unless additional Congressional action is taken; however, pursuant to the CARES Act and subsequent legislation, these reductions were suspended from May 1, 2020 through March 31, 2022 due to the COVID-19 pandemic. A 1% payment reduction occurred from April 1, 2022 through June 30, 2022, and the 2% payment reduction resumed on July 1, 2022. 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. 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. 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.

There has been increasing legislative and enforcement interest in the United States with respect to specialty drug pricing practices. At a federal level, President Biden signed an Executive Order on July 9, 2021 affirming the administration's policy to (i) support legislative reforms that would lower the prices of prescription drug and biologics, including by allowing Medicare to negotiate drug prices, by imposing inflation caps, and by supporting the development and market entry of lower-cost generic drugs and biosimilars; and (ii) support the enactment of a public health insurance option. Among other things, the Executive Order also directs the U.S. Department of Health and Human Services, or HHS, to provide a report on actions to combat excessive pricing of prescription drugs, enhance the domestic drug supply chain, reduce the price that the Federal government pays for drugs, and address price gouging in the industry; and directs the FDA to work with states and Indian Tribes that propose to develop section 804 Importation Programs in accordance with the Medicare Prescription Drug, Improvement, and Modernization Act of 2003, and the FDA's implementing regulations. The FDA released such implementing regulations on September 24, 2020, which went into effect on November 30, 2020, providing guidance for states to build and submit importation plans for drugs from Canada. On September 25, 2020, CMS stated drugs imported by states under this rule will not be eligible for federal rebates under Section 1927 of the Social Security Act and manufacturers would not report these drugs for "best price" or Average Manufacturer Price purposes. Since these drugs are not considered covered outpatient drugs, CMS further stated it will not publish a National Average Drug Acquisition Cost for these drugs. If implemented, importation of drugs from Canada may materially and adversely affect the price we receive for any of our product candidates. Further, on November 20, 2020, CMS issued an Interim Final Rule implementing the Most Favored Nation, or MFN, Model under which Medicare Part B reimbursement rates would have been calculated for certain drugs and biologicals based on the lowest price drug manufacturers receive in Organization for Economic Cooperation and Development countries with a similar gross domestic product per capita. However, on December 29, 2021, CMS rescinded the MFN rule. Additionally, on December 2, 2020, HHS published a regulation removing safe harbor protection for price reductions from pharmaceutical manufacturers to plan sponsors under Part D, either directly or through pharmacy benefit managers, unless the price reduction is required by law. The rule also creates a new safe harbor for price reductions reflected at the point-of-sale, as well as a safe harbor for certain fixed fee arrangements between pharmacy benefit managers and manufacturers. Pursuant to court order, the removal and addition of the aforementioned safe harbors were delayed until January 1, 2026. This deadline was further pushed back to January 1, 2027 by the Bipartisan Safer Communities Act, and the Inflation Reduction Act of 2022 further delayed implementation of this rule to January 1, 2032. On August 16, 2022 the Inflation Reduction Act of 2022 was passed, which, among other things, allows for CMS to negotiate prices for certain single-source drugs and biologics reimbursed under Medicare Part B and Part D, beginning with ten high-cost drugs paid for by Medicare Part D starting in 2026, followed by 15 Part D drugs in 2027, 15 Part B or Part D drugs in 2028, and 20 Part B or Part D drugs in 2029 and beyond. The legislation subjects drug manufacturers to civil monetary penalties and a potential excise tax for failing to comply with the legislation by offering a price that is not equal to or less than the negotiated "maximum fair price" under the law or for taking price increases that exceed inflation. The legislation also caps Medicare beneficiaries' annual out-of-pocket drug expenses at $2,000. The effect of the Inflation Reduction Act of 2022 on our business and the healthcare industry in general is not yet known. Although a number of these and other proposed measures may require authorization through additional legislation to become effective, and the Biden administration may reverse or otherwise change these measures, both the Biden administration and Congress have indicated that they will continue to seek new legislative measures to control drug costs.

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 United States 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.

Recent federal legislation and actions by federal, state and local governments may permit reimportation of drugs from foreign countries into the United States, including foreign countries where the drugs are sold at lower prices than in the United States, which could materially adversely affect our operating results.

We may face competition in the United States for our development candidates and investigational medicines, if approved, from therapies sourced from foreign countries that have placed price controls on pharmaceutical products. In the United States, the Medicare Modernization Act, or MMA, contains provisions that call for the promulgation of regulations that expand pharmacists' and wholesalers' ability to import cheaper versions of an approved drug and competing products from Canada, where there are government price controls. Further, the MMA provides that these changes to U.S. importation laws will not take effect, unless and until the Secretary of the HHS certifies that the changes will pose no additional risk to the public's health and safety and will result in a significant reduction in the cost of products to consumers. On September 23, 2020, the Secretary of the HHS made such certification to Congress, and on October 1, 2020, FDA published a final rule that allows for the importation of certain prescription drugs from Canada. Under the final rule, States and Indian Tribes, and in certain future circumstances pharmacists and wholesalers, may submit importation program proposals to the FDA for review and authorization. On September 25, 2020, CMS stated drugs imported by States under this rule will not be eligible for federal rebates under Section 1927 of the Social Security Act and manufacturers would not report these drugs for "best price" or Average Manufacturer Price purposes. Since these drugs are not considered covered outpatient drugs, CMS further stated it will not publish a National Average Drug Acquisition Cost for these drugs. Separately, the FDA also issued a final guidance document outlining a pathway 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. The market implications of the final rule and guidance are unknown at this time. Proponents of drug reimportation may attempt to pass legislation that would directly allow reimportation under certain circumstances. Legislation or regulations allowing the reimportation of drugs, if enacted, could decrease the price we receive for any products that we may develop and adversely affect our future revenues and prospects for profitability.

Risks Related to the Regulatory Agency Review Process

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

The ability of the FDA to review and approve new products can be affected by a variety of factors, including government budget and funding levels, global health concerns, ability to hire and retain key personnel and accept the payment of user fees, and statutory, regulatory, and policy changes. Average review times at the agency have fluctuated in recent years as a result. In

addition, government funding of the SEC and other government agencies on which our operations may rely, including those that fund research and development activities, is subject to the political process, which is inherently fluid and unpredictable.

Disruptions at the FDA and other agencies may also slow the time necessary for new drugs to be reviewed and/or approved by necessary government agencies, which would adversely affect our business. For example, over the last several years the U.S. government has shut down several times and certain regulatory agencies, such as the FDA and the SEC, have had to furlough critical government employees and stop critical activities. Separately, in response to the ongoing COVID-19 pandemic, since March 2020 when foreign and domestic inspections of facilities were largely placed on hold, the FDA has been working to resume pre-pandemic levels of inspection activities, including routine surveillance, bioresearch monitoring and pre-approval inspections. Should the FDA determine that an inspection is necessary for approval and an inspection cannot be completed during the review cycle due to restrictions on travel, and the FDA does not determine a remote interactive evaluation to be adequate, the agency has stated that it generally intends to issue, depending on the circumstances, a complete response letter or defer action on the application until an inspection can be completed. During the COVID-19 public health emergency, a number of companies announced receipt of complete response letters due to the FDA's inability to complete required inspections for their applications. Regulatory authorities outside the U.S. may adopt similar restrictions or other policy measures in response to the ongoing COVID-19 pandemic and may experience delays in their regulatory activities. Additionally, as of May 26, 2021, the FDA noted it is continuing to ensure timely reviews of applications for medical products during the ongoing COVID-19 pandemic in line with its user fee performance goals. However, the FDA may not be able to continue its current pace and approval timelines could be extended, including where a pre-approval inspection or an inspection of clinical sites is required and due to the ongoing COVID-19 pandemic and any travel restrictions, the FDA is unable to complete such required inspections during the review period. If a prolonged government shutdown occurs, or if global health concerns continue to prevent the FDA or other regulatory authorities from conducting their regular inspections, reviews, or other regulatory activities, it could significantly impact the ability of the FDA to timely review and process our regulatory submissions, which could have a material adverse effect on our business. Further, in our operations as a public company, future government shutdowns could impact our ability to access the public markets and obtain necessary capital in order to properly capitalize and continue our operations.

Risks Related to Employee Matters and Managing Growth

Risks Related to Employee Matters

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 the 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 or other nonclinical studies or clinical trials, which could result in regulatory sanctions and cause serious harm to our reputation. We have adopted 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.

Risks Related to Growth and Acquisitions

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 December 31, 2022, we had 327 full-time employees. We expect to experience significant growth in the number of our employees and the scope of our operations, particularly in the areas of pharmaceutical and clinical 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.

Our acquisitions expose us to risks that could adversely affect our business, and we may not achieve the anticipated benefits of acquisitions of businesses or technologies.

As a part of our growth strategy, we may make selected acquisitions of complementary products and/or businesses, such as our acquisition of ZebiAI in April 2021. Any acquisition involves numerous risks and operational, financial, and managerial challenges, including the following, any of which could adversely affect our business, financial condition, or results of operations:

- difficulties in integrating new operations, technologies, products, and personnel;
- challenges maintaining uniform procedures, controls and policies with respect to our financial accounting systems;
- lack of synergies or the inability to realize expected synergies and cost-savings;

- underperformance of any acquired technology, product, or business relative to our expectations and the price we paid;
- negative near-term impacts on financial results after an acquisition, including acquisition-related earnings charges;
- the potential loss of key employees, customers, and strategic partners of acquired companies;
- claims by terminated employees and shareholders of acquired companies or other third parties related to the transaction;
- the assumption or incurrence of additional debt obligations or expenses, or use of substantial portions of our cash;
- the issuance of equity securities to finance or as consideration for any acquisitions that dilute the ownership of our stockholders;
- the issuance of equity securities to finance or as consideration for any acquisitions may not be an option if the price of our common stock is low or volatile which could preclude us from completing any such acquisitions;
- any collaboration, strategic alliance and licensing arrangement may require us to relinquish valuable rights to our technologies or product candidates, or grant licenses on terms that are not favorable to us;
- diversion of management's attention and company resources from existing operations of the business;
- inconsistencies in standards, controls, procedures, and policies;
- the impairment of intangible assets as a result of technological advancements, or worse-than-expected performance of acquired companies;
- assumption of, or exposure to, historical liabilities of the acquired business, including unknown contingent or similar liabilities that are difficult to identify or accurately quantify; and
- risks associated with acquiring intellectual property, including potential disputes regarding acquired companies' intellectual property.

In addition, the successful integration of acquired businesses requires significant efforts and expense across all operational areas. There can be no assurance that any of the acquisitions we may make, including our acquisition of ZebiAI, will be successful or will be, or will remain, profitable. Our failure to successfully address the foregoing risks may prevent us from achieving the anticipated benefits from any acquisition in a reasonable time frame, or at all.

Risks Related to Business Disruptions

Our internal information technology systems, or those of our third-party collaborators and/or partners, may fail or suffer security breaches, loss or leakage of data and other disruptions, which could result in a material disruption of our development programs, compromise sensitive information related to our business or prevent us from accessing critical information, potentially exposing us to liability or otherwise adversely affecting our business.

We are increasingly dependent upon information technology systems, infrastructure and data to operate our business. In the ordinary course of business, we collect, store and transmit confidential information (including but not limited to intellectual property, proprietary business information and personal information). It is critical that we do so in a secure manner to maintain the confidentiality and integrity of such confidential information. We also have outsourced elements of our operations to third parties, and as a result we collaborate with a number of third-party CROs, vendors, and other contractors and consultants who have access to our confidential information.

Given our limited operating history, we are still in the process of implementing our internal information technology security measures. Due to the size and complexity and the increasing amounts of confidential information that are maintained, our internal information technology systems and those of our third-party CROs, vendors and other contractors and consultants are potentially vulnerable to breakdown or other damage or interruption from service interruptions, system malfunction, natural disasters, terrorism, war and telecommunication and electrical failures, as well as security incidents or breaches from inadvertent or intentional actions by our employees and/or third parties with whom we do business, or from cyber-attacks by malicious third

parties (including the deployment of harmful malware, ransomware, digital extortion, denial-of-service attacks, supply chain attacks, social engineering and other means to affect service reliability and threaten the confidentiality, integrity and availability of information), which may compromise our system infrastructure or those of our partners or lead to data leakage. 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, similar events relating to the information technology systems of our third-party collaborators who we rely on for the manufacture of our product candidates and to conduct clinical trials could also have a material adverse effect on our business.

The risk of a security breach or disruption, particularly through cyber-attacks or cyber intrusion, including by computer hackers, foreign governments, and cyber terrorists, has generally increased as the frequency, persistence, intensity and sophistication of attempted attacks and intrusions from around the world have increased, including potentially in connection with the current conflict between Russia and Ukraine. We may not be able to anticipate all types of security threats, nor may we be able to implement preventive measures effective against all such security threats. The techniques used by cyber criminals change frequently, may not be recognized until launched and can originate from a wide variety of sources, including outside groups such as external service providers, organized crime affiliates, terrorist organizations or hostile foreign governments or agencies. In addition, changes in how our employees work and access our systems during the ongoing COVID-19 pandemic, when part of our workforce is working remotely, could also lead to opportunities for bad actors to launch cyber-attacks or for employees to cause inadvertent security risks or incidents. The prevalent use of mobile devices also increases the risk of data security incidents.

We are also subject to legal obligations concerning cyber security. For example, as a company handing employee information of individuals who reside in Massachusetts, we are required to comply with the Massachusetts Data Security Regulations (201 CMR 17.00) which require the development and implementation of a Comprehensive Written Information Security Program and the maintenance of specific information security protections.

While we have not experienced any material system failure, accident or security breach to date, we cannot guarantee that our data protection efforts and our investment in information technology will prevent significant breakdowns, data leakages, or breaches in our systems. While we maintain liability insurance at levels that we believe are appropriate for our business, we cannot assure our investors that it will be sufficient in type or amount to cover us against all claims related to security compromises or breaches, cyberattacks and other related breaches. 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, the further development and commercialization of our product candidates or any future product candidates could be hindered or delayed, we could be required to expend significant amounts of money and other resources to repair or replace our information systems or networks, the market perception of the effectiveness of our security measures could be harmed and our reputation and credibility could be damaged. Furthermore, any failure or perceived failure by us or any third-party collaborators, service providers, contractors or consultants to comply with our privacy, confidentiality, data security or similar obligations to third parties, or any data security incidents or other security compromises or breaches that result in the unauthorized access, use, acquisition, disclosure, release or transfer of sensitive information, including physician data, patient data, or any personally identifiable information, may result in governmental investigations, enforcement actions, regulatory fines, litigation or public statements against us, could cause third parties to lose trust in us or could result in claims by third parties asserting that we have breached our privacy, confidentiality, data security or similar obligations, any of which could have a material adverse effect on our reputation, business, financial condition or results of operations. Moreover, data security incidents and other security compromises and breaches can be difficult to detect, and any delay in identifying or remediating them may lead to increased harm. While we have implemented data security measures intended to protect our information technology systems and infrastructure, there can be no assurance that such measures will successfully prevent service interruptions or data security incidents or compromises, including security breaches.

If we fail to comply with applicable 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. Compliance with applicable environmental, health and safety laws and regulations is expensive, and current or future environmental regulations may impair our business, prospects, financial condition or results of operations.

Our current operations are located in Massachusetts; however, we rely on third parties, including those that are located outside the United States, and we or the third parties upon whom we depend may be adversely affected by natural disasters or other unplanned events 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, global conflicts such as the current conflict between Russia and Ukraine, 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 facilities of our third-party contract manufacturers or CROs, 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 ongoing COVID-19 pandemic could further disrupt our operations and have a material and adverse effect on our business, financial condition, results of operations and prospects. If a natural disaster, power outage or other event occurred that prevented us from using all or a significant portion of our headquarters, that damaged critical infrastructure, such as our research facilities or the facilities of our third-party contract manufacturers or CROs, 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 facilities of our third-party contract manufacturers or CROs 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.

Risks Related to Our Common Stock

Risks Related to Trading Our Common Stock

The trading price of our common stock historically has been volatile, which may affect the price at which you could sell any shares of our common stock. Securities class action or other litigation involving our company or members of our management team could also substantially harm our business, financial condition and results of operations.

The market price for our common stock historically has been volatile and could continue to be subject to wide fluctuations in response to various factors. Since shares of our common stock were sold in our initial public offering, or IPO, in July 2020 at a price of $20.00 per share, our stock price has fluctuated significantly, ranging from an intraday low of $12.65 to an intraday high of $64.37 through February 17, 2023. This volatility may affect the price at which you could resell the common stock. Our stock price is likely to continue to be volatile and subject to significant price and volume fluctuations in response to market and other factors, including the factors described below. The stock market in general and Nasdaq and the market for biopharmaceutical companies in particular, have experienced extreme volatility that has often been unrelated or disproportionate to the operating performance of these companies.

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;
- sales of a substantial number of shares of our common stock in the public market, or the perception in the market that the holders of a large number of shares intend to sell shares;
- 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.

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.

An active trading market for our common stock may not be sustained.

If an active market for our common stock does not continue, it may be difficult for our stockholders to sell their shares without depressing the market price for the shares or sell their shares at or above the prices at which they acquired their shares or sell their shares at the time they would like to sell. Any inactive trading market for our common stock may also impair our ability to raise capital to continue to fund our operations by selling shares and may impair our ability to acquire other companies or technologies by using our shares as consideration.

Risks Related to Dividends

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.

General Risk Factors

Risks Related to Insider Control

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

As of December 31, 2022, the holdings of our executive officers, directors, principal stockholders and their affiliates, represented beneficial ownership, in the aggregate, of approximately 47.2% of our outstanding common stock. 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 may have interests, with respect to their common stock, that are different from those of our public market investors 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.

Risks Related to Tax

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 experience ownership changes in the future as a result of subsequent shifts in our stock ownership. As of December 31, 2022, we had federal net operating loss carryforwards of approximately $412.0 million, and our ability to utilize those net operating loss carryforwards could be limited by an "ownership change" as described above.

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

The rules dealing with U.S. federal, state and local income taxation are constantly under review by persons involved in the legislative process and by the Internal Revenue Service, or IRS, and the U.S. Treasury Department. Changes to tax laws (which changes may have retroactive application) could adversely affect us or holders of our common stock. In recent years, many changes have been made and changes are likely to continue to occur in the future.

Additional changes to U.S. federal income tax law are currently being contemplated, and future changes in tax laws could have a material adverse effect on our business, cash flow, financial condition or results of operations. It cannot be predicted whether, when, in what form, or with what effective dates, new tax laws may be enacted, or regulations and rulings may be enacted, promulgated or issued under existing or new tax laws, which could result in an increase in our or our stockholders' tax liability or require changes in the manner in which we operate in order to minimize or mitigate any adverse effects of changes in tax law or in the interpretation thereof. You are urged to consult your tax advisor regarding the implications of potential changes in tax laws on an investment in our common stock.

Risks Related to Operating as a Public Company

We have incurred and will continue to incur increased costs as a result of operating as a public company, and our management has devoted and will continue to devote substantial time to compliance initiatives.

As a public company, and particularly since we are no longer an "emerging growth company," we have incurred and expect to incur significant legal, accounting and other expenses. In addition, the Sarbanes-Oxley Act of 2002 and rules subsequently implemented by the SEC 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 devote a substantial amount of time to these compliance initiatives. Moreover, these rules and regulations will continue to increase our legal and financial compliance costs and will make some activities more time-consuming and costly.

Pursuant to Section 404 of the Sarbanes-Oxley Act of 2002, or Section 404, we are required to furnish a report by our management on our internal control over financial reporting. Because we are no longer an emerging growth company, we are required to include with our annual reports 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 have been and will continue to 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 or that we will not be able to comply with the requirements of Section 404 in a timely manner. 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 addition, if we are not able to continue to meet these requirements, we may not be able to remain listed on Nasdaq.

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

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.

Risks Related to Our Charter and Bylaws

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, as amended, the Certificate of Incorporation, and our amended and restated bylaws, as amended, the Bylaws, 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 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 Certificate of Incorporation and 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 Bylaws designate specific courts as the exclusive forum for certain litigation that may be initiated by our stockholders, which could limit our stockholders' ability to obtain a favorable judicial forum for disputes with us.

Pursuant to our 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 Certificate of Incorporation or our 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 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 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 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 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.

Risks Related to Securities Analysts

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 securities analysts publish about us or our business. If one or more of the analysts covering our stock downgrade their evaluations of our stock or publishes inaccurate or unfavorable research about our business, the trading price of our stock may 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.

Item 1B. Unresolved Staff Comments.

None.

Item 2. Properties.

Our corporate headquarters are located in Cambridge, Massachusetts.

We occupy approximately (a) 46,631 square feet of office and laboratory space at 399 Binney Street, Cambridge, Massachusetts 02139, the lease term for which expires on April 30, 2029, with an option to extend the term by five years with 12 to 15 months' notice at agreed upon market rates, and (b) 41,474 square feet of office and laboratory space at 60 Hampshire Street, Cambridge, Massachusetts 02139, the lease term for which expires on June 30, 2032.

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.

Item 3. 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.

Item 4. Mine Safety Disclosures.

Not applicable.

PART II

Item 5. Market for Registrant's Common Equity, Related Stockholder Matters and Issuer Purchases of Equity Securities.

Certain Information Regarding the Trading of Our Common Stock

Our common stock trades under the symbol "RLAY" on the NASDAQ Global Market and has been publicly traded since July 16, 2020. Prior to this time, there was no public market for our common stock.

Holders of Our Common Stock

As of February 1, 2023, there were approximately 50 holders of record of shares of our common stock. This number does not include stockholders for whom shares are held in "nominee" or "street" name.

Dividends

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 for use in the operation of our business and do not anticipate paying any dividends on our common stock 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.

Stock Performance Graph

The following performance graph and related information shall not be deemed to be "soliciting material" or to be "filed" with the Securities and Exchange Commission, or SEC, for purposes of Section 18 of the Securities Exchange Act of 1934, as amended, or the Exchange Act, nor shall such information be incorporated by reference into any future filing under the Exchange Act or Securities Act of 1933, as amended, or the Securities Act, except to the extent that we specifically incorporate it by reference into such filing.

In July 2020, we issued 23,000,000 shares of our common stock in our IPO at a price of $20.00 per share. The following performance graph compares the performance of our common stock to the Nasdaq Composite Index and to the Nasdaq Biotechnology Index from July 16, 2020, the closing market price on the first trading day of our common stock, through December 31, 2022. The comparison assumes $100 was invested in our common stock and in each of the foregoing indices after the market closed on July 16, 2020 and it assumes reinvestment of dividends, if any. The stock price performance included in this graph is not necessarily indicative of, nor is it intended to forecast, future stock price performance.



Securities Authorized for Issuance Under Equity Compensation Plans

Information about our equity compensation plans will be included in our definitive proxy statement to be filed with the SEC with respect to our 2023 Annual Meeting of Stockholders and is incorporated herein by reference.

Unregistered Sales of Equity Securities and Use of Proceeds

None.

Recent Sales of Unregistered Equity Securities

None.

Purchases of Equity Securities by the Issuer and Affiliated Purchasers

We did not purchase any of our registered equity securities during the period covered by this Annual Report on Form 10-K.

Item 6. [Reserved]

Not applicable.

Item 7. Management's Discussion and Analysis of Financial Condition and Results of Operations.

You should read the following discussion and analysis of our financial condition and results of operations together with our consolidated financial statements and the related notes included elsewhere in this Annual Report on Form 10-K. This discussion and other parts of this Annual Report on Form 10-K 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 Annual Report on Form 10-K, 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 medicine company transforming the drug discovery process by combining leading-edge computational and experimental technologies with the goal of bringing life-changing therapies to patients. As we believe we are among the first of a new breed of biotech created at the intersection of complementary techniques and technologies, we aim to push the boundaries of what's possible in drug discovery. Our Dynamo™ platform integrates an array of leading-edge computational and experimental approaches designed to drug protein targets that have previously been intractable or inadequately addressed. Our initial focus is on enhancing small molecule therapeutic discovery in targeted oncology and genetic disease indications.

We have deployed our technology platform to build a pipeline of product candidates to address targets in precision medicine 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.

We are advancing a pipeline of medicines to address targets in precision oncology and genetic disease indications, including our lead product candidates, RLY-4008, RLY-2608, and GDC-1971 (formerly known as RLY-1971).

- **RLY-4008.** In the third quarter of 2020, we initiated the RLY-4008 ReFocus Trial for patients with advanced or metastatic FGFR2-altered solid tumors. In October 2021, we announced initial clinical data from this trial, which suggested robust inhibition of FGFR2 in the first 49 subjects that was not observed to be limited by off-target toxicities, including hyperphosphatemia and diarrhea, as of the data cut-off date of September 9, 2021. In December 2021, we initiated expansion cohorts at a continuous 70 mg once-daily, or QD, dose, and in January 2022, the U.S. Food and Drug Administration, or FDA, granted orphan drug designation to RLY-4008 for the treatment of cholangiocarcinoma, or CCA. In the first half of 2022, we conducted an end-of-Phase 1 meeting with the FDA to discuss next steps for the clinical development of RLY-4008. Based on discussions with the FDA, we have decided to move forward with a single-arm trial design for pan-FGFR, or FGFRi, treatment-naïve, FGFR2-fusion CCA at 70 mg QD to potentially support accelerated approval. In June 2022, we announced the anticipated registrational path for RLY-4008 in CCA and the interim clinical data with a data cut-off date of April 19, 2022 that was shared with the FDA to support that potential registrational path. In September 2022, we announced additional interim clinical data for RLY-4008 with a data cut-off date of August 1, 2022 that was presented at the European Society for Medical Oncology Congress 2022. This interim clinical data showed an interim ORR of 88% from the FGFRi treatment-naïve, FGFR2-fusion CCA patients treated at the pivotal dose of 70 mg QD and an interim ORR of 63% across all dose levels and schedules. In October 2022, the European Medicines Agency, or EMA, adopted a positive opinion on the orphan drug designation application for RLY-4008 for the treatment of biliary tract cancer.

- **RLY-2608.** In December 2021, we dosed the first patient in the RLY-2608 ReDiscover Trial and in April 2022, we initiated the second arm of the dose escalation part of this trial, evaluating RLY-2608 in combination with fulvestrant for patients with HR+, HER2–, PI3Kα-mutated, locally advanced or metastatic breast cancer. RLY-2608 is the lead program of multiple efforts in our PI3Kα franchise to discover and develop mutant selective inhibitors of PI3Kα. In the fourth quarter of 2021, we announced preclinical data for RLY-2608, in which we observed that RLY-2608 preferentially bound to mutant PI3Kα at a novel allosteric site discovered by the Dynamo platform. The data also suggest that projected clinically relevant doses of RLY-2608 achieved tumor regression in PIK3CA mutant in vivo xenograft mouse models representing H1047R and E545K mutations with significantly reduced impact on glucose metabolism compared to non-mutant selective active site inhibitors. The data further suggest that in preclinical models, RLY-2608 combined with standard of care therapies resulted in regressions in ER+/HER2- breast cancer.

- **GDC-1971 (formerly known as RLY-1971).** In the first quarter of 2020, we initiated a Phase 1a clinical trial for RLY-1971, our inhibitor of Src homology region 2 domain-containing phosphatase-2, or SHP2, as a monotherapy in patients with advanced or metastatic solid tumors. We completed enrollment of this trial in 2022. In December 2020, we entered into the Genentech Agreement for the development and commercialization of RLY-1971 (now referred to as GDC-1971). Genentech initiated the cohort of GDC-1971 in combination with GDC-6036, its KRAS G12C

inhibitor, in a Phase 1b trial in July 2021, and a Phase 1b trial of GDC-1971 in combination with atezolizumab, its PD-L1 antibody, in August 2022.

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 indications. In addition to the three lead product candidates described above, we announced three discovery stage programs in June 2022 as part of our HR+/HER2- breast cancer franchise, including a selective cyclin dependent kinase 2, or CDK2, inhibitor, a rationally designed estrogen receptor alpha, or ERα, degrader and a selective and chemically distinct pan-mutant PI3Kα inhibitor, RLY-5836. We also have five additional discovery stage programs across both precision oncology and genetic disease indications. 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 computational and experimental approaches on protein motion, 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, convertible debt, and proceeds from public offerings of our common stock. We have also received an aggregate of $105.0 million in connection with the Genentech Agreement through December 31, 2022.

In September 2022, we completed a public offering, or the September 2022 Offering, of 11,320,755 shares of common stock at an offering price of $26.50 per share. We received proceeds of $284.7 million, which was net of $15.3 million in underwriting discounts and commissions, as well as other offering expenses.

In October 2021, we completed a public offering, or the October 2021 Offering, of 15,188,679 shares of common stock, including the exercise in full of the underwriters' option to purchase an additional 1,981,132 shares, at an offering price of $26.50 per share. We received proceeds of $382.2 million, which was net of $20.3 million in underwriting discounts and commissions, as well as other offering expenses.

In July 2020, we closed our initial public offering, or IPO, and issued 23,000,000 shares of our common stock at a price of $20.00 per share for proceeds of $425.3 million, which was net of $34.7 million in underwriting discounts and commissions, as well as other offering expenses. Prior to our IPO, we had received gross proceeds of approximately $520.0 million from sales of preferred stock and issuance of convertible debt.

On April 15, 2021, we entered into an Agreement and Plan of Merger, or the Merger Agreement, and on April 22, 2021, we acquired ZebiAI Therapeutics, Inc., or ZebiAI. Pursuant to the Merger Agreement, upfront consideration included (a) payment of approximately $20.0 million in cash and (b) issuance of 1,914,219 shares of our common stock at an aggregate fair value of $61.8 million, both transferred to ZebiAI's former stockholders, option holders, and warrant holders, or the ZebiAI Holders, upon closing. In addition, (i) the ZebiAI Holders are eligible to receive up to $85.0 million in other payments upon the achievement of certain platform or program milestones, payable in shares of our common stock, or the Contingent Milestone Payments, a portion of which was paid to the ZebiAI Holders in 2022, and (ii) we will pay 10% of payments we receive within three years of the closing date of the Merger Agreement from partnering, collaboration, or other agreements related to ZebiAI's platform, up to an aggregate maximum amount of $100.0 million, payable in cash, or the Contingent Earnout Payments, to the ZebiAI Holders.

In December 2020, we entered into the Genentech Agreement with Genentech for the development and commercialization of GDC-1971 (formerly known as RLY-1971). Under the terms of the Genentech Agreement, we received $75.0 million in an upfront payment in 2021, as well as $30.0 million in milestone payments from Genentech through December 31, 2022. We are eligible to receive an additional $5.0 million in near-term payments; and, if we do not opt into a U.S. profit/cost share, up to $685.0 million in additional development, commercialization and sales-based milestones for GDC-1971; and tiered royalties on annual global net sales (on a country-by-country basis), anticipated to be in the low-to-mid-teens, subject to reductions in certain circumstances. Additionally, we are eligible to receive additional royalties in the event of regulatory approval of GDC-1971 and Genentech's compound, GDC-6036, that directly binds to and inhibits KRAS G12C, in combination. We have the right to opt-in to a 50/50 U.S. profit/cost share and, if we do opt into the U.S. profit/cost share, we are eligible to receive up to $410.0 million in additional commercialization and sales-based milestones for GDC-1971 outside of the U.S. and tiered royalties on annual net sales outside of the U.S. (on a country-by-country basis), anticipated to be in the low-to-mid-teens, subject to reduction in certain circumstances. We also retain the right to develop GDC-1971 in combination with our FGFR2 and PI3Kα programs.

The ongoing COVID-19 pandemic has presented a substantial public health and economic challenge around the world and continues to affect our employees, patients, communities, and business operations. The extent to which the COVID-19 pandemic may continue to affect 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 severity and duration of additional variant outbreaks, vaccination and booster vaccination rates where we or our third party

partners conduct operations, and the actions to contain COVID-19 or treat its impact, among others. The continued spread of COVID-19 globally could adversely impact our preclinical or clinical trial operations in the United States, including our ability to obtain slots for IND-enabling studies, recruit and retain patients, principal investigators and site staff in our clinical trials, and obtain sufficient clinical trial supply of our product candidates due to supply chain disruptions or interruptions in global shipping, as well as activate new clinical trial sites. To date, we have been able to continue to enroll our patients in first-in-human clinical trials for RLY-4008 and RLY-2608, and we currently do not anticipate any interruptions in clinical enrollment or any material adverse impact on our financial condition or results of operations due to the ongoing COVID-19 pandemic. However, we are continuing to assess the potential impact of the ongoing 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. See "*—The ongoing COVID-19 pandemic has impacted our business and any future pandemic, epidemic, or outbreak of an infectious disease could similarly affect our business and our financial results and could cause further disruption to the development of our product candidates*" for a more detailed discussion of the risks related to the ongoing COVID-19 pandemic.

Additionally, inflation generally affects us by increasing our employee-related costs and clinical trial expenses, as well as other operating expenses. Our financial condition and results of operations may also be impacted by other factors we may not be able to control, such as global supply chain disruptions, uncertain global economic conditions, global trade disputes or political instability as further discussed in the section "Risk Factors" in this Annual Report. We do not believe that such factors had a material adverse impact on our results of operations during the years ended December 31, 2022, 2021, and 2020.

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 $290.5 million, $363.9 million, and $52.4 million for the years ended December 31, 2022, 2021, and 2020, respectively. As of December 31, 2022, we had an accumulated deficit of $1.1 billion. 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, including the costs of operating as a public company, and generate 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-4008 and RLY-2608;
- conduct additional preclinical research and development of RLY-5836, our PI3Kα mutant selective inhibitor, CDK2 inhibitor and ERα degrader programs 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, regulatory, quality 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 operations as 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 may be forced to reduce or terminate our operations.

We believe our cash, cash equivalents, and investments of $998.9 million as of December 31, 2022 will enable us to fund our operating expenses and capital expenditure requirements into 2025. 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. We will need to raise additional capital in the future to continue developing the drugs in our pipeline and to commercialize any approved drug. We may seek to obtain additional financing in the future through the issuance of our common stock, through other equity or debt financings or through collaborations or partnerships with other companies. We may not be able to raise additional capital on terms acceptable to us, or at all, and any failure to raise capital as and when needed could compromise our ability to execute on our business plan.

Components of our Results of Operations

Revenue

To date, our revenue primarily consists of amounts related to the Genentech Agreement. We recognize our revenue as the performance obligations are satisfied under the License Agreement.

Operating Expenses

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 contract research organizations, or CROs, contract manufacturing organizations, or 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 do not allocate certain internal costs, facilities, or overhead costs to specific development programs.

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 other 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 expenses or accrued research and development expenses.

Our lead product candidates, RLY-4008, RLY-2608 and GDC-1971, are in clinical development. In addition, we have three discovery stage programs as part of our HR+/HER2- breast cancer franchise, including a selective cyclin dependent kinase 2 inhibitor, a rationally designed estrogen receptor alpha degrader and a selective and chemically distinct pan-mutant PI3Kα inhibitor, RLY-5836. We also have five additional discovery stage programs across both precision oncology and genetic disease indications. Costs incurred for these programs include costs incurred to support our discovery research and translational science efforts up to the initiation of first-in-human 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 include 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 and future development costs, if, when, or to what extent we will generate revenue from the commercialization and sale of any of 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-4008, RLY-2608, 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 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 ongoing COVID-19 pandemic or a similar public health crisis or the changing political conditions, such as the current conflict between Russia and Ukraine and related global economic sanctions;
- 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 to conduct clinical trials of RLY-4008 and RLY-2608, as well as 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 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.

In-Process Research and Development Expenses

In-process research and development expenses consist of the cost of acquiring in-process research and development assets that have no alternative future use, specifically in connection with our acquisition of ZebiAI. We do not expect to record incremental expenses in connection therewith in future periods.

Loss on Initial Consolidation of Variable Interest Entity

Loss on initial consolidation of variable interest entity consists of the difference between total consideration transferred and the fair value of net assets acquired and liabilities assumed in connection with our acquisition of ZebiAI. We do not expect to record incremental losses in connection therewith in future periods.

Change in Fair Value of Contingent Consideration Liability

Change in fair value of contingent consideration liability consists of fluctuations in the estimated fair value of Contingent Milestone Payments under the Merger Agreement with ZebiAI. In future periods, we expect the fair value of such Contingent Milestone Payments to increase or decrease based on, among other things, our estimates of the probability of achieving the contingent milestones and timing in connection therewith, as well as, to a lesser extent, changes in market interest rates and the time value of money.

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; other expenses associated with operating as a public company, including compliance with exchange listing and Securities and Exchange Commission, or SEC, requirements, director and officer insurance costs, and investor and public relations costs; travel expenses; and facility-related expenses, which include 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.

Other Income, Net

Other income, net primarily consists of interest income related to interest earned on our cash, cash equivalents, and investments.

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 such items.

As of December 31, 2022, we had Federal NOL carryforwards of $412.0 million available to reduce taxable income, of which $43.1 million expire beginning in 2035 and $368.9 million do not expire.

As of December 31, 2022, we had state NOL carryforwards of $501.7 million available to reduce future state taxable income, which expire at various dates beginning in 2035.

As of December 31, 2022, we also had Federal and state research and development tax credit carryforwards of $25.9 million and $5.6 million, respectively, which begin to expire in 2035 and 2030, respectively.

Results of Operations

Comparison of years ended December 31, 2022 and 2021

The following table summarizes our results of operations for the years ended December 31, 2022 and 2021:

	Year Ended December 31,		Change
	2022	2021	
		(in thousands)	
License and other revenue	$ 1,381	$ 3,029	$ (1,648)
Operating expenses:			
Research and development expenses	$ 246,355	$ 172,650	$ 73,705
In-process research and development expenses	—	123,000	(123,000)
Loss on initial consolidation of variable interest entity	—	11,855	(11,855)
Change in fair value of contingent consideration liability	(11,677)	2,836	(14,513)
General and administrative expenses	65,978	57,386	8,592
Total operating expenses	300,656	367,727	(67,071)
Loss from operations	(299,275)	(364,698)	65,423
Other income, net	8,766	826	7,940
Net loss	$ (290,509)	$ (363,872)	$ 73,363

License and Other Revenue

We recognized license and other revenue of approximately $1.4 million and $3.0 million for the years ended December 31, 2022 and 2021, respectively. The decrease of $1.6 million was primarily related to (a) the decrease in research and development services provided under the Genentech Agreement, as we completed enrollment of the Phase 1a clinical trial of GDC-1971 (formerly known as RLY-1971) in 2022 and are nearing completion of trial-related activities, and (b) revenue recognized upon the transfer of active pharmaceutical ingredient during the year ended December 31, 2021, for which no revenue was recognized during the year ended December 31, 2022.

Research and Development Expenses

The following summarizes our research and development expenses for the years ended December 31, 2022 and 2021:

	Year Ended December 31,		Change
	2022	2021	
		(in thousands)	
External costs for programs in clinical trials	$ 51,094	$ 18,367	$ 32,727
External costs for platform technologies and preclinical programs	80,612	69,828	10,784
Employee related expenses	93,118	68,438	24,680
Other expenses	21,531	16,017	5,514
Total research and development expenses	$ 246,355	$ 172,650	$ 73,705

Research and development expenses were $246.4 million for the year ended December 31, 2022 compared to $172.7 million for the year ended December 31, 2021. The increase of $73.7 million was due to $32.7 million of additional external costs in connection with the ongoing enrollment of our clinical trials for RLY-4008 and RLY-2608, $24.7 million of additional employee related costs from increased headcount, including an increase in stock-based compensation expense of $5.7 million, $10.8 million of additional external costs for platform technologies and preclinical programs, and $5.5 million of other expenses, primarily for facility expenses associated with additional lab space during the year ended December 31, 2022.

In-Process Research and Development Expenses

In-process research and development expenses of $123.0 million were recognized for the year ended December 31, 2021 in connection with the in-process research and development asset pursuant to the asset acquisition of ZebiAI in the second quarter of 2021. No such expenses were incurred during the year ended December 31, 2022.

Loss on Initial Consolidation of Variable Interest Entity

Loss on initial consolidation of variable interest entity of $11.9 million was recognized for the year ended December 31, 2021 in connection with the acquisition of ZebiAI in the second quarter of 2021. No such expenses were incurred during the year ended December 31, 2022.

Change in Fair Value of Contingent Consideration Liability

The change in fair value of our contingent consideration liability for Contingent Milestone Payments under the Merger Agreement with ZebiAI was a decrease of $11.7 million for the year ended December 31, 2022 compared to an increase of $2.8 million for the year ended December 31, 2021. The fluctuation of $14.5 million was primarily attributable to changes in the assumptions underlying the fair value measurement between periods, which we expect to continue in future periods.

General and Administrative Expenses

General and administrative expenses were $66.0 million for the year ended December 31, 2022 compared to $57.4 million for the year ended December 31, 2021. The increase of $8.6 million was primarily due to $9.2 million of additional employee related costs from increased headcount, including an increase in stock-based compensation expense of $1.9 million, offset by individually insignificant fluctuations in other general and administrative expenses.

Other Income, Net

Other income, net, was $8.8 million for the year ended December 31, 2022 compared to $0.8 million for the year ended December 31, 2021. The increase of approximately $8.0 million was primarily a result of changes in interest rates.

Comparison of years ended December 31, 2021 and 2020

The following table summarizes our results of operations for the years ended December 31, 2021 and 2020:

	Year Ended December 31,		Change
	2021	2020	
		(in thousands)	
License and other revenue	$ 3,029	$ 82,654	$ (79,625)
Operating expenses:			
Research and development expenses	$ 172,650	$ 99,862	$ 72,788
In-process research and development expenses	123,000	—	123,000
Loss on initial consolidation of variable interest entity	11,855	—	11,855
Change in fair value of contingent consideration liability	2,836	—	2,836
General and administrative expenses	57,386	38,588	18,798
Total operating expenses	367,727	138,450	229,277
Loss from operations	(364,698)	(55,796)	(308,902)
Other income, net	826	3,384	(2,558)
Net loss	$ (363,872)	$ (52,412)	$ (311,460)

License and Other Revenue

We recognized license and other revenue of $3.0 million and $82.7 million for the years ended December 31, 2021 and 2020, respectively. During the year ended December 31, 2020, license and other revenue was recognized for substantially all of the $85.0 million upfront payment under the Genentech Agreement upon transfer of the license. During the year ended December 31, 2021, $3.0 million of license and other revenue was recognized, primarily upon satisfaction of the ongoing performance obligation to provide research and development services to Genentech under the Genentech Agreement, as well as upon the transfer of active pharmaceutical ingredient to Genentech.

Research and Development Expenses

The following summarizes our research and development expenses for the years ended December 31, 2021 and 2020:

	Year Ended December 31,		Change
	2021	2020	
		(in thousands)	
External costs for programs in clinical trials	$ 18,367	$ 7,447	$ 10,920
External costs for platform technologies and preclinical programs	69,828	42,431	27,397
Employee related expenses	68,438	38,440	29,998
Other expenses	16,017	11,544	4,473
Total research and development expenses	$ 172,650	$ 99,862	$ 72,788

Research and development expenses were $172.7 million for the year ended December 31, 2021 compared to $99.9 million for the year ended December 31, 2020. The increase of $72.8 million was due to $30.0 million of additional employee related costs from increased headcount, including an increase in stock-based compensation expense of $10.2 million, $27.4 million of additional external costs for platform technologies and preclinical programs, $10.9 million of additional external costs in connection with the ongoing enrollment of our clinical trial for RLY-4008 and the initiation of our clinical trial for RLY-2608 during the year ended December 31, 2021, and $4.5 million of additional costs for such items as lab supplies, facilities, depreciation, and other miscellaneous expenses.

In-Process Research and Development Expenses

In-process research and development expenses of $123.0 million were recognized for the year ended December 31, 2021 in connection with the in-process research and development asset pursuant to the asset acquisition of ZebiAI in the second quarter of 2021. No such expenses were incurred during the year ended December 31, 2020.

Loss on Initial Consolidation of Variable Interest Entity

Loss on initial consolidation of variable interest entity of $11.9 million was recognized for the year ended December 31, 2021 in connection with the acquisition of ZebiAI in the second quarter of 2021. No such expenses were incurred during the year ended December 31, 2020.

Change in Fair Value of Contingent Consideration Liability

The change in fair value of our contingent consideration liability for Contingent Milestone Payments under the Merger Agreement with ZebiAI was an increase of $2.8 million for the year ended December 31, 2021, primarily attributable to time value of money. There were no similar amounts in the year ended December 31, 2020, since the contingent consideration liability was only originally recorded upon closing of the transaction in April 2021.

General and Administrative Expenses

General and administrative expenses were $57.4 million for the year ended December 31, 2021 compared to $38.6 million for the year ended December 31, 2020. The increase of $18.8 million was primarily due to $12.8 million of additional employee related costs from increased headcount, including an increase of $6.3 million in stock-based compensation expense, and $6.0 million of other general and administrative expenses in connection with insurance, advisory, consulting, and other expenses.

Other Income (Expense), Net

Other income, net, was $0.8 million for the year ended December 31, 2021 compared to $3.4 million for the year ended December 31, 2020. The decrease of $2.6 million was primarily a result of changes in interest rates.

Liquidity and Capital Resources

Since our inception, we have not generated any revenue from product sales 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 principally financed our operations through private placements of preferred stock, convertible debt and proceeds from public offerings of our common stock. In July 2020, we closed our initial public offering and issued 23,000,000 shares of common stock for proceeds of $425.3 million, which was net of $34.7 million in underwriting discounts and commissions, as well as other offering expenses. Prior to our initial public offering, we received gross proceeds of $520.0 million from sales of preferred stock and issuance of convertible debt. We received an upfront payment of $75.0 million from Genentech pursuant to the Genentech Agreement in January 2021, as well as $30.0 million in milestone payments through December 31, 2022. As of December 31, 2022, we had cash, cash equivalents, and investments of $998.9 million.

In August 2021, we filed a universal shelf registration statement on Form S-3ASR with the SEC, or the 2021 Shelf, to register for sale an amount of our common stock, preferred stock, debt securities, warrants and/or units in one or more offerings, which became effective upon filing with the SEC (File No. 333-258768).

In August 2021, we entered into a sales agreement, or Sales Agreement, with Cowen and Company, LLC, or Cowen, pursuant to which we may offer and sell shares of our common stock having aggregate gross proceeds of up to $300.0 million from time to time in “at-the-market” offerings through Cowen, as our sales agent. We agreed to pay Cowen a commission of up to 3.0% of the gross proceeds of any shares sold by Cowen under the Sales Agreement. There have been no shares of our common stock sold under the Sales Agreement as of December 31, 2022.

In October 2021, we completed the October 2021 Offering of 15,188,679 shares of common stock, including the exercise in full of the underwriters' option to purchase an additional 1,981,132 shares, at an offering price of $26.50 per share. We received proceeds of $382.2 million, which was net of $20.3 million in underwriting discounts and commissions, as well as other offering expenses.

In September 2022, we completed the September 2022 Offering of 11,320,755 shares of common stock at an offering price of $26.50 per share. We received proceeds of $284.7 million, which was net of $15.3 million in underwriting discounts and commissions, as well as other offering expenses.

Cash Flows

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

	Year Ended December 31,		
	2022	2021	2020
	(in thousands)		
Cash used in operating activities	$ (229,490)	$ (74,406)	$ (102,489)
Cash (used in) provided by investing activities	(188,745)	(479,511)	81,672
Cash provided by financing activities	289,910	388,090	426,509
Net (decrease) increase in cash, cash equivalents, and restricted cash	$ (128,325)	$ (165,827)	$ 405,692

Operating Activities

During the year ended December 31, 2022, we used $229.5 million of cash on operating activities, primarily resulting from our net loss of $290.5 million, offset by non-cash charges of $49.8 million and cash provided by changes in our operating assets and liabilities of $11.2 million.

During the year ended December 31, 2021, we used $74.4 million on operating activities, primarily resulting from our net loss of $363.9 million, offset by non-cash charges of $192.1 million and cash provided by changes in our operating assets and liabilities of $97.3 million.

During the year ended December 31, 2020, we used $102.5 million on operating activities, primarily resulting from our net loss of $52.4 million and cash used by changes in our operating assets and liabilities of $85.2 million, partially offset by non-cash charges of $35.1 million.

Investing Activities

During the year ended December 31, 2022, we used $188.7 million of cash on investing activities, consisting of $179.7 million of net purchases of investments and $9.1 million for the acquisition of property and equipment.

During the year ended December 31, 2021, we used $479.5 million of cash on investing activities, consisting of $450.7 million of net purchases of investments, $25.3 million for the acquisition of ZebiAI, and $3.5 million for the acquisition of property and equipment.

During the year ended December 31, 2020, net cash provided by investing activities was $81.7 million, consisting of $83.6 million from net investment proceeds upon maturity, offset by $1.9 million for the acquisition of property and equipment.

Financing Activities

During the year ended December 31, 2022, net cash provided by financing activities was $289.9 million, primarily consisting of $284.7 million in net proceeds from the September 2022 Offering, as well as $3.5 million in proceeds from the exercise of stock options and $1.7 million in purchases under our Employee Stock Purchase Plan, or ESPP.

During the year ended December 31, 2021, net cash provided by financing activities was $388.1 million, primarily consisting of $382.2 million in net proceeds from the October 2021 Offering, as well as $4.7 million in proceeds from the exercise of stock options and $1.1 million in purchases under our ESPP.

During the year ended December 31, 2020, net cash provided by financing activities was $426.5 million, primarily consisting of $425.3 million in proceeds from our initial public offering, as well as $1.2 million in proceeds from the exercise of stock options.

Funding Requirements

We expect our expenses to increase substantially in connection with our ongoing clinical development activities related to RLY-4008 and RLY-2608 and the ongoing preclinical development activities of our other programs. In addition, we continue to incur additional costs associated with operating as a public company. We expect that our expenses will increase substantially as discussed in more detail in "— Overview" above.

As of December 31, 2022, we had cash, cash equivalents, and investments of $998.9 million. We believe that our existing cash, cash equivalents, and investments will enable us to fund our operating expenses and capital expenditure requirements into 2025. 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-4008, RLY-2608, and our other product candidates and programs, and because the extent to which we may enter into collaborations with third parties for the 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 ongoing COVID-19 pandemic or similar public health crisis or the changing political conditions, such as the current conflict between Russia and Ukraine and related global economic sanctions;

- the scope, progress, results, and costs of our current and future clinical trials of RLY-4008 and RLY-2608 and additional preclinical research of our other programs;

- 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 existing or future 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, such as the Genentech Agreement;

- the achievement of milestones or occurrence of other developments that trigger payments under any existing or future collaboration agreements, if any;

- the extent to which we are obligated to reimburse, or entitled to reimbursement of, clinical trial costs under any existing or future collaboration agreements, if any;

- 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

Intellectual Property License

On June 15, 2020, we entered into an Amended and Restated Collaboration and License Agreement, or DESRES Agreement, with D. E. Shaw Research, LLC, or D. E. Shaw Research, extending the term and otherwise modifying the terms of the Collaboration and License Agreement originally entered into on August 17, 2016. The DESRES Agreement 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 $7.3 million in the aggregate for each of the first three products we develop and up to $6.3 million in the aggregate for each product we develop after the first three. In addition, we are obligated to pay D. E. Shaw Research royalty payments, as defined in the DESRES Agreement. We assessed the milestone and royalty events under the DESRES Agreement as of December 31, 2022 and 2021, concluding no such payments were due as of the balance sheet dates.

The DESRES Agreement extended the term of the original agreement to August 16, 2025 and increased the annual fee from $1.0 million to $7.9 million, commencing on August 16, 2020. In May 2021, the annual fee was further increased, by mutual agreement of the parties, from $7.9 million to $9.9 million. The DESRES 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 us and D. E. Shaw Research.

399 Binney Street

In December 2017, we entered into a facility lease agreement for approximately 44,336 square feet of office and laboratory space at 399 Binney Street, Cambridge, Massachusetts 02139, which was increased to 44,807 square feet in January 2018. We 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 measurement of our right of use asset and lease liability on the balance sheet through December 31, 2022. In September 2020, we entered into an amendment to our existing facility lease agreement to expand the leased area by approximately 1,824 square feet of office space at 399 Binney Street, Cambridge, Massachusetts 02139. The amendment commenced in October 2020 and also expires in April 2029, subject to certain renewal options, which have also not been included in the measurement of our right of use asset and lease liability on the balance sheet through December 31, 2022. We

provided a letter of credit in connection with our facility lease agreement in the amount of $0.9 million with a financial institution, which expires commensurate with the lease in April 2029.

60 Hampshire Street

In May 2021, the Company entered into an agreement to lease approximately 41,474 square feet of office and laboratory space at 60 Hampshire Street, Cambridge, Massachusetts 02139. We gained control of the space in July 2022 and the lease expires in June 2032. There are no renewal options. We provided a letter of credit in connection with the agreement in the amount of $1.7 million with a financial institution, which expires commensurate with the lease in June 2032.

Other Significant Arrangements

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 us to the third party have expired. We have the right to terminate such 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. We assessed the milestones as of December 31, 2022 and 2021, concluding no such payments were due as of December 31, 2022 and $0.5 million in payments were due as of December 31, 2021.

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. Payments due upon cancelation consist only of payments for services provided and expenses incurred up to the date of cancelation.

For more information, please refer to Note 12, *Commitments and Contingencies,* and Note 13, *Leases,* of the notes to our consolidated financial statements included elsewhere in this Annual Report on Form 10-K.

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, liabilities, costs, 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.

While our significant accounting policies are described in more detail in the notes to our consolidated financial statements included elsewhere in this Annual Report on Form 10-K, 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.

Acquisition Accounting

We are required to make significant judgments and estimates to determine whether an acquisition constitutes an acquisition of a business or assets. For asset acquisitions, this includes whether substantially all of the fair value of the gross assets acquired is concentrated in a single identifiable asset or a group of similar identifiable assets. We are also required to make several significant judgments and estimates in order to determine the total consideration transferred for the asset acquisition and then allocate it to the assets we have acquired and the liabilities we have assumed on our consolidated balance sheet.

With respect to the acquisition of ZebiAI in 2021, the determination of the fair value of in-process research and development, or IPR&D, expense did not include significant judgment, considering substantially all of the fair value of the gross assets acquired was concentrated in a single identifiable asset. However, estimating the fair value of the Contingent Milestone Payments required significant judgment and estimation, primarily with respect to estimating the probability of achieving the milestones and the timing in connection therewith.

We are also required to reassess the fair value of the Contingent Milestone Payments from the acquisition of ZebiAI each quarter, which requires significant judgments and estimation. These significant judgments are primarily the result of our estimates of the probability of achieving the milestone and the timing in connection therewith. Changes in the fair value of the Contingent Milestone Payments can result from changes to one or multiple inputs, including adjustments to the probability of achievement,

timing of the payments, and, to a lesser extent, changes to the discount rate used to measure the payments at present value. Significant judgment is used in determining these assumptions during each reporting period. Reasonable changes in these assumptions can cause material changes to the fair value of our contingent consideration liability.

Revenue Recognition

We account for revenue recognition in accordance with Accounting Standards Codification Topic 606, *Revenue from Contracts with Customers*, or ASC 606. We recognize revenue pursuant to ASC 606 when our customer obtains control of promised goods or services in an amount that reflects the consideration which we expect to receive in exchange for those goods or services.

At contract inception, once the contract is determined to be within the scope of ASC 606, we assess the goods or services promised within the contract and determine those that are performance obligations. We then determine the transaction price and allocate it to the performance obligations. As part of the accounting for such arrangements, we must use judgment to determine: (a) the number of performance obligations; (b) the transaction price, including the determination of whether milestones or other variable consideration should be included in the transaction price; and (c) the stand-alone selling price for each performance obligation identified in the contract for the allocation of the transaction price.

We utilize key assumptions and judgments in (a) determining the stand-alone selling price for each performance obligation, which may include discounted cash flow models, evaluation of comparable transactions, and pricing considered in negotiating the transaction and estimated costs, and (b) determining how the transaction price is allocated amongst the performance obligations. We also use judgment to determine whether milestones or other variable consideration should be included in the transaction price. As part of management's evaluation of the transaction price, we consider numerous factors, including whether the achievement of the milestones is outside of our control, contingent upon the efforts of others, or subject to scientific risks of success. If we conclude it is probable that a significant revenue reversal would not occur, the associated milestone payment is included in the transaction price. Milestone payments that are not within our control, such as regulatory approvals, are generally not considered probable until those milestones are achieved. We re-evaluate the transaction price, including estimated variable consideration included in the transaction price and all constrained amounts, in each reporting period and as uncertain events are resolved or other changes in circumstances occur. For revenue-based royalties, including milestone payments based on the level of sales, we will include royalties in the transaction price at the later of (i) when the related sales occur, or (ii) when the performance obligation to which some or all of the royalty is allocated has been satisfied (or partially satisfied).

Once the performance obligations are identified, the transaction price is allocated to each performance obligation based on the relative stand-alone selling price. We then recognize as revenue the amount of the transaction price allocated to the respective performance obligation when (or as) it is satisfied, either at a point in time or over time. If the performance obligation is satisfied over time, we recognize revenue based on the use of either an output or input method.

Accrued Research and Development Expenses

As part of the process of preparing our consolidated financial statements, we are required to estimate accrued research and development and manufacturing expenses. This process involves reviewing open contracts 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 consolidated 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 such 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.

Recently Issued and Adopted Accounting Pronouncements

A description of recently issued accounting pronouncements that we have adopted is disclosed in Note 2, *Significant Accounting Policies*, to our consolidated financial statements included elsewhere in this Annual Report on Form 10-K. None of these pronouncements had a material impact on our financial position or results of operations.

Item 7A. Quantitative and Qualitative Disclosures About Market Risk.

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 December 31, 2022, our cash equivalents consisted of money market funds. As of December 31, 2022, our investments consisted of investments in U.S. treasury bills and United States agency securities that have contractual maturities of less than two years. 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 in federal interest rates. 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 December 31, 2022, we estimate that such hypothetical 100 basis point adverse movement would not result in a material impact on our condensed consolidated results of operations.

As of December 31, 2022, we had no debt outstanding and, therefore, are 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. We estimate that 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, 2022, 2021, and 2020. While we have not engaged in the hedging of our foreign currency transactions to date, we are evaluating the costs and benefits of initiating such a program and may in the future hedge selected significant transactions denominated in currencies other than the U.S. dollar as we expand our international operations and our risk grows.

Item 8. Financial Statements and Supplementary Data.

The financial statements required to be filed pursuant to this Item 8 are appended to this Annual Report on Form 10-K. An index of those financial statements is found in Index to the Consolidated Financial Statements of this Annual Report on Form 10-K, as incorporated by reference into Item 15, Exhibits and Financial Statement Schedules, of this Annual Report on Form 10-K.

Item 9. Changes in and Disagreements With Accountants on Accounting and Financial Disclosure.

None.

Item 9A. Controls and Procedures.

We have established disclosure controls and procedures (as defined in Rules 13a-15(e) and 15d-15(e) under the Securities Exchange Act of 1934, as amended, or the Exchange Act) designed to ensure that information required to be disclosed in the

reports that we file or submit under the Exchange Act is recorded, processed, summarized, and reported within the time periods specified in the SEC's rules and forms and is accumulated and communicated to management, including the principal executive officer (our Chief Executive Officer) and principal financial officer (our Chief Financial Officer), to allow timely decisions regarding required disclosure. In addition, the design of disclosure controls and procedures must reflect the fact that there are resource constraints and that management is required to apply judgment in evaluating the benefits of possible controls and procedures relative to their costs.

Evaluation of Disclosure Controls and Procedures

Our management has evaluated, with the participation of our Chief Executive Officer and Chief Financial Officer, the effectiveness of our disclosure controls and procedures (as defined in Rules 13a-15(e) and 15d-15(e) under the Exchange Act) as of the end of the period covered by this Annual Report on Form 10-K. Management recognizes that any controls and procedures, no matter how well designed and operated, can provide only reasonable assurance of achieving the desired control objectives and management necessarily applies its judgment in evaluating the cost-benefit relationship of possible controls and procedures. Our disclosure controls and procedures have been designed to provide reasonable assurance of achieving their objectives. Based on that evaluation, our Chief Executive Officer and Chief Financial Officer have concluded that, as of December 31, 2022, our disclosure controls and procedures were effective.

Internal Control over Financial Reporting

Management's Annual Report on Internal Control Over Financial Reporting

Our management is responsible for establishing and maintaining adequate internal control over financial reporting. Internal control over financial reporting is defined in Rules 13a-15(f) and 15d-15(f) under the Exchange Act as a process designed by, or under the supervision of, a company's principal executive officer and principal financial officer, or persons performing similar functions, and effected by a company's board of directors, management, and other personnel, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles and includes those policies and procedures that:

- pertain to the maintenance of records that in reasonable detail accurately and fairly reflect the transactions and dispositions of a company's assets;

- provide reasonable assurance that transactions are recorded as necessary to permit preparation of financial statements in accordance with generally accepted accounting principles, and that a company's receipts and expenditures are being made only in accordance with authorizations of the company's management and directors; and

- provide reasonable assurance regarding prevention or timely detection of unauthorized acquisition, use, or disposition of our assets that could have a material effect on the financial statements.

Because of its inherent limitations, internal control over financial reporting may not prevent or detect misstatements. Projections of any evaluation of effectiveness to future periods are subject to the risk that controls may become inadequate because of changes in conditions, or that the degree of compliance with the policies or procedures may deteriorate. Our internal control over financial reporting is a process designed under the supervision of our principal executive officer and principal financial officer to provide reasonable assurance regarding the reliability of financial reporting and the preparation of our financial statements for external reporting purposes in accordance with U.S. generally accepted accounting principles.

Under the supervision of and with the participation of our principal executive officer and principal financial officer, our management assessed the effectiveness of our internal control over financial reporting as of December 31, 2022 based on the criteria set forth by the Committee of Sponsoring Organizations of the Treadway Commission in Internal Control—Integrated Framework (2013 framework). Based on this assessment, management concluded that our internal control over financial reporting was effective as of December 31, 2022.

Our independent registered public accounting firm has issued an attestation report of our internal control over financial reporting. This report appears below.

Changes in Internal Control Over Financial Reporting

There has been no change in our internal control over financial reporting (as defined in Rules 13a-15(f) and 15d-15(f) under the Exchange Act) that occurred during the fiscal quarter ended December 31, 2022 that has materially affected, or is reasonably likely to materially affect, our internal control over financial reporting.

REPORT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

To the Stockholders and the Board of Directors of Relay Therapeutics, Inc.

Opinion on Internal Control Over Financial Reporting

We have audited Relay Therapeutics, Inc.'s internal control over financial reporting as of December 31, 2022, based on criteria established in Internal Control—Integrated Framework issued by the Committee of Sponsoring Organizations of the Treadway Commission (2013 framework) (the COSO criteria). In our opinion, Relay Therapeutics, Inc. (the Company) maintained, in all material respects, effective internal control over financial reporting as of December 31, 2022, based on the COSO criteria.

We also have audited, in accordance with the standards of the Public Company Accounting Oversight Board (United States) (PCAOB), the consolidated balance sheets of the Company as of December 31, 2022 and 2021, the related consolidated statements of operations and comprehensive loss, convertible preferred stock and stockholders' equity (deficit), and cash flows for each of the three years in the period ended December 31, 2022, and the related notes and our report dated February 23, 2023 expressed an unqualified opinion thereon.

Basis for Opinion

The Company's management is responsible for maintaining effective internal control over financial reporting and for its assessment of the effectiveness of internal control over financial reporting included in the accompanying Management's Report on Internal Control over Financial Reporting. Our responsibility is to express an opinion on the Company's internal control over financial reporting based on our audit. We are a public accounting firm registered with the 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 audit in accordance with the standards of the PCAOB. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether effective internal control over financial reporting was maintained in all material respects.

Our audit included obtaining an understanding of internal control over financial reporting, assessing the risk that a material weakness exists, testing and evaluating the design and operating effectiveness of internal control based on the assessed risk, and performing such other procedures as we considered necessary in the circumstances. We believe that our audit provides a reasonable basis for our opinion.

Definition and Limitations of Internal Control Over Financial Reporting

A company's internal control over financial reporting is a process designed to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles. A company's internal control over financial reporting includes those policies and procedures that (1) pertain to the maintenance of records that, in reasonable detail, accurately and fairly reflect the transactions and dispositions of the assets of the company; (2) provide reasonable assurance that transactions are recorded as necessary to permit preparation of financial statements in accordance with generally accepted accounting principles, and that receipts and expenditures of the company are being made only in accordance with authorizations of management and directors of the company; and (3) provide reasonable assurance regarding prevention or timely detection of unauthorized acquisition, use, or disposition of the company's assets that could have a material effect on the financial statements.

Because of its inherent limitations, internal control over financial reporting may not prevent or detect misstatements. Also, projections of any evaluation of effectiveness to future periods are subject to the risk that controls may become inadequate because of changes in conditions, or that the degree of compliance with the policies or procedures may deteriorate.

/s/ Ernst & Young LLP

Boston, Massachusetts

February 23, 2023

Item 9B. Other Information.

None.

Item 9C. Disclosure Regarding Foreign Jurisdictions that Prevent Inspections.

Not applicable.

PART III

Item 10. Directors, Executive Officers and Corporate Governance.

The information required by this Item 10 will be included in our Definitive Proxy Statement to be filed with the Securities and Exchange Commission, or SEC, with respect to our 2023 Annual Meeting of Stockholders within 120 days of the end of our fiscal year pursuant to General Instruction G(3) of Form 10-K and is incorporated herein by reference.

Item 11. Executive Compensation.

The information required by this Item 11 will be included in our Definitive Proxy Statement to be filed with the SEC with respect to our 2023 Annual Meeting of Stockholders within 120 days of the end of our fiscal year pursuant to General Instruction G(3) of Form 10-K and is incorporated herein by reference.

Item 12. Security Ownership of Certain Beneficial Owners and Management and Related Stockholder Matters.

The information required by this Item 12 will be included in our Definitive Proxy Statement to be filed with the SEC with respect to our 2023 Annual Meeting of Stockholders within 120 days of the end of our fiscal year pursuant to General Instruction G(3) of Form 10-K and is incorporated herein by reference.

Item 13. Certain Relationships and Related Transactions, and Director Independence.

The information required by this Item 13 will be included in our Definitive Proxy Statement to be filed with the SEC with respect to our 2023 Annual Meeting of Stockholders within 120 days of the end of our fiscal year pursuant to General Instruction G(3) of Form 10-K and is incorporated herein by reference.

Item 14. Principal Accounting Fees and Services.

Our independent public accounting firm is Ernst & Young LLP, Boston, Massachusetts, United States, PCAOB Auditor ID 42.

The information required by this Item 14 will be set forth in the section headed " – Ratification of the Appointment of Ernst & Young LLP as Relay Therapeutics' Independent Registered Public Accounting Firm for the Fiscal Year Ending December 31, 2023" in our Definitive Proxy Statement to be filed with the SEC with respect to our 2023 Annual Meeting of Stockholders within 120 days of the end of our fiscal year pursuant to General Instruction G(3) of Form 10-K and is incorporated herein by reference.

PART IV

Item 15. Exhibits and Financial Statement Schedules.

(1) For a list of the financial statements included herein, see Index to the Consolidated Financial Statements of this Annual Report on Form 10-K, incorporated into this Item by reference.

(2) Financial statement schedules have been omitted because they are either not required or not applicable or the information is included in the consolidated financial statements or the notes thereto.

(3) The exhibits filed as part of this Annual Report on Form 10-K are set forth on the Exhibit Index immediately preceding the signature page of this Annual Report on Form 10-K. The Exhibit Index is incorporated herein by reference.

Item 16. Form 10-K Summary

Not applicable.

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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, 2022 and 2021, the related consolidated statements of operations and comprehensive loss, convertible preferred stock and stockholders' equity (deficit), and cash flows for each of the three years in the period ended December 31, 2022, 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, 2022 and 2021, and the results of its operations and its cash flows for each of the three years in the period ended December 31, 2022, in conformity with U.S. generally accepted accounting principles.

We also have audited, in accordance with the standards of the Public Company Accounting Oversight Board (United States) (PCAOB), the Company's internal control over financial reporting as of December 31, 2022, based on criteria established in Internal Control-Integrated Framework issued by the Committee of Sponsoring Organizations of the Treadway Commission (2013 framework) and our report dated February 23, 2023 expressed an unqualified opinion thereon.

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 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. 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.

Critical Audit Matter

The critical audit matter communicated below is a matter arising from the current period audit of the financial statements that was communicated or required to be communicated to the audit committee and that: (1) relates to accounts or disclosures that are material to the financial statements and (2) involved our especially challenging, subjective or complex judgments. The communication of the critical audit matter does not alter in any way our opinion on the consolidated financial statements, taken as a whole, and we are not, by communicating the critical audit matter below, providing a separate opinion on the critical audit matter or on the accounts or disclosures to which it relates.

Valuation of Contingent Milestone Payment Liability

Description of the Matter

As discussed in Notes 3 and 10 to the consolidated financial statements, the Company's acquisition-related Contingent Milestone Payment Liability is remeasured to its estimated fair value each reporting period. As of December 31, 2022, the acquisition-related Contingent Milestone Payment Liability was $27.4 million.

Auditing the valuation of the Contingent Milestone Payment Liability was especially subjective and judgmental due to the significant estimation required in determining the fair value. In particular, the fair value estimate was sensitive to significant assumptions including the probability of milestone achievement and the related timing thereof.

How We Addressed the Matter in Our Audit

We obtained an understanding, evaluated the design and tested the operating effectiveness of controls over the Company's valuation of the Contingent Milestone Payment Liability. For example, we tested controls over management's review of the valuation model and the significant assumptions utilized in the calculation, including the probability and expected timeline of achieving certain platform and program-related milestones.

To test the valuation of the Contingent Milestone Payment Liability, we performed audit procedures that included, among others, assessing the terms of the arrangement, evaluating the methodology used, testing the significant assumptions discussed above, and testing the completeness and accuracy of the underlying data. For example, to test the estimated probability and expected timeline of achieving milestones, we considered the stage of development of the research in relation to relevant external data and discussed these probabilities with the Company's executives, including those in research and development. In addition, we performed sensitivity analyses of the significant assumptions to evaluate the change in the fair value of the Contingent Milestone Payment Liability resulting from changes in the significant assumptions.

/s/ Ernst & Young

We have served as the Company's auditor since 2017.

Boston, Massachusetts

February 23, 2023

Relay Therapeutics, Inc.
Consolidated Balance Sheets
(In thousands, except share and per share amounts)

	December 31, 2022	December 31, 2021
Assets		
Current assets:		
Cash and cash equivalents	$ 151,794	$ 280,119
Investments	847,123	677,954
Accounts receivable	306	403
Contract asset	4,913	4,537
Prepaid expenses	12,110	11,465
Other current assets	3,259	1,764
Total current assets	1,019,505	976,242
Property and equipment, net	11,634	6,543
Operating lease assets	63,754	20,780
Restricted cash	2,578	2,578
Intangible asset	2,300	2,300
Total assets	$ 1,099,771	$ 1,008,443
Liabilities and Stockholders' Equity		
Current liabilities:		
Accounts payable	$ 10,578	$ 8,276
Accrued expenses	22,703	13,557
Operating lease liabilities	4,276	1,844
Deferred revenue	—	248
Other current liabilities	26,152	396
Total current liabilities	63,709	24,321
Operating lease liabilities, net of current portion	53,466	21,056
Contingent consideration liability	32,378	50,258
Other liabilities	—	15,000
Total liabilities	149,553	110,635
Commitments and contingencies (Note 12)		
Stockholders' equity:		
Undesignated preferred stock, $0.001 par value, 10,000,000 shares authorized as of December 31, 2022 and December 31, 2021; no shares issued and outstanding at December 31, 2022 and December 31, 2021	—	—
Common stock, $0.001 par value; 300,000,000 and 150,000,000 shares authorized at December 31, 2022 and December 31, 2021, respectively; 121,112,234 and 108,210,318 shares issued and outstanding at December 31, 2022 and December 31, 2021, respectively	121	109
Additional paid-in capital	2,019,126	1,666,887
Accumulated other comprehensive loss	(10,420)	(1,088)
Accumulated deficit	(1,058,609)	(768,100)
Total stockholders' equity	950,218	897,808
Total liabilities and stockholders' equity	$ 1,099,771	$ 1,008,443

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,		
	2022	2021	2020
Revenue:			
License and other revenue	$ 1,381	$ 3,029	$ 82,654
Total revenue	1,381	3,029	82,654
Operating expenses:			
Research and development expenses	$ 246,355	$ 172,650	$ 99,862
In-process research and development expenses	—	123,000	—
Loss on initial consolidation of variable interest entity	—	11,855	—
Change in fair value of contingent consideration liability	(11,677)	2,836	—
General and administrative expenses	65,978	57,386	38,588
Total operating expenses	300,656	367,727	138,450
Loss from operations	(299,275)	(364,698)	(55,796)
Other income:			
Interest income	8,786	830	3,400
Other income (expense)	(20)	(4)	(16)
Total other income, net	8,766	826	3,384
Net loss	$ (290,509)	$ (363,872)	$ (52,412)
Dividend upon extinguishment of Series C Preferred Stock (Note 9)	—	—	(177,789)
Net loss attributable to common stockholders	$ (290,509)	$ (363,872)	$ (230,201)
Net loss attributable to common stockholders per share, basic and diluted	$ (2.59)	$ (3.82)	$ (5.40)
Weighted average shares of common stock, basic and diluted	112,233,649	95,136,719	42,619,582
Other comprehensive loss:			
Unrealized holding loss	(9,332)	(1,152)	(261)
Total other comprehensive loss	(9,332)	(1,152)	(261)
Total comprehensive loss	$ (299,841)	$ (365,024)	$ (52,673)

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	Accumulated Other Comprehensive	Accumulated	Total Stockholders' Equity
	Shares	Par Value	Shares	Par Value	Capital	Income/(Loss)	Deficit	(Deficit)
Balances at December 31, 2019	212,642,857	$ 537,781	4,037,476	$ 4	$ 8,715	$ 325	$ (189,482)	$ (180,438)
Extinguishment upon modification of Series C Preferred Stock (Note 9)	—	177,789	—	—	(15,455)	—	(162,334)	(177,789)
Conversion of preferred stock into common stock upon initial public offering	(212,642,857)	(715,570)	61,992,534	62	715,508	—	—	715,570
Issuance of common stock in initial public offering, net	—	—	23,000,000	23	425,270	—	—	425,293
Issuance of common stock upon exercise of stock options	—	—	297,000	—	1,216	—	—	1,216
Vesting of restricted common stock	—	—	579,825	1	153	—	—	154
Stock-based compensation expense	—	—	—	—	31,960	—	—	31,960
Unrealized loss on investments	—	—	—	—	—	(261)	—	(261)
Net loss	—	—	—	—	—	—	(52,412)	(52,412)
Balances at December 31, 2020	—	$ —	89,906,835	$ 90	$ 1,167,367	$ 64	$ (404,228)	$ 763,293
Issuance of common stock upon exercise of stock options	—	—	996,536	1	4,738	—	—	4,739
Issuance of common stock upon acquisition of ZebiAI	—	—	1,914,219	2	62,990	—	—	62,992
Issuance of common stock in follow-on offering, net	—	—	15,188,679	15	382,195	—	—	382,210
Issuance of common stock under ESPP	—	—	43,685	1	1,140	—	—	1,141
Vesting of restricted common stock	—	—	84,489	—	3	—	—	3
Vesting of restricted stock units	—	—	75,875	—	—	—	—	—
Stock-based compensation expense	—	—	—	—	48,454	—	—	48,454
Unrealized loss on investments	—	—	—	—	—	(1,152)	—	(1,152)
Net loss	—	—	—	—	—	—	(363,872)	(363,872)
Balances at December 31, 2021	—	$ —	108,210,318	$ 109	$ 1,666,887	$ (1,088)	$ (768,100)	$ 897,808
Issuance of common stock upon exercise of stock options	—	—	757,873	1	3,479	—	—	3,480
Issuance of common stock upon milestone achievement	—	—	301,939	—	6,203	—	—	6,203
Issuance of common stock in follow-on offering, net	—	—	11,320,755	11	284,733	—	—	284,744
Issuance of common stock under ESPP	—	—	123,019	—	1,686	—	—	1,686
Vesting of restricted stock units	—	—	398,330	—	—	—	—	—
Stock-based compensation expense	—	—	—	—	56,138	—	—	56,138
Unrealized loss on investments	—	—	—	—	—	(9,332)	—	(9,332)
Net loss	—	—	—	—	—	—	(290,509)	(290,509)
Balances at December 31, 2022	—	$ —	121,112,234	$ 121	$ 2,019,126	$ (10,420)	$ (1,058,609)	$ 950,218

See accompanying notes.

Relay Therapeutics, Inc.
Consolidated Statements of Cash Flows
(In thousands)

	Year Ended December 31,		
	2022	2021	2020
Cash flows from operating activities:			
Net loss	(290,509)	$ (363,872)	$ (52,412)
Adjustments to reconcile net loss to net cash used in operating activities:			
Stock-based compensation expense	56,138	48,454	31,960
Depreciation expense	4,130	3,925	3,549
Net amortization of premiums and discounts on investments	1,182	2,052	(416)
Acquired in-process research and development	—	123,000	—
Loss on initial consolidation of variable interest entity	—	11,855	—
Change in fair value of contingent consideration liability	(11,677)	2,836	—
Changes in assets and liabilities:			
Accounts receivable	97	74,677	(75,000)
Contract asset	(376)	3,117	(7,654)
Prepaid expenses and other current assets	(2,140)	(2,681)	(4,665)
Operating lease assets and liabilities, net	(8,132)	277	571
Other assets	—	22	(22)
Accounts payable	1,989	930	(410)
Accrued expenses and other liabilities	20,056	21,002	2,010
Deferred revenue	(248)	—	—
Net cash used in operating activities	(229,490)	(74,406)	(102,489)
Cash flows from investing activities:			
Purchases of property and equipment	(9,062)	(3,471)	(1,931)
Purchases of investments	(535,419)	(980,665)	(266,455)
Proceeds from maturities of investments	355,736	529,923	350,058
Cash paid for acquisition of ZebiAI, net of cash acquired	—	(25,298)	—
Net cash (used in) provided by investing activities	(188,745)	(479,511)	81,672
Cash flows from financing activities:			
Proceeds from issuance of common stock in initial public offering, net	—	—	425,293
Proceeds from issuance of common stock in follow-on offering, net	284,744	382,210	—
Proceeds from issuance of common stock upon exercise of stock options	3,480	4,739	1,216
Proceeds from issuance of common stock under ESPP	1,686	1,141	—
Net cash provided by financing activities	289,910	388,090	426,509
Net (decrease) increase in cash, cash equivalents, and restricted cash	(128,325)	(165,827)	405,692
Cash, cash equivalents, and restricted cash at beginning of period	282,697	448,524	42,832
Cash, cash equivalents, and restricted cash at end of period	154,372	282,697	448,524
Supplemental disclosure of non-cash activities:			
Extinguishment upon modification of Series C Preferred Stock (Note 9)	$ —	$ —	$ (177,789)
Conversion of preferred stock into common stock upon initial public offering	$ —	$ —	$ 715,508
Additions of property and equipment in accounts payable and accrued expenses	$ 159	$ 1,010	$ 519
Reclassification of restricted stock liability to additional paid-in capital	$ —	$ 3	$ 153
Assets obtained in asset acquisition of ZebiAI	$ —	$ 662	$ —
Liabilities assumed in asset acquisition of ZebiAI	$ —	$ 2,330	$ —
Fair value of common stock issued in asset acquisition of ZebiAI	$ —	$ 62,990	$ —
Issuance of common stock upon milestone achievement	$ 6,203	$ —	$ —
Operating lease assets obtained in exchange for operating lease liabilities	$ 46,626	$ —	$ 819

Reconciliation of Cash, Cash Equivalents, and Restricted Cash from Balance Sheets to Statements of Cash Flows

	Year Ended December 31,		
	2022	2021	2020
		(in thousands)	
Cash and cash equivalents	$ 151,794	$ 280,119	$ 447,646
Restricted cash	2,578	2,578	878
Cash, cash equivalents, and restricted cash per statements of cash flows	$ 154,372	$ 282,697	$ 448,524

See accompanying notes.

1. Nature of Business and Basis of Presentation

Relay Therapeutics, Inc. (the "Company") was incorporated in Delaware on May 4, 2015 and is headquartered in Cambridge, Massachusetts. The Company is a clinical-stage, precision medicine company transforming the drug discovery process by combining leading-edge computational and experimental technologies with the goal of bringing life-changing therapies to patients. As the Company believes it is among the first of a new breed of biotech created at the intersection of complementary techniques and technologies, the Company aims to push the boundaries of what's possible in drug discovery. The Company's Dynamo™ platform integrates an array of leading-edge computational and experimental approaches designed to drug protein targets that have previously been intractable or inadequately addressed. The Company's initial focus is on enhancing small molecule therapeutic discovery in targeted oncology and genetic disease indications. The Company's lead product candidates, RLY-4008, RLY-2608, and GDC-1971 (formerly known as RLY-1971), are in clinical development. In addition, the Company has three discovery stage programs as part of its HR+/HER2- breast cancer franchise, including a selective cyclin dependent kinase 2 inhibitor, a rationally designed estrogen receptor alpha degrader and a selective and chemically distinct pan-mutant PI3Kα inhibitor, RLY-5836. The Company also has five additional discovery stage programs across both precision oncology and genetic disease indications.

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 preclinical 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 its product candidates, including RLY-4008, RLY-2608, and GDC-1971 (formerly known as RLY-1971), by developing its computation and experimental approaches, building its intellectual property portfolio, business planning, raising capital and providing general and administrative support for these operations.

The Company has incurred net operating losses since inception and had an accumulated deficit of $1.1 billion as of December 31, 2022. The Company expects that its existing cash, cash equivalents, and investments as of December 31, 2022 will enable it to fund its planned operating expenses and capital expenditure requirements for at least one year from the date of the issuance of these consolidated financial statements. 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 material adverse effect on its financial condition and ability to pursue its business strategies. 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 license or 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. In the event the Company requires additional funding, there can be no assurance that it will be successful in obtaining sufficient funding on terms acceptable to the Company to fund its 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") and pursuant to the rules and regulations of the U.S. Securities and Exchange Commission ("SEC") for reporting on Form 10-K. The Company's consolidated financial statements include the

accounts of Relay Therapeutics, Inc. and its wholly-owned subsidiaries, Relay Securities Corporation and Relay ML Discovery, LLC.

All intercompany balances and transactions have been eliminated.

Certain prior period amounts, limited to (a) prepaid expenses and other current assets and (b) accrued expenses and other current liabilities, have been reclassified to conform to current period presentation. Such reclassifications have no impact on the Company's consolidated statements of operations and comprehensive loss, as previously reported.

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 fair value of contingent milestone payments in connection with the acquisition of ZebiAI Therapeutics, Inc. ("ZebiAI"), the determination of the transaction price and standalone selling price of performance obligations under Financial Accounting Standards Board ("FASB") Accounting Standards Codification ("ASC") Topic 606, *Revenue from Contracts with Customers* ("ASC 606"), the accrual of research and development and manufacturing expenses, the valuation of equity instruments, and the incremental borrowing rate for determining operating lease assets and liabilities. Estimates are periodically reviewed in light of changes in circumstances, facts and experience.

Segment Information

The Company manages its operations as a single segment for 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 to drug protein targets that have previously been intractable or inadequately addressed. The Company operates in the United States and all tangible assets are held in the United States.

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 had restricted cash of $2.6 million as of December 31, 2022 and 2021, specifically to secure letters of credit in connection with operating leases of the Company's facilities, as detailed in Note 13, *Leases*. The Company classified the restricted cash as a noncurrent asset on its consolidated balance sheets, consistent with the terms of the lease agreements.

Investments

Investments in marketable securities are classified as available-for-sale.

Available-for-sale securities are measured and reported at fair value using quoted prices in active markets for similar securities.

Premiums or discounts from par value are amortized to investment income over the life of the underlying investment.

In June 2016, the FASB issued Accounting Standards Update ("ASU") No. 2016-13, *Financial Instruments—Credit Losses (Topic 326): Measurement of Credit Losses on Financial Instruments* ("ASU 2016-13"). Certain amendments thereto were also issued by the FASB. The Company adopted ASU 2016-13, as well as the related amendments thereto, on January 1, 2022, pursuant to which the Company reviews investments whenever the fair value of an investment is less than the amortized cost and evidence indicates that an investment's carrying amount is not recoverable within a reasonable period of time. In connection therewith, the Company evaluates whether the decline in fair value has resulted from credit losses or other factors, considering the extent to which fair value is less than amortized cost, any changes to the rating of the security by a rating agency, and adverse conditions specifically related to the security, among other factors. If this assessment indicates that a credit loss exists, the present value of cash flows expected to be collected from the security is compared to the amortized cost basis of the security. If the present value of cash flows expected to be collected is less than the amortized cost basis, a credit loss exists and an allowance for credit losses is recorded on the consolidated balance sheet, limited by the amount that the fair value is less than the amortized cost basis. Any impairment that is not related to credit is recognized in other comprehensive loss as a separate component of

stockholders' equity. Changes in the allowance for credit losses are recorded as a provision for (or reversal of) credit loss expense in general and administrative expenses within the consolidated statements of operations and comprehensive loss. Losses are charged against the allowance when the Company believes the uncollectability of an available-for-sale security is confirmed or when either of the criteria regarding intent or requirement to sell is met.

All of the Company's available-for-sale securities are available to the Company for use in current operations. As a result, the Company classified all such securities as current assets as of December 31, 2022 and 2021, even though the stated maturity of some individual securities may be one year or more beyond the balance sheet dates.

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 statements of operations and comprehensive loss.

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, all of which 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 12, *Commitments and Contingencies*, to meet its requirements for its programs. These programs could be adversely affected by a significant interruption in preclinical and clinical testing, as well as the supply of active pharmaceutical ingredients and formulated drugs.

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.

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 underlying 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 in an 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, 2022, 2021, and 2020.

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 preclinical 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.

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.

Stock-Based Compensation

The Company measures stock options and other stock-based awards granted to employees, directors, and other consultants based on their fair value on the date of grant and recognizes compensation expense for such awards over the requisite service period, which is generally the vesting period of the respective award. The Company recognizes the impact of forfeitures on stock-based compensation expense as they occur.

The Company estimates 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 the Company's common stock and assumptions the Company makes for the expected term of the stock options, the risk-free interest rate and volatility of its common stock for a period that approximates the expected term of the stock options, and the expected dividend yield.

Prior to the Company's initial public offering of common stock in 2020, the estimated fair value of its common stock was determined by the board of directors, or compensation committee thereof, as of the date of each option grant, with input from management, considering the most recently available third-party valuations of common stock and the 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, such independent third-party valuations of the Company's equity instruments were performed contemporaneously with identified value inflection points. Furthermore, such 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* (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 the Company's common stock at each valuation date.

Following the Company's initial public offering of common stock in 2020, in connection with the accounting for stock options and other awards the Company may grant, the fair value of the Company's common stock is determined based on the quoted market price of its common stock.

Revenue Recognition

The Company accounts for revenue recognition in accordance with ASC 606, pursuant to which an entity recognizes revenue when its customer obtains control of promised goods or services in an amount that reflects the consideration which the entity expects to receive in exchange for those goods or services. To determine revenue recognition for arrangements that an entity determines are within the scope of ASC 606, the entity performs the following five steps: (i) identify the contract(s) with customer(s); (ii) identify the performance obligation(s) in the contract(s); (iii) determine the transaction price; (iv) allocate the transaction price to the performance obligation(s) in the contract(s); and (v) recognize revenue when (or as) the entity satisfies a performance obligation.

At contract inception, once the contract is determined to be within the scope of ASC 606, the Company assesses the goods or services promised within the contract and determines those that are performance obligations. The Company then determines the transaction price and allocates it to the performance obligations. As part of the accounting for such arrangements, the Company must use judgment to determine: (a) the number of performance obligations based on the determination under step (ii) above; (b) the transaction price under step (iii) above, including the determination of whether milestones or other variable consideration should be included in the transaction price; and (c) the stand-alone selling price for each performance obligation identified in the contract for the allocation of the transaction price in step (iv) above.

The Company utilizes key assumptions and judgments in (a) determining the stand-alone selling price for each performance obligation, which may include discounted cash flow models, evaluation of comparable transactions, and pricing considered in negotiating the transaction and estimated costs, and (b) determining how the transaction price is allocated amongst the performance obligations. The Company also uses judgment to determine whether milestones or other variable consideration should be included in the transaction price. As part of management's evaluation of the transaction price, the Company considers numerous factors, including whether the achievement of the milestones is outside of the Company's control, contingent upon the efforts of others, or subject to scientific risks of success. If the Company concludes it is probable that a significant revenue reversal would not occur, the associated milestone payment is included in the transaction price. Milestone payments that are not within the Company's control, such as regulatory approvals, are generally not considered probable until those milestones are achieved. The Company re-evaluates the transaction price, including estimated variable consideration included in the transaction price and all constrained amounts, in each reporting period and as uncertain events are resolved or other changes in circumstances occur. For revenue-based royalties, including milestone payments based on the level of sales, the Company will include royalties in the transaction price at the later of (i) when the related sales occur, or (ii) when the performance obligation to which some or all of the royalty is allocated has been satisfied (or partially satisfied).

Once the performance obligations are identified, the transaction price is allocated to each performance obligation based on the relative stand-alone selling price. The Company then recognizes as revenue the amount of the transaction price allocated to the respective performance obligation when (or as) it is satisfied, either at a point in time or over time. If the performance obligation is satisfied over time, the Company recognizes revenue based on the use of either an output or input method.

Collaboration Agreements

The Company enters into collaborative agreements with third parties to research, develop, and commercialize drug candidates, pursuant to which the risks and rewards for such activities are shared between the parties. Such arrangements also provide for cost sharing between the parties during the research and development phase, as well as potential future profit share payments during the commercialization phase. In general, such contracts are evaluated under the provisions of FASB ASC 808, *Collaborative Arrangements* ("ASC 808"). The amounts receivable and payable for research and development activities are presented net within research and development expense on the consolidated statements of operations and comprehensive loss. As such, the net costs reflect the Company's share of the ongoing research and development efforts. The amounts receivable and payable for commercialization activities are presented net as either collaboration revenue, separate from revenue from contracts with customers, or collaboration expense on the consolidated statements of operations, as appropriate.

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. 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.

Lease Agreements

Pursuant to ASC 842, *Leases*, 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 prior to commencement and exclude 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.

Acquired In-Process Research and Development

In an asset acquisition, the cost allocated to acquire in-process research and development ("IPR&D") with no alternative future use is charged to expense at the acquisition date. Please refer to Note 10, *Acquisition of ZebiAI*, for a more detailed description of the accounting policies applied to the Company's only asset acquisition during the three years ended December 31, 2022.

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 years ended December 31, 2022, 2021, and 2020, other comprehensive income (loss) consisted of changes in unrealized gains and losses from available-for-sale investments.

Net Loss per Common Share

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 any 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. Additionally, 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.

For additional discussion of net loss per common share, please refer to Note 9, *Net Loss per Share.*

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.

Recently Adopted Accounting Pronouncements

As noted above, the Company adopted ASU 2016-13, as well as the related amendments thereto, on January 1, 2022. The adoption of ASU 2016-13, as well as the related amendments thereto, did not have a material impact on the Company's consolidated financial statements or disclosures.

Recently Issued Accounting Pronouncements Not Yet Adopted

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 does not believe that the adoption of any recently issued standards have or may have a material impact on its consolidated financial statements and disclosures.

3. Fair Value Measurements

The following tables present information about the Company's financial assets and liabilities 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, 2022:			
	Level 1	Level 2	Level 3	Total
	(in thousands)			
Assets				
Cash equivalents:				
Money market funds	$ 118,446	$ —	$ —	$ 118,446
U.S. treasury bills	—	9,950	—	9,950
Total cash equivalents	118,446	9,950	—	128,396
Investments:				
U.S. treasury bills	—	466,603	—	466,603
U.S. agency securities	—	380,520	—	380,520
Total investments	—	847,123	—	847,123
Total assets	$ 118,446	$ 857,073	$ —	$ 975,519
Liabilities				
Contingent Milestone Payments	$ —	$ —	$ 27,378	$ 27,378
Total liabilities	$ —	$ —	$ 27,378	$ 27,378

	Fair Value Measurements as of December 31, 2021:			
	Level 1	Level 2	Level 3	Total
	(in thousands)			
Assets				
Cash equivalents:				
Money market funds	$ 251,891	$ —	$ —	$ 251,891
Total cash equivalents	251,891	—	—	251,891
Investments:				
U.S. treasury bills	—	469,386	—	469,386
U.S. agency securities	—	208,568	—	208,568
Total investments	—	677,954	—	677,954
Total assets	$ 251,891	$ 677,954	$ —	$ 929,845
Liabilities				
Contingent Milestone Payments	$ —	$ —	$ 45,258	$ 45,258
Total liabilities	$ —	$ —	$ 45,258	$ 45,258

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.

Fair Value of Contingent Consideration

In April 2021, the Company acquired ZebiAI, as detailed further in Note 10, *Acquisition of ZebiAI*.

The Company's Level 3 contingent consideration liability is related to $85.0 million of platform and program milestones ("Contingent Milestone Payments") payable to ZebiAI's former equity holders upon achievement. The contingent consideration liability for the Contingent Milestone Payments is measured at fair value at each reporting date pursuant to FASB ASC Topic 480, *Distinguishing Liabilities from Equity* ("ASC 480"). The Company determines the fair value of the Contingent Milestone Payments based on the probability of achieving the milestones, the related timing, and, to a lesser extent, an appropriate discount rate. Significant judgment is used in determining the underlying assumptions. Due to the uncertainties associated with the development of platforms and drug candidates in the pharmaceutical industry and the effects of changes in assumptions,

including probability of success and related timing, the Company expects its estimates regarding the fair value of Contingent Milestone Payments to continue to change in the future, resulting in adjustments to the fair value of the Company's Contingent Milestone Payments. The effect of any such adjustments could be material.

The Company also has a contingent consideration liability related to the fair value of $100.0 million in earnout payments ("Contingent Earnout Payments"). Because the Contingent Earnout Payments were not accounted for as derivatives under FASB ASC Topic 815, *Derivatives and Hedging* ("ASC 815"), they were only measured at fair value as of the acquisition date and are not re-assessed at fair value at each reporting period. The Contingent Earnout Payments will be adjusted when the contingency is resolved and the consideration is paid or becomes payable.

The following table reconciles the change in the contingent consideration liability:

	Year Ended December 31,		
	2022	2021	2020
	(in thousands)		
Balance at beginning of period	$ 50,258	$ —	$ —
Fair value of contingent consideration upon acquisition	—	47,422	—
Change in fair value of Contingent Milestone Payments	(11,677)	2,836	—
Common stock issued upon milestone achievement	(6,203)	—	—
	$ 32,378	$ 50,258	$ —

The "Fair value of contingent consideration upon acquisition" in the table above represents the fair value of the Contingent Milestone Payments and Contingent Earnout Payments upon acquisition of ZebiAI in 2021.

The "Change in fair value of Contingent Milestone Payments" in the table above was attributable to changes in the assumptions noted above during the periods specified.

The "Common stock issued upon milestone achievement" in the table above was attributable to 301,939 shares of common stock issued to ZebiAI's former equity holders upon achievement of one of the platform milestones during the year ended December 31, 2022.

The outstanding Contingent Milestone Payments are payable in shares of common stock based on a fixed amount assigned to each milestone and the average closing price of the Company's common stock for the 5-day period prior to the milestone achievement. Accordingly, the number of shares of common stock to be issued upon a milestone achievement vary dependent on the Company's common stock price. If the outstanding milestones were achieved in full on December 31, 2022, the number of shares of common stock to be issued would be 4,954,739 based on an average closing price of the Company's common stock of $14.58 for the 5-day period prior to December 31, 2022.

4. Investments

The fair value of available-for-sale investments by type of security was as follows:

	December 31, 2022			
	Amortized Cost	Unrealized Gains	Unrealized Losses	Fair Value
	(in thousands)			
Investments:				
U.S. treasury bills	$ 356,728	$ 9	$ (5,523)	$ 351,214
U.S. agency securities	236,483	49	(3,104)	233,428
Total investments with a maturity of one year or less	593,211	58	(8,627)	584,642
U.S. treasury bills	116,290	14	(915)	115,389
U.S. agency securities	148,042	36	(986)	147,092
Total investments with a maturity of one to two years	264,332	50	(1,901)	262,481
Total investments	$ 857,543	$ 108	$ (10,528)	$ 847,123

	December 31, 2021			
	Amortized Cost	Unrealized Gains	Unrealized Losses	Fair Value
	(in thousands)			
Investments:				
U.S. treasury bills	$ 189,406	$ —	$ (228)	$ 189,178
U.S. agency securities	108,895	—	(138)	108,757
Total investments with a maturity of one year or less	298,301	—	(366)	297,935
U.S. treasury bills	280,743	—	(535)	280,208
U.S. agency securities	99,998	—	(187)	99,811
Total investments with a maturity of one to two years	380,741	—	(722)	380,019
Total investments	$ 679,042	$ —	$ (1,088)	$ 677,954

The following table summarizes the Company's available-for-sale debt securities in an unrealized loss position for which an allowance for credit losses has not been recorded at December 31, 2022, aggregated by major security type and length of time in a continuous unrealized loss position:

	Less than 12 Months		12 Months or Longer		Total	
	Fair Value	Unrealized Losses	Fair Value	Unrealized Losses	Fair Value	Unrealized Losses
	(in thousands)					
U.S. treasury bills	$ 143,089	$ (1,860)	$ 275,445	$ (4,578)	$ 418,534	$ (6,438)
U.S. agency securities	190,468	(1,649)	97,305	(2,441)	287,773	(4,090)
Total	$ 333,557	$ (3,509)	$ 372,750	$ (7,019)	$ 706,307	$ (10,528)

The following table summarizes our available-for-sale debt securities in an unrealized loss position for which an allowance for credit losses has not been recorded at December 31, 2021, aggregated by major security type and length of time in a continuous unrealized loss position:

	Less than 12 Months		12 Months or Longer		Total	
	Fair Value	Unrealized Losses	Fair Value	Unrealized Losses	Fair Value	Unrealized Losses
	(in thousands)					
U.S. treasury bills	$ 469,386	$ (763)	$ —	$ —	$ 469,386	$ (763)
U.S. agency securities	208,568	(325)	—	—	208,568	(325)
Total	$ 677,954	$ (1,088)	$ —	$ —	$ 677,954	$ (1,088)

As summarized in the tables immediately above, the Company held 126 and 88 debt securities that were in an unrealized loss position as of December 31, 2022 and 2021, respectively. The unrealized losses at December 31, 2022 and 2021 were attributable to changes in interest rates and the unrealized losses do not represent credit losses. The Company does not intend to sell these securities and it is not more likely than not that it will be required to sell them before recovery of their amortized cost basis.

5. Property and Equipment

Property and equipment, net consisted of the following:

	December 31,	
	2022	2021
	(in thousands)	
Property and equipment:		
Laboratory equipment	$ 21,472	$ 15,797
Leasehold improvements	3,826	2,897
Computer equipment	1,743	1,093
Furniture and fixtures	1,762	989
Construction in process	1,220	134
	30,023	20,910
Less: accumulated depreciation	(18,389)	(14,367)
Total property and equipment, net	$ 11,634	$ 6,543

The Company recorded $4.1 million, $3.9 million, and $3.5 million of depreciation expense for the years ended December 31, 2022, 2021, and 2020, respectively.

6. Accrued Expenses

Accrued expenses consisted of the following:

	December 31,	
	2022	2021
	(in thousands)	
External research and development costs	$ 19,276	$ 9,353
Consulting and professional services	831	1,109
Compensation costs	1,043	593
Other	1,553	2,502
Total accrued expenses	$ 22,703	$ 13,557

7. Common Stock

Each share of common stock entitles the stockholder 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. As of December 31, 2022, no dividends had been declared.

Restricted Common Stock

In prior years, the Company issued restricted shares of common stock to its founders and consultants. The Company also issued restricted shares of common stock upon the early exercise of stock options under the Company's 2016 Stock Option and Grant Plan (the "2016 Stock Plan"). The restrictions on the common shares generally lapsed over vesting terms of four years. The Company included the proceeds from the issuance of the restricted shares of common stock as a restricted stock liability on the accompanying consolidated balance sheets. Amounts were reclassified to additional paid-in capital as the restrictions lapsed. The Company had the right to repurchase any unvested shares of restricted common stock at the original cost upon termination.

As of December 31, 2021, the restrictions had lapsed on each share of restricted common stock issued in prior years.

At-the-Market Offering

In August 2021, the Company entered into a sales agreement, (the "Sales Agreement"), with Cowen and Company, LLC ("Cowen"), pursuant to which the Company may offer and sell shares of its common stock having aggregate gross proceeds of up to $300.0 million from time to time in "at-the-market" offerings through Cowen, as the Company's sales agent. The Company agreed to pay Cowen a commission of up to 3.0% of the gross proceeds of any shares sold by Cowen under the Sales Agreement. There have been no shares of common stock sold under the Sales Agreement through December 31, 2022.

Follow-On Offerings

In October 2021, the Company completed a public offering of 15,188,679 shares of common stock, including the exercise in full of the underwriters' option to purchase an additional 1,981,132 shares, at an offering price of $26.50 per share. The Company received proceeds of $382.2 million, which was net of $20.3 million in underwriting discounts and commissions, as well as other offering expenses.

In September 2022, the Company completed a public offering of 11,320,755 shares of common stock at an offering price of $26.50 per share. The Company received proceeds of $284.7 million, which was net of $15.3 million in underwriting discounts and commissions, as well as other offering expenses.

8. Stock Compensation

In 2016, the Company adopted the 2016 Stock Plan. Subsequent to July 2020, no further awards have been granted under the 2016 Stock Plan and all equity-based awards have been and will continue to be granted under the 2020 Stock Option and Incentive Plan (the "2020 Stock Plan"). To the extent outstanding options granted under the 2016 Stock Plan are cancelled,

forfeited, or otherwise terminated without being exercised and would otherwise have been returned to the share reserve under the 2016 Stock Plan, the number of shares underlying such awards will be available for future grant under the 2020 Stock Plan.

In 2020, the Company's stockholders approved the 2020 Stock Plan. All of the Company's employees, officers, directors, and consultants are eligible to be granted options, restricted stock units, and other stock-based awards under the terms of the 2020 Stock Plan, which originally provided for the issuance of up to 8,376,080 of stock-based awards. The 2020 Stock Plan is also subject to annual increases to be added on the first day of each fiscal year, commencing on January 1, 2021, equal to 5% of the number of outstanding shares on the immediately preceding December 31 or such lesser number of shares approved by the Company's board of directors or compensation committee of the board of directors. On January 1, 2022, the number of shares available for issuance under the 2020 Stock Plan was increased by 5,410,515 shares of common stock. There were 10,783,577 stock-based awards available for grant at December 31, 2022 under the 2020 Stock Plan.

In 2020, the Company adopted an Employee Stock Purchase Plan ("ESPP") that permits eligible employees to enroll in six-month offering periods. Participants may purchase shares of the Company's common stock, through payroll deductions, at a price equal to 85% of the fair market value of the common stock on the first or last day of the applicable six-month offering period, whichever is lower. Purchase dates under the ESPP occur on or about June 30 and December 31 each year, with the initial purchase date under the ESPP on December 31, 2021. The Company's stockholders originally authorized 1,092,532 shares for issuance pursuant to the ESPP, which is subject to annual increases to be added on the first day of each fiscal year, commencing on January 1, 2021, equal to the lesser of 2,185,064 shares of the Company's common stock, 1% of the number of outstanding shares on the immediately preceding December 31, or an amount determined by the Company's board of directors. On January 1, 2022, the number of shares available for issuance under the ESPP was increased by 1,082,103 shares of common stock. There were 2,906,999 shares available for grant at December 31, 2022 under the ESPP.

In connection with all stock-based payments, total stock-based compensation expense recognized was as follows:

	Year Ended December 31,		
	2022	2021	2020
		(in thousands)	
Research and development expenses	$ 30,671	$ 24,922	$ 14,691
General and administrative expenses	25,467	23,532	17,269
	$ 56,138	$ 48,454	$ 31,960

Time-Based Stock Options

The Company has historically granted stock options to employees, directors, and consultants with vesting conditions based on continued service over time. Accordingly, stock-based compensation expense for such awards is recognized using a straight-line attribution model over the vesting term of each option.

The following table summarizes activity for time-based stock options under the 2016 Stock Plan and the 2020 Stock Plan for the year ended December 31, 2022:

	Number of Stock Options	Weighted-Average Exercise Price	Weighted-Average Remaining Term (in Years)	Aggregate Intrinsic Value (in thousands)
Outstanding at December 31, 2021	6,906,367	$ 16.80	7.90	$ 111,021
Granted	3,658,461	20.58		
Exercised	(737,144)	4.47		
Cancelled	(551,132)	32.60		
Outstanding at December 31, 2022	9,276,552	$ 18.33	7.85	$ 34,647
Vested at December 31, 2022	4,415,876	$ 13.49	6.94	$ 29,401
Unvested at December 31, 2022	4,860,676	$ 22.73	8.67	$ 5,246

The total intrinsic value of time-based stock options exercised was $15.5 million, $32.4 million, and $2.4 million for the years ended December 31, 2022, 2021, and 2020, respectively.

The fair value of each time-based stock option granted is estimated on the date of grant using the Black-Scholes option pricing model, pursuant to which the weighted-average grant date fair values were $13.67, $22.95, and $14.77 during the years ended December 31, 2022, 2021, and 2020, respectively. The following table summarizes the assumptions used in calculating the fair value of the time-based stock options granted.

	Year Ended December 31,		
	2022	2021	2020
Expected term (in years)	6.25	6.25	6.25
Risk-free interest rate	1.6% to 4.2%	0.6% to 1.6%	0.4% to 1.8%
Expected volatility	72.7% to 76.2%	74.7% to 76.6%	73.5% to 77.6%
Expected dividend yield	0.0%	0.0%	0.0%

The Company uses the simplified method to calculate the expected term, as it does not have sufficient historical exercise data to provide a reasonable basis upon which to estimate the expected term for time-based stock options granted. The expected term is applied to the time-based stock option grant group as a whole, as the Company does not expect substantially different exercise or post-vesting termination behavior among the Company's employees, directors, and consultants. The risk-free interest rate is based on a treasury instrument whose term is consistent with the expected term of the stock options. The Company's stock price volatility assumption is based on historical volatility of a group of companies with similar characteristics to the Company and who have similar risk profiles and positions within the industry. The Company accounts for forfeitures as they occur.

As of December 31, 2022, the total unrecognized stock-based compensation related to unvested time-based stock options was $66.7 million, which the Company expects to recognize over a weighted-average period of approximately 1.47 years.

Performance-Based Stock Options

In March 2020 and September 2021, the Company granted options to certain employees with performance-based vesting conditions. In both instances, the commencement of vesting is based on the achievement of various scientific and operational milestones during specified periods, subject to the discretion and approval of either the Company's board of directors or President and Chief Executive Officer.

For the performance-based stock options, the Company applies variable accounting until the performance criteria are determined to be achieved, at which time vesting commences over contractual service periods. Furthermore, because (a) the awards were authorized prior to the accounting grant date in the context of ASC 718, *Stock Compensation*, (b) the recipients were providing service prior to the accounting grant date, and (c) there were performance conditions that, if not met by the accounting grant date, would have resulted in the forfeiture of the award, the service inception dates preceded the accounting grant date. Ultimately, the stock-based compensation expense for the options is determined based on the fair value of the awards on the accounting grant date, which is then recognized using an accelerated attribution model over the vesting term commencing upon the actual or expected accounting grant date.

For the performance-based stock options granted in March 2020, all performance conditions have been resolved and the grant date was set at or prior to December 31, 2020. For the performance-based stock options granted in September 2021, all performance conditions have been resolved and the grant date was set at or prior to December 31, 2022.

The following table summarizes activity for performance-based stock options for the year ended December 31, 2022:

	Number of Stock Options	Weighted-Average Exercise Price	Weighted-Average Remaining Term (in Years)	Aggregate Intrinsic Value (in thousands)
Outstanding at December 31, 2021	1,813,260	$ 5.41	8.11	$ 45,912
Exercised	(20,729)	5.22		
Cancelled	(18,348)	5.22		
Outstanding at December 31, 2022	1,774,183	$ 5.41	7.18	$ 17,128
Vested at December 31, 2022	927,394	$ 5.22	7.17	$ 9,014
Unvested at December 31, 2022	846,789	$ 5.62	7.19	$ 8,114

The total intrinsic value of performance-based stock options exercised was $0.4 million, $1.1 million, and immaterial for the years ended December 31, 2022, 2021, and 2020, respectively.

The fair value of each performance-based stock option granted is estimated on the accounting grant date, or at the end of each reporting period if variable accounting is applied, using the Black-Scholes option-pricing model, pursuant to which the grant date fair values were $20.28 and $37.48 during the years ended December 31, 2021 and 2020, respectively. There were no

performance-based stock options granted during the year ended December 31, 2022. The assumptions and methodologies used in calculating the fair value of performance-based stock options was similar to the assumptions and methodologies used in calculating the fair value of time-based stock options granted during the years ended December 31, 2021 and 2020.

As of December 31, 2022, the total unrecognized stock-based compensation related to unvested performance-based stock options was $8.5 million, which the Company expects to recognize over a weighted-average period of approximately 0.79 years.

Restricted Stock Units

Starting in 2021, the Company granted restricted stock units ("RSUs") to employees, directors, and consultants under the 2020 Stock Plan. Each of the RSUs represents the right to receive one share of the Company's common stock upon vesting. The majority of RSUs granted to date have vesting conditions based on continued service over time. Accordingly, stock-based compensation expense for the majority of such awards is recognized using a straight-line attribution model over the vesting term of each RSU. The fair value of each RSU is based on the closing price of the Company's common stock on the date of grant.

The following table summarizes activity for RSUs under the 2020 Stock Plan for the year ended December 31, 2022:

	Number of Shares Underlying RSUs	Weighted-Average Grant Date Fair Value
Unvested at December 31, 2021	691,205	$ 34.51
Granted	1,389,696	20.85
Vested	(398,330)	27.75
Cancelled	(115,811)	27.59
Unvested at December 31, 2022	1,566,760	24.62

The fair value of restricted shares that vested during the year ended December 31, 2022 was $8.6 million.

As of December 31, 2022, the total unrecognized compensation related to unvested RSUs granted was $35.0 million, which the Company expects to recognize over a weighted-average period of approximately 1.55 years.

Employee Stock Purchase Plan

The following table summarizes activity under the Company's ESPP from the initial offering period, or July 1, 2021 through December 31, 2021, through December 31, 2022, including (a) after-tax contributions from employees, (b) shares purchased, and (c) assumptions underlying the Black-Scholes option pricing model to estimate the fair value of the option component of the shares purchased under the ESPP in each period.

	July 1, 2022 to December 31, 2022	January 1, 2022 to June 30, 2022	July 1, 2021 to December 31, 2021
Purchase date	December 31, 2022	June 30, 2022	December 31, 2021
After-tax contributions (in thousands)	$ 549	$ 1,137	$ 1,141
Shares of common stock purchased	43,160	79,859	43,685
Expected term (in years)	0.50	0.50	0.50
Risk-free interest rate	2.5%	0.2%	0.1%
Expected volatility	89.6%	66.2%	65.1%
Expected dividend yield	0.0%	0.0%	0.0%

As of December 31, 2022, there was no unrecognized stock-based compensation expense related to ESPP, since the purchase for the offering period between July 1, 2022 and December 31, 2022 was transacted on December 31, 2022.

9. 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,		
	2022	2021	2020
	(in thousands, except share and per share data)		
Net loss	$ (290,509)	$ (363,872)	$ (52,412)
Dividend upon extinguishment of Series C Preferred Stock	—	—	(177,789)
Net loss attributable to common stockholders	$ (290,509)	$ (363,872)	$ (230,201)
Net loss attributable to common stockholders per share, basic and diluted	$ (2.59)	$ (3.82)	$ (5.40)
Weighted average shares of common stock, basic and diluted	112,233,649	95,136,719	42,619,582

On July 8, 2020, the Company's board of directors and its Series C preferred stockholders approved an amendment to the conversion preferences and rights of the Company's Series C preferred stock, which, among other changes, resulted in a reduction in the conversion price of the Series C preferred stock from $3.21 to $3.027603. The changes to the conversion feature were considered to be a significant change to the substantive contractual terms of the Company's Series C preferred stock and, therefore, the Company accounted for the change as an extinguishment and reissuance of the Company's Series C preferred stock. In accordance with SEC staff guidance codified in ASC 260-10-S99-2, when equity classified preferred shares are extinguished, the difference between (1) the fair value of the consideration transferred to the holders of the preferred shares and (2) the carrying amount of the preferred shares, net of issuance costs, is subtracted from (or added back to) net income to arrive at income available to common stockholders in the calculation of earnings per share. This difference between the fair value of consideration transferred and carrying amount of the preferred shares, also referred to as a deemed dividend, was, therefore, added back to net loss above to derive net loss attributable to common stockholders.

The Company excluded the following potentially dilutive securities, presented based on amounts outstanding at each period end, from the computation of diluted net loss per share for the years ended December 31, 2022, 2021, and 2020, as the effect would be anti-dilutive and reduce the net loss per share calculated for each period. Therefore, the weighted-average number of shares of common stock outstanding used to calculate both basic and diluted net loss per share is the same.

	Year Ended December 31,		
	2022	2021	2020
Options to purchase common stock	11,050,735	8,719,627	7,697,058
Unvested restricted stock	—	—	84,489
Unvested restricted stock units	1,566,760	691,205	—
	12,617,495	9,410,832	7,781,547

10. Acquisition of ZebiAI

On April 22, 2021 (the "Acquisition Date"), the Company acquired ZebiAI, a privately held company focused on using machine learning combined with DNA encoded library data sets for drug discovery. Pursuant to the Agreement and Plan of Merger (the "Merger Agreement"), upfront consideration included (a) payment of approximately $20.0 million in cash and (b) issuance of 1,914,219 shares of the Company's common stock at an aggregate fair value of $61.8 million, both transferred to ZebiAI's former stockholders, option holders, and warrant holders (the "ZebiAI Holders"), upon closing. In addition, (i) the ZebiAI Holders are eligible to receive up to $85.0 million in other payments upon the achievement of certain platform or program milestones, payable in shares of the Company's common stock (the "Contingent Milestone Payments"), a portion of which was paid to the ZebiAI Holders in 2022, and (ii) the Company will pay 10% of payments it receives within three years of the closing date of the Merger Agreement from partnering, collaboration, or other agreements related to ZebiAI's platform, up to an aggregate maximum amount of $100.0 million, payable in cash (the "Contingent Earnout Payments"), to the ZebiAI Holders.

In accounting for the transaction, the Company assessed if ZebiAI represented an asset or business under ASC 805, *Business Combinations* ("ASC 805"), as amended by ASU 2017-01. Pursuant to the guidance noted, the Company concluded ZebiAI did not constitute a business, since substantially all of the fair value of the gross assets acquired was concentrated in a single asset, which was the intellectual property for the AI platform and the related data sets in development by ZebiAI. The intellectual property acquired from ZebiAI was at an early stage of development and continues to require a significant investment of time and capital for development. There is no assurance the Company will be successful in completing the additional research and development activities.

The Company also concluded the acquisition represented an initial consolidation of a variable interest entity that does not constitute a business in accordance with ASC 810, *Consolidation* ("ASC 810"). In connection therewith, the Company

determined ZebiAI was considered to be a variable interest entity, as it did not have sufficient equity to finance its activities without additional subordinated financial support. Prior to the Acquisition Date, the primary source of funding for ZebiAl had been preferred stock financings and convertible notes. The Company acquired all of the outstanding shares of ZebiAI and, therefore, is the sole equity holder. The Company will absorb the losses of ZebiAI, has the rights to the benefits derived from the ZebiAI platform, and the power to direct all activities. Therefore, the Company is the primary beneficiary. The net assets acquired and liabilities assumed in connection with the ZebiAI acquisition were recorded at their estimated fair values as of the Acquisition Date. Total consideration transferred of $135.5 million included the cash and shares of the Company's common stock issued to ZebiAI Holders, the fair value of the Contingent Milestone Payments, and the fair value of the Contingent Earnout Payments, as well as an insignificant amount attributed to the replacement of stock options to ZebiAI Holders. The Contingent Milestone Payments were determined to be liabilities pursuant to ASC 480 and, therefore, included in consideration transferred. The Contingent Earnout Payments were required to be included in total consideration transferred as a result of the guidance under ASC 810. The difference between total consideration transferred and the fair value of net assets acquired and liabilities assumed of $11.9 million was recorded as loss on initial consolidation of a variable interest entity pursuant to ASC 810.

The following table summarizes net assets acquired based on their estimated fair values as of the Acquisition Date:

	Amount (in thousands)
Acquired IPR&D asset	$ 123,000
Loss on initial consolidation of VIE	11,855
Assets obtained in asset acquisition	662
Liabilities assumed in asset acquisition	(2,330)
Intangible asset	2,300
Net acquired assets	$ 135,487

In estimating the fair value of the acquired tangible assets and liabilities assumed, the Company used the carrying value of the net working capital balances as the most reliable indicator of fair value based on the associated short-term nature of the balances. The remaining fair value was attributable to the acquired IPR&D and an intangible asset. The fair value attributable to the IPR&D asset was determined using an Avoided Cost Method, which includes all costs to develop the IPR&D asset, including appropriate mark-ups on the cost estimate and an expected return related to developing the IPR&D asset over a period of time. The fair value of the IPR&D asset was expensed in the Company’s consolidated statements of operations and comprehensive loss for the year ended December 31, 2021, as the acquired IPR&D had no alternative future use, which was determined by the Company in accordance with U.S. GAAP, including ASC 730, *Research and Development* ("ASC 730"). The intangible asset represents the assembled workforce, for which the Company concluded there were no indicators of impairment through December 31, 2022. The Company recognized stock-based compensation expense of $4.6 million associated with accelerated vesting for certain stock options in connection with the acquisition within the consolidated statements of operations and comprehensive loss for the year ended December 31, 2021, with no incremental charges in connection therewith for the year ended December 31, 2022. Finally, the Company recognized other acquisition costs of $0.9 million within general and administrative expenses in the consolidated statements of operations and comprehensive loss for the year ended December 31, 2021.

For the Contingent Milestone Payments and Contingent Earnout Payments, the Company recorded contingent consideration liabilities of $42.4 million and $5.0 million, respectively, representing the fair value of the payment provisions noted as of the Acquisition Date. The Company is required to re-assess the fair value of the Contingent Milestone Payments at each reporting period pursuant to ASC 480, as summarized within Note 3, *Fair Value Measurements*. However, the Contingent Earnout Payments were not accounted for as derivatives under ASC 815 and, therefore, are not re-assessed at fair value at each reporting period. The Contingent Earnout Payments will be adjusted when the contingency is resolved and the consideration is paid or becomes payable.

11. Collaboration and License Agreement with Genentech, Inc.

In December 2020, the Company and Genentech, Inc. ("Genentech") entered into the Collaboration and License Agreement ("Genentech Agreement"), which granted Genentech a license to develop and commercialize GDC-1971 (formerly known as RLY-1971). In 2022, the Company completed enrollment of a Phase 1a dose escalation study of GDC-1971 as a monotherapy in patients with advanced or metastatic solid tumors ("Phase 1a Trial for GDC-1971"). The Company is also responsible for the one-time transfer of the active pharmaceutical ingredient (“API”) and other materials related to GDC-1971 to Genentech. Genentech will be responsible for conducting any additional clinical development of GDC-1971, including in any combination trials with Genentech’s compound, GDC-6036, that directly binds to and inhibits KRAS G12C, or other compounds. Genentech initiated the cohort of GDC-1971 in combination with GDC-6036 in a Phase 1b trial in July 2021, and a Phase 1b trial of GDC-1971 in combination with atezolizumab, its PD-L1 antibody, in August 2022.

Under the Genentech Agreement, the Company was entitled to a non-refundable upfront payment of $75.0 million, which was due upon completion of certain technology transfer activities and was reflected as accounts receivable on the consolidated

balance sheet at December 31, 2020. The Company collected this amount in January 2021. In April 2021, the Company completed the transfer of the Investigational New Drug ("IND") application for GDC-1971 to Genentech, upon which the Company received payment for the associated non-refundable milestone payment of $5.0 million in May 2021. The Company received further milestone payments of $15.0 million and $10.0 million in December 2021 and October 2022, respectively, which are refundable if the Company opts into the collaboration with Genentech, as discussed below. The Company is eligible to receive up to $5.0 million in other near-term milestone payments. The Company is also eligible to receive up to an aggregate of an additional $685.0 million upon the achievement of specified development, commercialization, and sales-based milestones for GDC-1971 worldwide, as well as tiered royalties ranging from low-to-mid teens on annual worldwide net sales of GDC-1971, on a country-by-country basis, subject to reduction in certain circumstances.

The Company has the option, exercisable one time at the Company's sole discretion, to (a) fund half of the development costs of GDC-1971 in the U.S., (b) share half of the net profits or net losses of commercializing GDC-1971 in the U.S. (the "Profit/Cost Share"), and (c) be eligible to receive up to an aggregate of an additional $410.0 million upon the achievement of specified commercialization and sales-based milestones for GDC-1971 outside of the U.S and tiered royalties ranging from low-to-mid teens on annual net sales of GDC-1971 outside of the U.S., on a country-by-country basis, subject to reduction in certain circumstances. The Company may elect to opt-out of further participation in the Profit/Cost Share at any time prior to the third anniversary of the first commercial sale of GDC-1971 in the U.S, in which case the financial terms would revert to the terms applicable as if Company had not opted into the Profit/Cost Share as of the effective opt-out date.

Genentech may terminate the Genentech Agreement for convenience and the Company may terminate the Genentech Agreement under certain limited circumstances. Unless otherwise terminated, the Genentech Agreement will remain in effect until the expiration of all Genentech's royalty payment obligations to the Company.

Accounting Analysis

Identification of the Contract

The Company concluded Genentech is a customer in this arrangement and, as such, the arrangement falls within the scope of the revenue recognition guidance in ASC 606.

Identification of Performance Obligations

At the commencement of the Genentech Agreement, the Company identified the following performance obligations:

- License to develop and commercialize GDC-1971 and the related know-how;
- Research and development services to complete the Phase 1a Trial for GDC-1971; and
- Transfer of API and other materials related to GDC-1971.

The Company concluded the performance obligations outlined above are both capable of being distinct and distinct within the context of the contract, given such rights and activities are independent of each other. The license can be used by Genentech without the research and development services or API outlined above. Similarly, such services and inventory provide distinct benefit to Genentech within the context of the contract, separate from the license.

Determination of Transaction Price

As of December 31, 2022, the Company concluded the transaction price for the Genentech Agreement was $86.8 million, which includes both fixed and variable consideration. The total transaction price of $86.8 million is comprised of (i) the $75.0 million fixed, non-refundable upfront payment, (ii) a $5.0 million non-refundable milestone payment due upon the transfer of the IND application to Genentech, (iii) a $5.0 million non-refundable milestone payment due upon delivery of certain data relating to the completion of the Phase 1a Trial for GDC-1971, and (iv) $1.8 million of estimated variable consideration related to reimbursements due from Genentech for research and development services. No (a) other development milestone payments, including the $15.0 million and $10.0 million milestone payments received in December 2021 and October 2022, respectively, and (b) regulatory milestone payments are included in the transaction price, as such payments are variable consideration fully constrained as of December 31, 2022. As part of management's evaluation of the constraint, the Company considered numerous factors, including consideration of the fact that achievement of the milestones is outside of the Company's control, contingent upon Genentech's efforts, the receipt of regulatory approval, and subject to scientific risks of success, as well as the Company's option to participate in the Profit/Cost Share.

Allocation of Transaction Price to Performance Obligations

The Company allocated the transaction price of $86.8 million based on the stand-alone selling prices ("SSP") of each of the performance obligations as follows:

- $83.6 million for the transfer of the license;
- $2.9 million for research and development services; and
- $0.3 million for the transfer of API.

The SSP for the license was determined using an approach that considered discounted, probability-weighted cash flows related to the license transferred. The Company also reviewed comparable market transactions in determining the SSP of the license. The SSP for the research and development services and the transfer of API were based on estimates of the associated effort and cost of these services and cost to manufacture API, adjusted for a reasonable profit margin that would be expected to be realized under similar contracts.

Recognition of Revenue

The Company is recognizing revenue for each of the three performance obligations as follows.

- The Company recognized revenue related to the license at a point in time upon transfer of the license to Genentech. The Company recognized the full amount allocated to the license and related know-how in 2020, because the Company had transferred the license upon execution of the Genentech Agreement.
- The Company is satisfying the research and development performance obligation for GDC-1971 as the research and development services are performed. The research and development services performance obligation consists of the Company completing the Phase 1a clinical trial initiated in 2020. The Company recognizes revenue related to the research and development services over time using a cost-based input method by calculating actual costs incurred to date at each period end relative to total estimated costs expected to be incurred to fulfill the performance obligation. Revenue recognized related to this performance obligation during the years ended December 31, 2022, 2021, and 2020 was $0.7 million, $1.7 million, and $0, respectively.
- The Company recognized the full amount of revenue related to the transfer of API in 2021 upon transfer to Genentech in the amount of $0.3 million. There was no revenue recognized related to this performance obligation during the years ended December 31, 2022 and 2020.

During the years ended December 31, 2022, 2021, and 2020, the Company recognized an aggregate of $1.0 million, $2.6 million, and $82.7 million, respectively, of revenue from the Genentech Agreement.

As of December 31, 2022 and 2021, the Company recorded a contract asset of $4.9 million and $4.5 million, respectively, both of which are classified as current assets on the consolidated balance sheets. The contract asset relates to the amount of revenue recognized for which the right to payment is contingent upon conditions other than the passage of time, such as the completion of future milestone activities.

The Company recorded an other current liability of $25.0 million and an other liability of $15.0 million as of of December 31, 2022 and 2021, respectively, representing the amount of certain development milestones achieved as of such dates under the Genentech Agreement. The amounts have been excluded from the transaction price at both December 31, 2022 and 2021 and, therefore, excluded from amounts recognized as revenue to date, since they are subject to repayment to Genentech if the Company exercises its option to participate in the Profit/Cost Share under the Genentech Agreement.

12. 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 held 9,999,999 shares of Series A preferred stock and 1,557,875 shares of Series C preferred stock at December 31, 2019. In conjunction with the Company's initial public offering in 2020, such shares were converted into 3,281,253 shares of common stock of the Company, which are outstanding at December 31, 2022. The contract provides that the parties will jointly conduct research efforts with the goal of identifying and developing product candidates. The original term of the contract was three years

and required the Company to pay an annual fee of $1.0 million. On June 15, 2020, the Company and D. E. Shaw Research agreed to amend the Collaboration and License Agreement (the "DESRES Agreement"). The DESRES Agreement extended the term of the agreement to August 16, 2025 and increased the annual fee from $1.0 million to $9.9 million. The DESRES Agreement also automatically renews for successive one-year periods, unless either party provides at least one year notice of non-renewal. The annual fee during each of the one-year renewal terms is subject to mutual agreement of the Company and D. E. Shaw Research.

The Company is obligated to pay potential development milestone payments under the terms of the DESRES Agreement up to $7.3 million per target, plus sales milestones and royalties, upon the achievement of certain specified contingent events. Such payments for achievement of development and regulatory milestones total up to $7.3 million in the aggregate for each of the first three products the Company develops and up to $6.3 million, in the aggregate, for each product the Company develops after the first three. The Company assessed the milestone and royalty events under the DESRES Agreement as of December 31, 2022 and 2021, concluding no such payments were due.

For the years ended December 31, 2022, 2021, and 2020, the Company recorded research and development expenses of $9.4 million, $9.5 million, and $6.4 million, respectively, under the DESRES Agreement on its consolidated statements of operations and comprehensive loss.

As of December 31, 2022 and 2021, the Company had prepaid balances of $4.9 million and $4.4 million, respectively, under the DESRES Agreement on its consolidated balance sheets.

As of December 31, 2022 and 2021, the Company had no accrued expense and accounts payable balances under the DESRES Agreement on its consolidated balance sheets.

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 certain development milestone payments pursuant to such arrangements upon the achievement of certain specified contingent events. The Company assessed such milestones at December 31, 2022 and 2021, concluding $0 was due as of December 31, 2022 and $0.5 million was due as of December 31, 2021. The Company incurred approximately $2.9 million, $5.4 million, and $2.7 million of research and development expenses under such agreements for the years ended December 31, 2022, 2021, and 2020, respectively.

13. Leases

399 Binney Street

In December 2017, the Company entered into an operating lease agreement for 44,336 square feet of office and laboratory space at 399 Binney Street, Cambridge, Massachusetts, which was increased to 44,807 square feet in January 2018. The Company gained control of the leased space in January 2019 and, accordingly, recorded an operating lease right-of-use asset and liability at such time. The operating lease expires in April 2029, subject to certain renewal options, which have not been included in the Company's operating lease right-of-use asset and liability, as the Company is not reasonably certain to exercise such options as of December 31, 2022.

In September 2020, the Company entered into an amendment to its operating lease agreement to expand the leased area by 1,824 square feet of office space at 399 Binney Street, Cambridge, Massachusetts. The amendment to the operating lease agreement met the criteria to be accounted for as a separate operating lease. The Company gained control of the leased space in October 2020 and, accordingly, recorded an operating lease right-of-use asset and liability at such time. The operating lease right-of-use asset and lease liability recorded in connection with the amendment were not material. The amended operating lease expires in April 2029, subject to certain renewal options.

As discussed in Note 2, *Significant Accounting Policies*, the Company provided a letter of credit in the amount of $0.9 million with a financial institution, which expires commensurate with the lease in April 2029.

The following table summarizes the presentation of amounts recorded on the Company's consolidated balance sheets for the operating lease at 399 Binney Street as of December 31, 2022 and 2021:

	December 31, 2022	December 31, 2021
	(in thousands)	
Assets:		
Operating lease assets	$ 18,828	$ 20,780
Liabilities:		
Operating lease liabilities	$ 2,170	$ 1,844
Operating lease liabilities, net of current portion	18,886	21,056
Total operating lease liabilities	$ 21,056	$ 22,900

The following table summarizes the effect of lease costs for the Company's operating lease at 399 Binney Street on the Company's condensed consolidated statements of operations and comprehensive loss for the years ended December 31, 2022, 2021, and 2020:

	Year Ended December 31,		
	2022	2021	2020
		(in thousands)	
Research and development expenses	$ 3,350	$ 3,262	$ 3,273
General and administrative expenses	893	1,002	899
	$ 4,243	$ 4,264	$ 4,172

The Company made cash payments of $4.1 million, $4.0 million, and $3.8 million under the operating lease agreement for 399 Binney Street during the years ended December 31, 2022, 2021, and 2020, respectively.

The minimum lease payments for the Company's operating lease at 399 Binney Street as of December 31, 2022 for the next five years and thereafter are expected to be as follows:

Year Ending December 31,	Amount (in thousands)
2023	$ 4,254
2024	4,377
2025	4,503
2026	4,634
2027	4,768
Thereafter	6,557
Total lease payments	29,093
Less: interest	(8,037)
Present value of operating lease liabilities	$ 21,056

The weighted-average remaining lease term and weighted-average discount rate of the Company's operating lease at 399 Binney Street were 6.33 years and 10.4%, respectively, at December 31, 2022.

The weighted-average remaining lease term and weighted-average discount rate of the Company's operating lease at 399 Binney Street were 7.33 years and 10.4%, respectively, at December 31, 2021.

60 Hampshire Street

In May 2021, the Company entered into an operating lease agreement for 41,474 square feet of office and laboratory space at 60 Hampshire Street, Cambridge, Massachusetts. The Company gained control of the leased space in July 2022 and, accordingly, recorded an operating lease right-of-use asset and liability at such time. The operating lease expires in June 2032 and there are no renewal options.

As discussed in Note 2, *Significant Accounting Policies*, the Company provided a letter of credit in the amount of $1.7 million with a financial institution, which expires commensurate with the lease in June 2032.

The following table summarizes the presentation of amounts recorded on the Company's consolidated balance sheets for the operating lease at 60 Hampshire Street as of December 31, 2022 and 2021:

	December 31, 2022	December 31, 2021
	(in thousands)	
Assets:		
Operating lease assets	$ 44,926	$ —
Liabilities:		
Current operating lease liabilities	$ 2,106	$ —
Operating lease liabilities, net of current portion	34,580	—
Total operating lease liabilities	$ 36,686	$ —

The following table summarizes the effect of lease costs for the Company's operating lease at 60 Hampshire Street on the Company's condensed consolidated statements of operations and comprehensive loss for the years ended December 31, 2022, 2021, and 2020:

	Year Ended December 31,		
	2022	2021	2020
		(in thousands)	
Research and development expenses	$ 2,675	$ —	$ —
General and administrative expenses	564	—	—
	$ 3,239	$ —	$ —

The Company made cash payments of $11.5 million, $0, and $0 under the operating lease agreement for 60 Hampshire Street during the years ended December 31, 2022, 2021, and 2020, respectively.

The minimum lease payments for the Company's operating lease at 60 Hampshire Street as of December 31, 2022 for the next five years and thereafter are expected to be as follows:

Year Ending December 31,	Amount (in thousands)
2023	$ 4,966
2024	5,109
2025	5,257
2026	5,409
2027	5,565
Thereafter	27,084
Total lease payments	53,390
Less: interest	(16,704)
Present value of operating lease liabilities	$ 36,686

The weighted-average remaining lease term and weighted-average discount rate of the Company's operating lease at 60 Hampshire Street were 9.50 years and 8.0%, respectively, at December 31, 2022.

14. Income Taxes

During the years ended December 31, 2022, 2021, and 2020, the Company recorded no income tax benefits due to losses incurred and the uncertainty of future taxable income.

A reconciliation of the expected income tax (benefit) computed using the U.S. federal statutory income tax rate to the Company's effective income tax rate is as follows for the years ended December 31, 2022, 2021, and 2020:

	December 31,		
	2022	2021	2020
Income tax computed at federal statutory rate	21.0%	21.0%	21.0%
State taxes, net of federal benefit	6.5%	5.7%	5.7%
Change in valuation allowance	(30.2)%	(20.5)%	(27.3)%
IPR&D	—	(7.0)%	—
R&D credit carryovers	4.2%	2.2%	7.6%
Stock-based compensation	(2.1)%	(0.4)%	(6.7)%
Permanent differences	(0.6)%	(1.0)%	(0.3)%
Total	0.0%	0.0%	0.0%

The Company's deferred tax assets and liabilities at December 31, 2022 and 2021, consist of the following:

	December 31,	
	2022	2021
	(in thousands)	
Deferred tax assets:		
Net operating losses	$ 119,688	$ 108,800
Tax credit carryforwards	30,593	18,288
Capitalized R&D	55,303	—
Lease liability	18,307	6,010
Stock-based compensation	14,510	8,374
Intangibles	1,875	1,859
Depreciation and amortization	568	477
Other	7,270	4,304
Total gross deferred tax assets	248,114	148,112
Valuation allowance	(230,518)	(142,674)
Net deferred tax assets	17,596	5,438
Deferred tax liabilities		
Operating lease assets	(17,596)	(5,438)
Total deferred tax liabilities	(17,596)	(5,438)
	$ —	$ —

The Company has incurred net operating losses ("NOLs") since inception. As of December 31, 2022 and 2021, the Company had federal NOL carryforwards of $412.0 million and $371.4 million, respectively, available to reduce taxable income, of which $43.1 million expire beginning in 2035 and $368.9 million do not expire. The Company also has state NOL carryforwards of $501.7 million and $466.2 million as of December 31, 2022 and 2021, respectively, available to reduce future state taxable income, which expire at various dates beginning in 2035.

As of December 31, 2022 and 2021, the Company also had available federal research and development tax credit carryforwards of $25.9 million and $14.9 million, respectively, 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 $5.6 million and $4.2 million as of December 31, 2022 and 2021, respectively, available to reduce future state tax liabilities, which expire at various dates beginning in 2030.

Utilization of NOL and research and development credit carryforwards may generally be subject to limitation under Sections 382 and 383 of the Internal Revenue Code of 1986 ("Sections 382 and 383") due to ownership changes that have occurred previously or could occur in the future. Such ownership changes may limit the amount of NOL and research and development credit carryforwards that can be utilized annually to offset any post-ownership change in taxable income and tax, respectively. The most recent Section 382 study was performed by the Company up to December 31, 2022, through which it was noted that a historic ownership change has likely occurred. Nonetheless, the Company has concluded that, as of December 31, 2022, the prospective utilization of NOL and research and development credit carryforwards from inception through December 31, 2022 (and, therefore, the corresponding Federal and state deferred tax assets) should not be restricted by Sections 382 and 383, although ownership changes after December 31, 2022 could impact the Company's ability to utilize such tax attributes in the future.

The Company recorded a valuation allowance against its deferred tax assets for the years ended December 31, 2022 and 2021, because the Company's management believes it is more likely than not that these assets will not be realized. The valuation allowance increased by approximately $87.8 million and $76.9 million for the years ended December 31, 2022 and 2021, 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, 2022 and 2021.

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 2017, the Tax Cuts and Jobs Act of 2017 ("2017 Tax Act") was signed into law. Amongst other provisions, the 2017 Tax Act requires taxpayers to capitalize and amortize research and experimental (R&D) expenditures under Section 174 for tax years beginning after December 31, 2021. As such, the rule noted became effective for the Company during the year ended December 31, 2022 and resulted in the capitalization of certain R&D costs within its tax provision. The Company will amortize

such costs for tax purposes over 5 years if the R&D was performed in the United States and over 15 years if the R&D was performed outside the United States.

In 2020, the Coronavirus Aid, Relief and Economic Security Act ("CARES Act") was signed into law. The CARES Act lifts certain deduction limitations originally imposed by the 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 years ended December 31, 2022, 2021, and 2020, or to the Company's net deferred tax assets as of December 31, 2022 and 2021, 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 the uncertainty of realizing a benefit from such items.

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 made matching contributions to the 401(k) Plan of $2.3 million and $1.2 million for the years ended December 31, 2022 and 2021. The Company was not required to make and did not make any matching contributions to the 401(k) Plan for the year ended December 31, 2020.

16. Subsequent Events

In preparing the consolidated financial statements as of December 31, 2022, the Company evaluated subsequent events for recognition and measurement purposes through the filing date of this Annual Report on Form 10-K. The Company concluded that no events or transactions have occurred that require disclosure in the accompanying consolidated financial statements.

EXHIBIT INDEX

Exhibit Number	Description
2.1†	Agreement and Plan of Merger dated April 15, 2021 by and among Relay Therapeutics, Inc., Elixir Merger Sub I, Inc., Elixir Merger Sub II, LLC, ZebiAI Therapeutics, Inc., and Shareholder Representative Services LLC (incorporated by reference to Exhibit 2.1 to the Registrant's Form 8-K (File No. 001-39385) filed on April 16, 2021).
3.1*	Fourth Amended and Restated Certificate of Incorporation of Relay Therapeutics, Inc.
3.2	Amended and Restated Bylaws of Relay Therapeutics, Inc. (incorporated by reference to Exhibit 3.2 to the Registrant's Form 8-K (File No. 001-39385) filed on July 21, 2020).
4.1	Specimen stock certificate evidencing the shares of common stock (incorporated by reference to Exhibit 4.1 to our Registration Statement on Form S-1/A (File No. 333-239412) filed on July 9, 2020).
4.2	Description of Securities (incorporated by reference to Exhibit 4.3 to the Registrant's Form 10-K (File No. 001-39385) filed on March 25, 2021).
10.1#	2016 Stock Option and Grant Plan, and form of award agreements thereunder (incorporated by reference to Exhibit 10.1 of the Registrant's Registration Statement on Form S-1 (File No. 333-239412) filed on June 24, 2020).
10.2#	2020 Stock Option and Incentive Plan, and form of award agreements thereunder (incorporated by reference to Exhibit 10.2 to the Registrant's Form 10-K (File No. 001-39385) filed on February 24, 2022.
10.3#	2020 Employee Stock Purchase Plan (incorporated by reference to Exhibit 10.3 of the Registrant's Registration Statement on Form S-1/A (File No. 333-239412) filed on July 9, 2020).
10.4#	Senior Executive Cash Bonus Plan (incorporated by reference to Exhibit 10.4 of the Registrant's Registration Statement on Form S-1 (File No. 333-239412) filed on June 24, 2020).
10.5#	Amended and Restated Non-Employee Director Compensation Policy, effective as of April 1, 2021 (incorporated by reference to Exhibit 10.5 to the Registrant's Registration Statement on Form S-1 (File No. 333-255583) filed on April 28, 2021).
10.6#	Form of Indemnification Agreement between the Registrant and each of its directors and executive officers (incorporated by reference to Exhibit 10.6 of the Registrant's Registration Statement on Form S-1 (File No. 333-239412) filed on June 24, 2020).
10.7#	Form of Amended and Restated Employment Agreement (incorporated by reference to Exhibit 10.8 of the Registrant's Registration Statement on Form S-1/A (File No. 333-239412) filed on July 9, 2020).
10.8#	Amended and Restated Employment Agreement, by and between the Registrant and Sanjiv K. Patel dated March 25, 2020 (incorporated by reference to Exhibit 10.9 of the Registrant's Registration Statement on Form S-1 (File No. 333-239412) filed on June 24, 2020).
10.9#	Retention Agreement by and between the Registrant and Donald Bergstrom, dated May 10, 2021 (incorporated by reference to Exhibit 10.2 of the Registrant's Form 10-Q (File No. 001-39385) filed on August 12, 2021).
10.10†	Amended and Restated Collaboration and License Agreement, by and between the Registrant and D. E. Shaw Research, LLC, dated June 15, 2020 (incorporated by reference to Exhibit 10.10 of the Registrant's Registration Statement on Form S-1 (File No. 333-239412) filed on June 24, 2020).

10.11†	Amendment No. AR1 to Amended and Restated Collaboration and License Agreement, by and between the Registrant and D. E. Shaw Research, LLC, dated February 4, 2021 (incorporated by reference to Exhibit 10.10 to the Registrant's Registration Statement on Form S-1 (File No. 333-255583) filed with the SEC on April 28, 2021).
10.12	Amendment No. AR2 to Amended and Restated Collaboration and License Agreement, by and between the Registrant and D. E. Shaw Research, LLC, dated May 12, 2021 (incorporated by reference to Exhibit 10.4 to the Registrant's Form 10-Q (File No. 001-39385) filed on May 13, 2021).
10.13†	Amendment No. AR3 to Amended and Restated Collaboration and License Agreement, by and between the Registrant and D.E. Shaw Research, LLC, dated January 27, 2022 (incorporated by reference to Exhibit 10.1 to the Registrant's Form 10-Q (File No. 001-39385) filed on May 5, 2022).
10.14†	Collaboration and License Agreement, by and between the Registrant and Genentech, Inc. and F. Hoffmann-La Roche Ltd, dated as of December 11, 2020 (incorporated by reference to Exhibit 10.10 to the Registrant's Form 10-K (File No. 001-39385) filed on March 25, 2021).
10.15†	First Amendment to Collaboration and License Agreement, by and between the Registrant and Genentech, Inc. and F. Hoffmann-La Roche Ltd, dated February 2, 2022 (incorporated by reference to Exhibit 10.2 to the Registrant's Form 10-Q (File No. 001-39385) filed on May 5, 2022).
10.16	Registration Rights Agreement by and between the Registrant and the stockholders of ZebiAI Therapeutics, Inc. dated April 22, 2021 (incorporated by reference to Exhibit 10.14 to the Registrant's Registration Statement on Form S-1 (File No. 333-255583) filed on April 28, 2021).
10.17	Lease Agreement between the Registrant and ARE-MA REGION NO. 58, LLC, dated as of January 10, 2018 (incorporated by reference to Exhibit 10.7 of the Registrant's Registration Statement on Form S-1 (File No. 333-239412) filed on June 24, 2020).
10.18	Second Amendment to Lease, dated as of September 23, 2020, between the Registrant and ARE-MA REGION NO. 58, LLC (incorporated by reference to Exhibit 10.7 of the Registrant's Form 10-Q (File No. 001-39385) filed on November 12, 2020).
10.19	Lease by and between the Registrant and BMR-Hampshire, LLC, dated May 26, 2021 (incorporated by reference to Exhibit 10.5 of the Registrant's Form 10-Q (File No. 001-39385) filed on August 12, 2021).
21.1	List of Subsidiaries of Registrant (incorporated by reference to Exhibit 21.1 of the Registrant's Form 10-K (File No. 001-39385) filed on February 24, 2022).
23.1*	Consent of Ernst & Young LLP, independent registered public accounting firm.
24.1*	Power of Attorney (included on signature page).
31.1*	Certification of Principal Executive Officer Pursuant to Rules 13a-14(a) or 15d-14(a) under the Securities Exchange Act of 1934, as Adopted Pursuant to Section 302 of the Sarbanes-Oxley Act of 2002.
31.2*	Certification of Principal Financial Officer Pursuant to Rules 13a-14(a) or 15d-14(a) under the Securities Exchange Act of 1934, as Adopted Pursuant to Section 302 of the Sarbanes-Oxley Act of 2002.
32.1**	Certification of Principal Executive Officer and Principal Financial Officer Pursuant to 18 U.S.C. Section 1350, as Adopted Pursuant to Section 906 of the Sarbanes-Oxley Act of 2002.
101.INS*	Inline XBRL Instance Document
101.SCH*	Inline XBRL Taxonomy Extension Schema Document
101.CAL*	Inline XBRL Taxonomy Extension Calculation Linkbase Document
101.DEF*	Inline XBRL Taxonomy Extension Definition Linkbase Document

101.LAB*	Inline XBRL Taxonomy Extension Label Linkbase Document
101.PRE*	Inline XBRL Taxonomy Extension Presentation Linkbase Document
104	Cover Page Interactive Data File (embedded within the Inline XBRL document)

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* Filed herewith.

** The certifications furnished in Exhibit 32.1 hereto are deemed to accompany this Annual Report on Form 10-K and will not be deemed "filed" for purposes of Section 18 of the Securities Exchange Act of 1934, as amended. Such certifications will not be deemed to be incorporated by reference into any filings under the Securities Act of 1933, as amended, or the Securities Exchange Act of 1934, as amended, except to the extent that the Registrant specifically incorporates it by reference.

† Portions of this exhibit (indicated by asterisks) were omitted in accordance with the rules of Item 601(b)(10) of Regulation S-K.

# Indicates a management contract or any compensatory plan, contract or arrangement.

SIGNATURES

Pursuant to the requirements of Section 13 or 15(d) of the Securities Exchange Act of 1934, as amended, the Registrant has duly caused this Report to be signed on its behalf by the undersigned, thereunto duly authorized.

Relay Therapeutics, Inc.

Date: February 23, 2023

By: /s/ Sanjiv K. Patel
Sanjiv K. Patel, M.D.
President and Chief Executive Officer
(Principal Executive Officer)

POWER OF ATTORNEY AND SIGNATURES

Each person whose individual signature appears below hereby authorizes and appoints Sanjiv K. Patel, M.D. and Brian Adams, and each of them, with full power of substitution and resubstitution and full power to act without the other, as his or her true and lawful attorney-in-fact and agent to act in his or her name, place and stead and to execute in the name and on behalf of each person, individually and in each capacity stated below, and to file any and all amendments to this Annual Report on Form 10-K and to file the same, with all exhibits thereto, and other documents in connection therewith, with the Securities and Exchange Commission, granting unto said attorneys-in-fact and agents, and each of them, full power and authority to do and perform each and every act and thing, ratifying and confirming all that said attorneys-in-fact and agents or any of them or their or his or her substitute or substitutes may lawfully do or cause to be done by virtue thereof.

Pursuant to the requirements of the Securities Exchange Act of 1934, as amended, this Report has been signed below by the following persons on behalf of the Registrant in the capacities and on the dates indicated.

Name	Title	Date
/s/ Sanjiv K. Patel Sanjiv K. Patel, M.D.	President, Chief Executive Officer and Director (Principal Executive Officer)	February 23, 2023
/s/ Thomas Catinazzo Thomas Catinazzo	Chief Financial Officer (Principal Accounting Officer and Principal Financial Officer)	February 23, 2023
/s/ Alexis Borisy Alexis Borisy	Director	February 23, 2023
/s/ Linda A. Hill Linda A. Hill, Ph.D.	Director	February 23, 2023
/s/ Douglas S. Ingram Douglas S. Ingram	Director	February 23, 2023
/s/ Sekar Kathiresan Sekar Kathiresan, M.D.	Director	February 23, 2023
/s/ Mark Murcko Mark Murcko, Ph.D.	Director	February 23, 2023
/s/ Jami Rubin Jami Rubin	Director	February 23, 2023
/s/ Laura Shawver Laura Shawver, Ph.D.	Director	February 23, 2023

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