KEROS THERAPEUTICS

# 2024 Annual Report

NASDAQ: KROS

**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, 2024**

**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: 001-39264**

# KEROS THERAPEUTICS, INC.

**(Exact name of registrant as specified in its charter)**

| **Delaware** | **81-1173868** |
|---|---|
| **(State or other jurisdiction of incorporation or organization)** | **(I.R.S. Employer Identification Number)** |
| **1050 Waltham Street, Suite 302 Lexington, Massachusetts** | **02421** |
| **(Address of principal executive offices)** | **(Zip Code)** |

**Tel: (617) 314-6297**

(Registrant's telephone number, including area code)

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

| Title of each class | Trading Symbol | Name of each exchange on which registered |
|---|---|---|
| **Common Stock, $0.0001 par value per share** | **KROS** | **The Nasdaq Stock Market LLC** |

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, a smaller reporting company, or an emerging growth company. See the definitions of “large accelerated filer,” “accelerated filer,” “smaller reporting company,” and “emerging growth company” in Rule 12b-2 of the Exchange Act.

| | | | |
|---|---|---|---|
| Large accelerated filer | ☒ | 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 corrects 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 the voting and non-voting common equity held by non-affiliates of the registrant as of June 28, 2024, the last business day of the registrant's most recently completed second fiscal quarter, was $1.3 billion, based on a closing price of $45.70 per share of the registrant's common stock as reported on the Nasdaq Global Market. The calculation does not reflect a determination that certain persons are affiliates of the registrant for any other purpose.

As of February 20, 2025, there were 40,562,047 outstanding shares of the registrant's common stock, par value $0.0001 per share.

**DOCUMENTS INCORPORATED BY REFERENCE**

Portions of the registrant's proxy statement to be filed with the Securities and Exchange Commission pursuant to Regulation 14A in connection with the registrant's 2025 Annual Meeting of Stockholders, which will be filed subsequent to the date hereof, are incorporated by reference into Part III of this Form 10-K. Such proxy statement will be filed with the Securities and Exchange Commission not later than 120 days following the end of the registrant's fiscal year ended December 31, 2024.

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## SPECIAL NOTE REGARDING FORWARD-LOOKING STATEMENTS

This Annual Report on Form 10-K contains forward-looking statements within the meaning of the Private Securities Litigation Reform Act of 1995. All statements other than statements of historical facts contained in this Annual Report on Form 10-K are forward-looking statements, including statements about:

- the timing of announcement of data from our Phase 2 clinical trial for our product candidate, cibotercept (KER-012), in patients with pulmonary arterial hypertension;
- the timing of announcement of data from our ongoing Phase 1 clinical trial for our second product candidate, KER-065, in healthy volunteers;
- risks associated with public health crises, which may adversely impact our business, preclinical studies and clinical trials;
- our ability to receive the required regulatory approvals and clearances to successfully market and sell our products, if approved in the United States and certain other countries;
- our ability to successfully advance our pipeline of additional product candidates;
- our ability to develop sales and marketing capabilities;
- the rate and degree of market acceptance of any products we are able to commercialize;
- the effects of increased competition as well as innovations by new and existing competitors in our market;
- our ability to obtain funding for our operations;
- our ability to establish and maintain collaborations;
- our ability to effectively manage our anticipated growth;
- our ability to maintain, protect and enhance our intellectual property rights and proprietary technologies;
- our ability to operate our business without infringing the intellectual property rights and proprietary technology of third parties;
- costs associated with defending intellectual property infringement, product liability and other claims;
- regulatory developments in the United States, Australia, New Zealand, Europe, the United Kingdom and other foreign countries;
- our ability to attract and retain qualified employees;
- statements regarding future revenue, hiring plans, expenses, capital expenditures, capital requirements and stock performance; and
- the future trading prices of our common stock and the impact of securities analysts' reports on these prices.

In some cases, you can identify forward-looking statements by the words "anticipate," "believe," "continue," "could," "estimate," "expect," "intend," "may," "might," "objective," "ongoing," "plan," "predict," "project," "potential," "should," "will," or "would," or the negative of these terms, or other comparable terminology intended to identify statements about the future. These statements involve known and unknown risks, uncertainties and other factors that may cause our actual results, levels of activity, performance or achievements to be materially different from the information expressed or implied by these forward-looking statements.

In addition, statements that "we believe" and similar statements reflect our beliefs and opinions on the relevant subject. These statements are based upon information available to us as of the date of this report, and while we believe such information forms a reasonable basis for such statements, such information may be limited or incomplete, and our statements should not be read to indicate that we have conducted an exhaustive inquiry into, or review of, all potentially available relevant information. These statements are inherently uncertain and investors are cautioned not to unduly rely upon these statements.

You should read the section titled "Risk Factors" set forth in Part I, Item 1A of this Annual Report on Form 10-K for a discussion of important factors that may cause our actual results to differ materially from those expressed or implied by our forward-looking statements. Moreover, we operate in an evolving environment. New risk factors and uncertainties may emerge from time to time, and it is not possible for management to predict all risk factors and uncertainties. As a result of these factors, we cannot assure you that the forward-looking statements in this Annual Report on Form 10-K will prove to be accurate. Except as required by applicable law, we do not plan to publicly update or revise any forward-looking statements contained herein, whether as a result of any new information, future events, changed circumstances or otherwise.

You should read this Annual Report on Form 10-K, completely and with the understanding that our actual future results may be materially different from what we expect. We qualify all of our forward-looking statements by these cautionary statements.

## SPECIAL NOTE REGARDING COMPANY REFERENCES

Throughout this Annual Report on Form 10-K, "Keros," the "Company," "we," "us" and "our" refer to Keros Therapeutics, Inc. and its subsidiaries.

## SPECIAL NOTE REGARDING TRADEMARKS

All trademarks, trade names and service marks appearing in this Annual Report on Form 10-K are the property of their respective owners.

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# PART I

## ITEM 1. BUSINESS

### Overview

We are a clinical-stage biopharmaceutical company focused on developing and commercializing novel therapeutics to treat a wide range of patients with disorders that are linked to dysfunctional signaling of the transforming growth factor-beta, or TGF-ß, family of proteins. We are a leader in understanding the role of the TGF-ß family of proteins, which are master regulators of the growth, repair and maintenance of a number of tissues, including blood, bone, skeletal muscle, adipose and heart tissue. By leveraging this understanding, we have discovered and are developing protein therapeutics that have the potential to provide meaningful and potentially disease-modifying benefit to patients. One of our product candidates, cibotercept (KER-012), is being developed for the treatment of pulmonary arterial hypertension, or PAH, and for the treatment of cardiovascular disorders. Our second product candidate, KER-065, is being developed for the treatment of neuromuscular diseases. Our most advanced product candidate, elritercept (KER-050), is being developed for the treatment of low blood cell counts, or cytopenias, including anemia and thrombocytopenia, in patients with myelodysplastic syndromes, or MDS, and in patients with myelofibrosis. In December 2024, we entered into an exclusive license agreement with Takeda Pharmaceuticals U.S.A., Inc., or Takeda, to further develop, manufacture and commercialize elritercept worldwide outside of mainland China, Hong Kong and Macau, which became effective on January 16, 2025.

Cibotercept is designed to bind to and inhibit the signaling of TGF-ß ligands that stimulate the proliferation of vascular endothelial and smooth muscle cells and fibroblasts, including activin A, activin B and myostatin (GDF8). We believe that cibotercept has the potential to increase the signaling of bone morphogenic protein, or BMP, pathways through this inhibition of activin A and activin B signaling, and consequently treat diseases such as PAH that are associated with reduced BMP signaling, including inactivating mutations in the BMP receptors. We are developing cibotercept for the treatment of PAH and for the treatment of cardiovascular disorders. We expect to present topline data from our Phase 2 clinical trial evaluating cibotercept in patients with PAH, which we refer to as the TROPOS trial, in the second quarter of 2025. We announced the early termination of the TROPOS trial in January 2025, based on an ongoing safety review due to the unanticipated observation of pericardial effusion adverse events in the trial. Following completion of the TROPOS trial, we plan to evaluate the appropriate development strategy for cibotercept, including in PAH and other potential indications.

KER-065 is designed to bind to and inhibit TGF-ß ligands, including myostatin (GDF8) and activin A, which are negative regulators of muscle and bone mass and strength. Through inhibition of these TGF-ß ligands, we believe that KER-065 has the potential to increase skeletal muscle regeneration, increase muscle size and strength, reduce body fat, reduce fibrosis of the skeletal muscle and increase bone strength. We are developing KER-065 for the treatment of neuromuscular disorders, with an initial focus on Duchenne muscular dystrophy, or DMD. Glucocorticoids, the standard of care in DMD, can have significant side effects when used long-term, including catabolism of muscle, increased fat and accelerated bone loss. We have commenced a Phase 1 clinical trial of KER-065 in a healthy volunteer adult population, and expect to announce initial data from this trial in the first quarter of 2025.

Elritercept is an engineered ligand trap comprised of a modified ligand-binding domain of the TGF-ß receptor known as activin receptor type IIA, or ActRIIA, that is fused to the portion of the human antibody known as the Fc domain. Elritercept is designed to increase red blood cell and platelet production by inhibiting the signaling of a subset of the TGF-ß family of proteins to promote hematopoiesis. We believe elritercept has the potential to provide benefit to patients suffering from red blood cell and platelet differentiation and maturation defects occurring across the spectrum from early through terminal stages of hematopoiesis, and consequently may be effective for many patients that have limited treatment options or are refractory to available therapies. In December 2024, we announced additional data from our ongoing Phase 2 clinical trial evaluating elritercept for the treatment of anemia and thrombocytopenia in patients with very low-, low-, or intermediate-risk MDS, which we refer to as lower-risk MDS, and initiated our placebo-controlled Phase 3 clinical trial in patients with lower-risk MDS. Additionally, in December 2024, we announced additional data from our ongoing Phase 2 clinical trial evaluating elritercept for the treatment of patients with myelofibrosis-associated cytopenias, which we refer to as the RESTORE trial.

Our strategy focuses on the role of members of the TGF-ß family of proteins in the development of a number of tissues, including skeletal muscle, bone, blood, adipose and heart tissue. Aged and damaged cells are routinely replaced by new cells in normally functioning organs. These new cells are derived from stem cells that have the ability to differentiate into cells with specialized function when appropriate signals are provided to maintain the homeostatic state of the tissue. Members of the TGF-ß family of proteins, including activins and BMPs, provide the necessary signals for this process of self-renewal and repair.

We seek to address the limitations of current therapeutic approaches to treating diseases whose manifestations are linked to dysfunction of TGF-ß signaling pathways by:

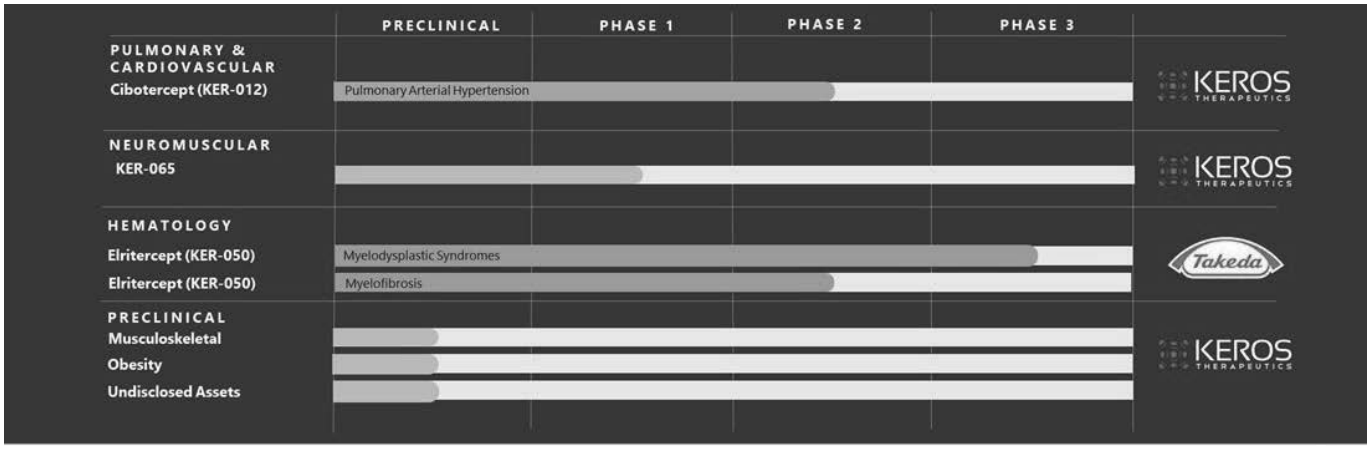
- leveraging our comprehensive insights into the TGF-ß signaling pathways to discover therapeutics to treat disorders that are linked to dysfunctional TGF-ß signaling;

- expanding our library of proprietary molecules that are engineered to induce desired biological effects, such as increased muscle mass and strength, improved muscle quality and reduced intramuscular fat, improved bone mineral density and modulated blood cell production;
- engineering proprietary molecules to selectively target specific proteins in the TGF-ß signaling pathways to provide therapeutic benefit while potentially minimizing safety risks;
- developing product candidates for the treatment of diseases where targeting the TGF-ß signaling pathways has clinical validation or biological rationale to improve our probability of success in the clinic; and
- targeting the TGF-ß family of proteins, which are highly conserved throughout evolution, permitting the use of animal models to potentially predict with high confidence the therapeutic benefit in patients.

We are led by a highly experienced management team and scientific advisory board who have significant experience and expertise researching and developing therapeutics in the TGF-ß family of proteins. Our team has collectively worked on marketed therapeutics such as Reblozyl, Takhzyro and Winrevair, and led drug discovery and clinical development at companies including Acceleron Pharma Inc. (which was acquired by Merck & Co. Inc. in November 2021), Dyax Corp, Scholar Rock Holding Corporation, Tourmaline Bio, Inc. and Wyeth Pharmaceuticals Inc.

### Our Pipeline

The following table sets forth our product candidates and their current development stages:




### Our Strategy

Our mission is to deliver significant clinical benefit to patients suffering from disorders that are linked to dysfunctional signaling of the TGF-ß family of proteins. With a focus on developing differentiated product candidates, we aim to target the TGF-ß pathways critical for the growth, repair and maintenance of a number of tissue and organ systems. The key elements of our strategy include:

- *Rapidly advance the clinical development of cibotercept, KER-065 and elritercept.* We expect to present topline data from our Phase 2 clinical trial evaluating cibotercept in patients with PAH in the second quarter of 2025. We also expect to announce initial data from our ongoing Phase 1 clinical trial of KER-065 in a healthy volunteer adult population in the first quarter of 2025. We initiated our Phase 3 clinical trial of elritercept in patients with lower-risk MDS in December 2024.
- *Pursue development and, if approved, commercialization of our product candidates in indications and regions where we believe we can maximize their value independently or through strategic collaborations.* We plan to independently advance our product candidates in indications and regions that we believe have clearly defined regulatory paths and commercialization strategies. We intend to also opportunistically evaluate strategic collaborations to maximize the potential commercial value of our product candidates and discovery programs.
- *Leverage our proprietary discovery approach and knowledge base to develop new therapeutics.* Our discovery efforts are focused on expanding our pipeline of wholly-owned assets for the treatment of disorders that are linked to dysfunctional TGF-ß signaling. Accordingly, we intend to identify and develop product candidates to treat diseases where targeting the TGF-ß signaling pathways has clinical validation or biological rationale.
- *Maintain a dynamic, data-driven operating model*. We manage our clinical programs dynamically, utilizing a data-driven approach to determine which product candidates and discovery-stage assets to develop, which includes considering the potential product profile and the most recent data. Our extensive knowledge of our assets and the process of drug development informs our decision-making process regarding when to advance the science and clinical path to pursue demonstrating proof-of-concept, balanced with the imperative of maintaining an efficient timeframe and cost-effective budget.

## Our Pulmonary and Cardiovascular Franchise

### *Cibotercept*

Cibotercept is a ligand trap comprised of a modified ligand-binding domain of activin receptor type IIB, or ActRIIB, that is fused to the portion of the human antibody known as the Fc domain. Cibotercept is designed to normalize blood vessel thickness and heart function by binding to and inhibiting the signaling of select TGF-ß ligands, including activin A, activin B and myostatin (GDF8), that stimulate the proliferation of vascular endothelial and smooth muscle cells and fibroblasts, without a dose-limiting increase in red blood cells. We believe that cibotercept has the potential to increase the signaling of BMP pathways through this inhibition of activin A and activin B signaling, and consequently treat diseases such as PAH that are associated with reduced BMP signaling due to inactivating mutations in the BMP receptors. We are developing cibotercept for the treatment of PAH and for the treatment of cardiovascular disorders. Following completion of the TROPOS trial, we plan to evaluate the appropriate development strategy for cibotercept, including in PAH and other potential indications.

#### *Pulmonary Arterial Hypertension*

PAH is a debilitating disorder characterized by elevated pulmonary vascular resistance due to the progressive narrowing and obliteration of precapillary pulmonary arteries. This increase in pulmonary vascular resistance results in severe elevation in pulmonary artery pressure, leading to right ventricular hypertrophy and ultimately, death from right heart failure. Patients with PAH develop shortness of breath, fatigue, fainting, chest pain, palpitations and swelling of extremities and abdomen. We estimate that there are approximately 40,000 addressable patients in the United States living with this condition. Despite current treatment options, survival with PAH remains only slightly above 60% at five years, with mortality typically resulting from right ventricle failure.

Loss-of-function mutations in the gene encoding the BMP type II receptor, or BMPR2, are present in over 70% of cases of heritable PAH, or HPAH, while loss-of-function mutations in certain BMPR2 co-receptors are present in other cases of HPAH and idiopathic PAH. Histology and gene expression studies from the lungs of human and experimental PAH showed diminished BMPR2 expression and BMP signaling even in the absence of loss-of-function mutations, as well as enhanced TGF-ß signaling. Consistent with an imbalance in the signaling of these families of ligands, it was recently found that PAH due to cirrhosis and portal hypertension is marked by a severe deficiency of circulating BMP9, while circulating TGF-ß, activin and growth differentiation factor, or GDF, ligands were found to be increased in PAH, even in the absence of causative mutations. Multiple experimental third-party models also demonstrated the efficacy of augmenting BMP signaling or suppressing TGF-ß, activin or GDF signaling, which we believe supports the notion that imbalanced homeostatic BMP and pathogenic TGF-ß, activin and GDF signaling drive the development and progression of pulmonary vascular disease.

##### *Limitations of Current Treatment Options for PAH*

All of the currently-approved therapies for PAH are vasodilators, which are medications that dilate blood vessels. These vasodilators fall into one of three categories: (i) prostanoids, which are agonists of the prostacyclin signaling pathway; (ii) endothelin receptor antagonists, or ERAs; or (iii) therapies that stimulate the nitric oxide-soluble guanylate cyclase-cyclic guanosine monophosphate axis, such as (a) phosphodiesterase 5 inhibitors, or PDE5i, or (b) soluble guanylate cyclase activators, which augment cGMP signaling, a key mediator in pulmonary arterial vasodilation.

One common approach to treating early-stage or mild PAH is an oral combination therapy using ERA and PDE5i medications. More severe PAH generally requires the addition of prostanoid, via oral or inhaled administration, while advanced PAH typically requires continuous parenteral administration. Each of these individual therapies may modestly improve a patient's functional status and in some cases survival, but is limited by systemic hypotension, systemic side effects and tachyphylaxis, which is an acute, sudden decrease in response to a product after its administration. Additionally, combination therapy is limited by the combined side effect profiles. Although existing treatments may modestly slow the progression of PAH, none appear to fully halt or reverse the disease's progression.

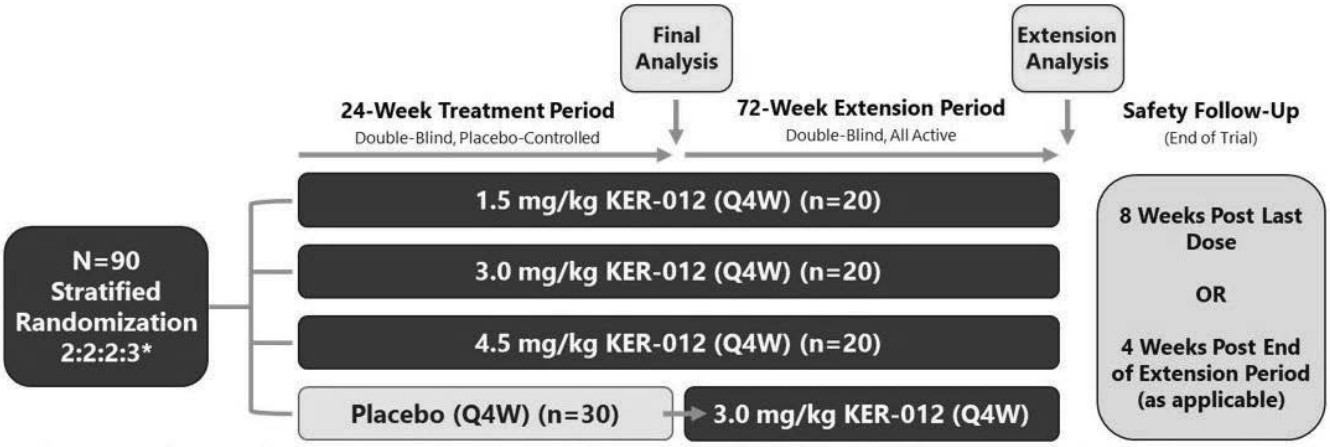
The key pathologic features of PAH include an unchecked proliferation of different vascular cells in the pulmonary arterial wall, including smooth muscle cells, endothelial cells and fibroblasts, and an exaggerated perivascular infiltration of inflammatory cells leading to a marked narrowing of small to medium sized pulmonary arteries. However, most currently approved therapies lower pulmonary vascular resistance through vasodilatation and do not fully target the obliterative pulmonary vascular remodeling. Accordingly, we believe there is a significant unmet need for a treatment that primarily targets the proliferative pathological processes and can be used alone or in combination with other PAH therapies. We believe that potent therapies that do not exhibit tachyphylaxis, are orally bioavailable or do not require continuous infusion therapy would have advantages over the currently available treatments for PAH.

Therapies that delay or reverse the obliterative pulmonary vascular remodeling could have a long-term clinical stabilizing effect in PAH. We believe that cibotercept has the potential to increase the signaling of BMP pathways through the inhibition of activin A and activin B signaling, and consequently treat diseases such as PAH that are associated with reduced BMP signaling due to inactivating mutations in the BMP receptors.

#### *Phase 2 Clinical Trial in Patients with Pulmonary Arterial Hypertension*

We conducted a randomized, double-blind, placebo-controlled Phase 2 clinical trial to evaluate cibotercept in combination with background therapy in adult patients with PAH, which we refer to as the TROPOS trial. The primary objective of this trial

was to evaluate the effect of cibotercept on hemodynamics compared to placebo in patients on background PAH therapy, and the primary endpoint was change from baseline in pulmonary vascular resistance at Week 24. The key secondary objective of this trial was to evaluate the effect of cibotercept on exercise capacity compared to placebo in patients on background PAH therapy, and the key secondary endpoint was change from baseline in 6-minute walk distance at Week 24. Additionally secondary objectives of this trial included evaluating the safety and tolerability of cibotercept, the effects of cibotercept on N-terminal pro B-type natriuretic peptide, or NT-proBNP, a biomarker of myocardial stress, and the improvement in functional class of cibotercept compared to placebo. The original trial design is summarized in the figure below.

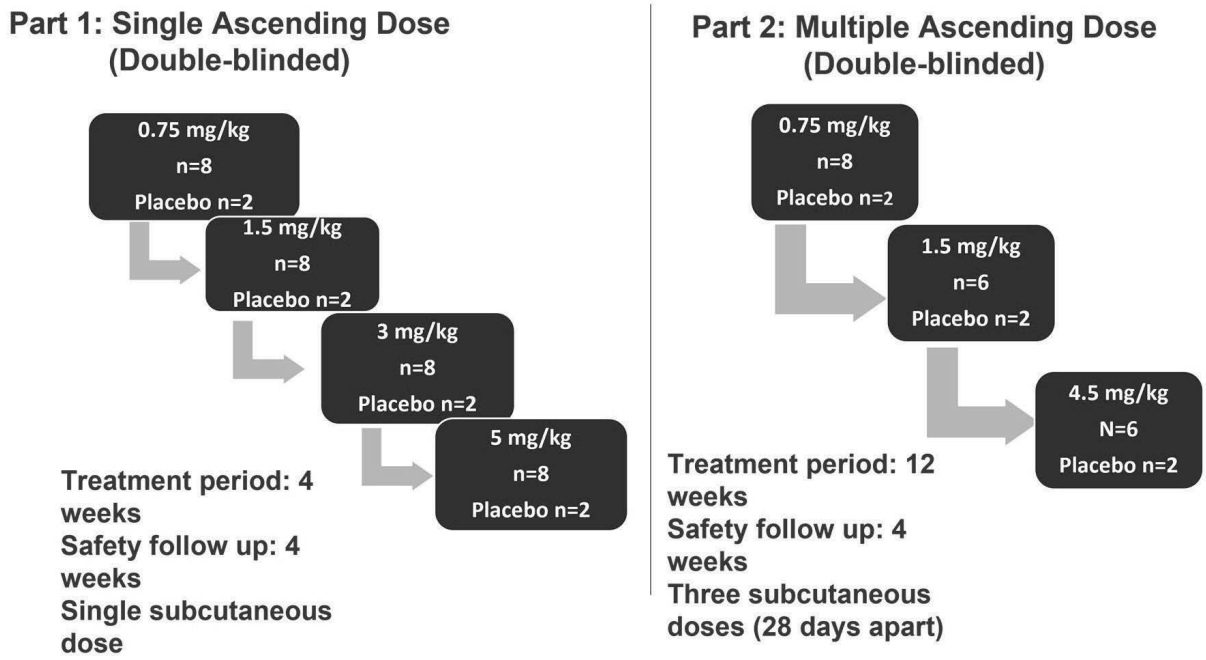



In December 2024, we announced that we voluntarily halted dosing in the 3.0 mg/kg and 4.5 mg/kg treatment arms in the fully enrolled TROPOS trial based on a safety review due to the unanticipated observation of pericardial effusion adverse events at those dose levels. Subsequently, we announced in January 2025 that we voluntarily halted all dosing in the TROPOS trial, including the 1.5 mg/kg and placebo treatment arms, based on the ongoing safety review due to new observations of pericardial effusion adverse events. The TROPOS trial is being terminated early, and patients are expected to be monitored through the end-of-trial visits. We expect to present topline data from all treatment arms in this trial in the second quarter of 2025.

*Completed Phase 1 Clinical Trial in Healthy Volunteers*

In September 2022, we completed a randomized, double-blind, placebo-controlled, two-part Phase 1 clinical trial to evaluate single and multiple ascending doses of cibotercept in healthy volunteers. The primary objectives of this trial were safety, tolerability and pharmacokinetics. The trial design is summarized in the figure below.

**Phase 1 Clinical Trial Design**



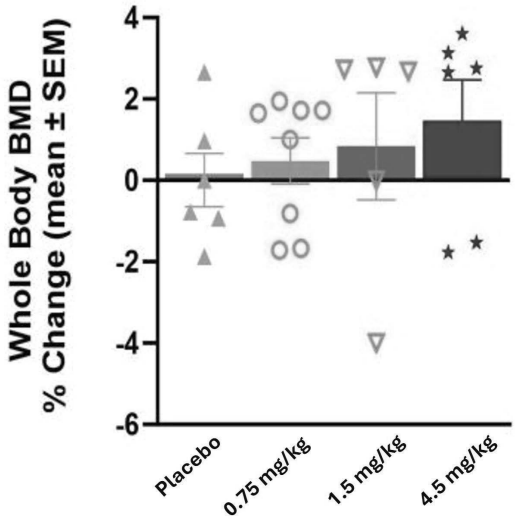

*Observed tolerability data*

Cibotercept was generally well tolerated in Part 1 of this trial at dose levels up to 5 mg/kg, the highest dose level tested, when administered as a single dose, and multiple doses of 0.75 mg/kg, 1.5 mg/kg and 4.5 mg/kg. In Part 1 of this trial, one subject withdrew consent after receiving a single 1.5 mg/kg dose of cibotercept and did not complete the safety follow-up. In Part 2 of this trial, one subject discontinued after receiving two doses of placebo due to a serious adverse event unrelated to treatment and another subject withdrew consent after receiving two 1.5 mg/kg doses of cibotercept. None of the discontinuations in this trial were due to treatment-related adverse events. No serious adverse events were reported in Part 1 of this trial. Additionally, the majority of the adverse events that were observed in this trial were mild in severity and resolved.

*Trend for increased whole-body bone mineral density observed*

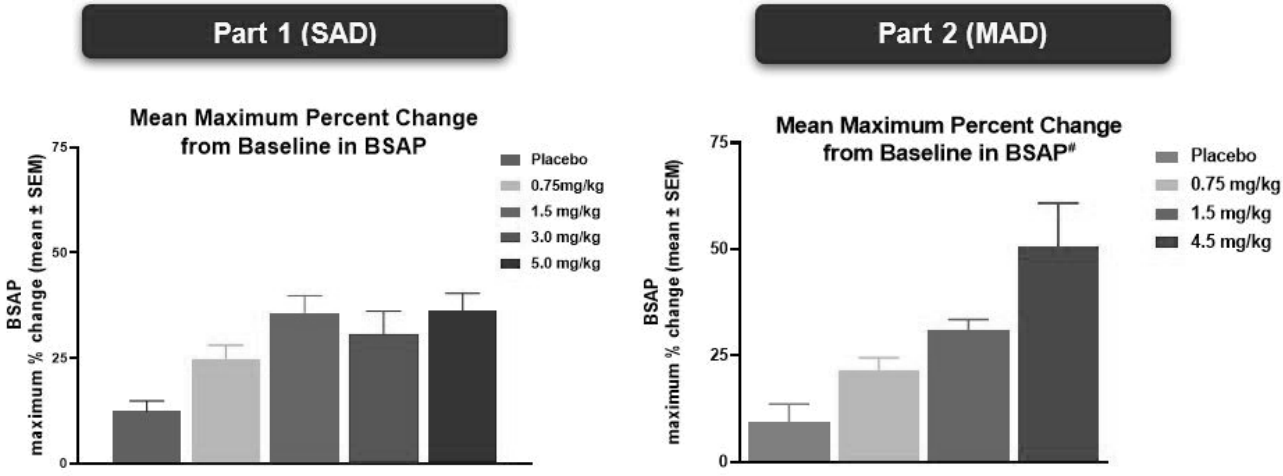
Bone mineral density, or BMD, was assessed temporally by dual-energy x-ray absorptiometry in Part 2 of this trial at baseline and at Day 113 of the trial. A trend for increased whole-body BMD was observed after multiple doses of cibotercept.

**Part 2 of the Trial: BMD Change from Baseline**




*Observed changes in pharmacodynamic markers were consistent with increased BMP signaling in the bone*

We observed dose-dependent increases in serum bone specific alkaline phosphatase, or BSAP, a marker of osteoblast activity, with a maximal increase observed at the highest doses evaluated in this trial.

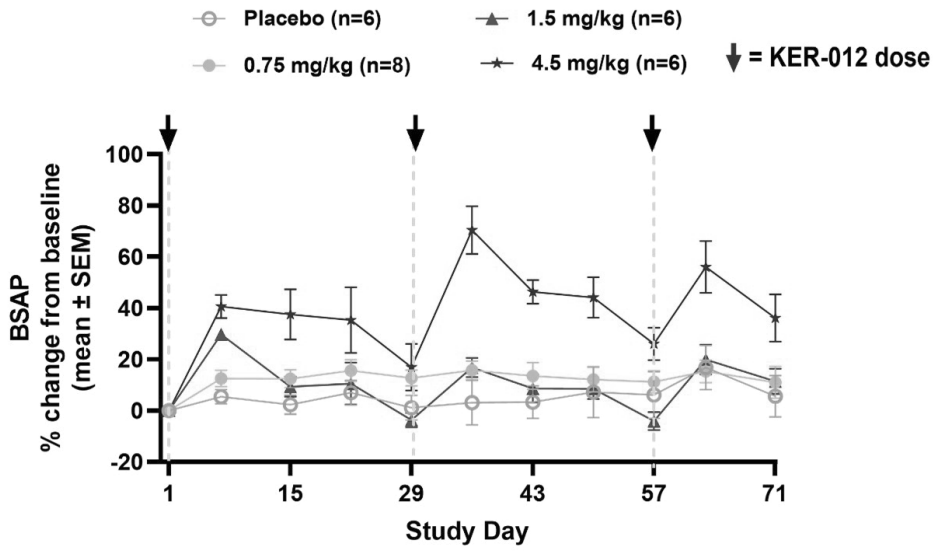



#Data shown post first dose only.

Cibotercept is designed to inhibit activins and growth differentiation factor ligands in bone, which potentially results in reduced SMAD 2/3 signaling and increased signaling of the BMP pathway (SMAD 1/5/9). The increased BMP signaling potentially promotes bone formation through a dual mechanism of activation and recruitment of bone forming osteoblasts and repression of osteoclasts, as demonstrated in our preclinical studies.

In Part 2 of this trial, we observed increases in BSAP after each dose, which is supportive of activation of osteoblasts after each dose.

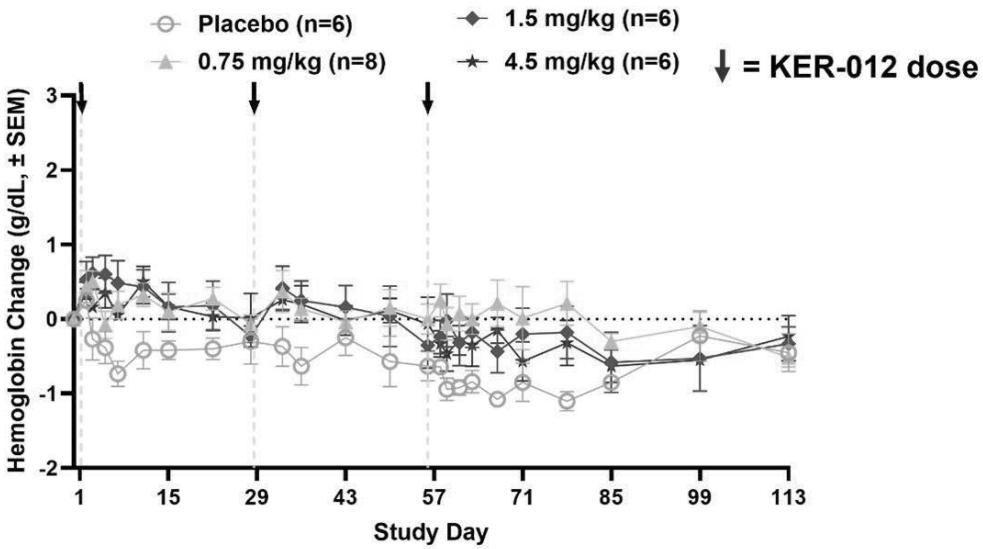
**Part 2 of the Trial: BSAP Percent Change from Baseline**



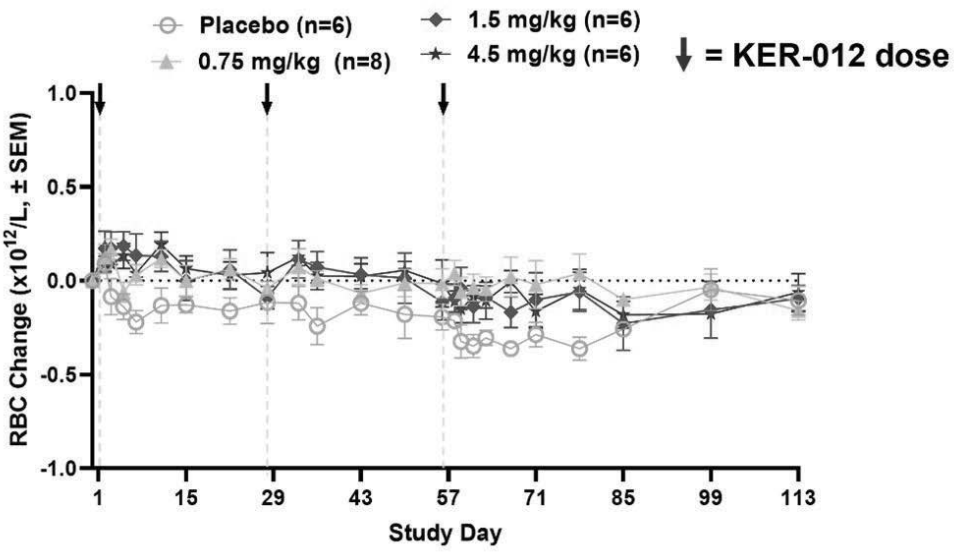

*Multiple doses of cibotercept did not elicit changes in erythropoiesis*

Administration of cibotercept did not elicit clinically meaningful changes in hemoglobin or red blood cells in this trial, and no changes in red blood cells were observed after the second or third dose.

**Observed Mean Hemoglobin Change**



**Observed Mean Red Blood Cell Change**




The observed lack of effect on erythropoiesis in this trial is consistent with the lack of effect observed in our multiple preclinical models.

*Preclinical Data*

We have generated preclinical data that we believe demonstrated proof-of-mechanism of cibotercept for the treatment of PAH and for the treatment of cardiovascular disorders. Specifically, in preclinical studies, cibotercept:

- Demonstrated effects on bone, including:
  - Exhibited high affinity for, and potent inhibition of, ligands involved in the regulation of bone homeostasis;
  - Increased bone mineral density and trabecular bone volume in wild-type mice and mice with established osteoporosis; and
  - Rats receiving a rodent version of cibotercept, or RKER-012, were protected from hypoxia-associated bone loss.
- Demonstrated potential for reduced bleeding risk, including:
  - No inhibition of retinal neovascularization observed in healthy newborn mice.
- Demonstrated benefit in a model of cardiovascular disease, including:
  - In a mouse model of pulmonary arterial banding, or PAB, RKER-012 was observed to protect against both the PAB-related cardiac dysfunction and remodeling.

*Cibotercept targeted ligands that signal through ActRIIA and ActRIIB in preclinical studies*

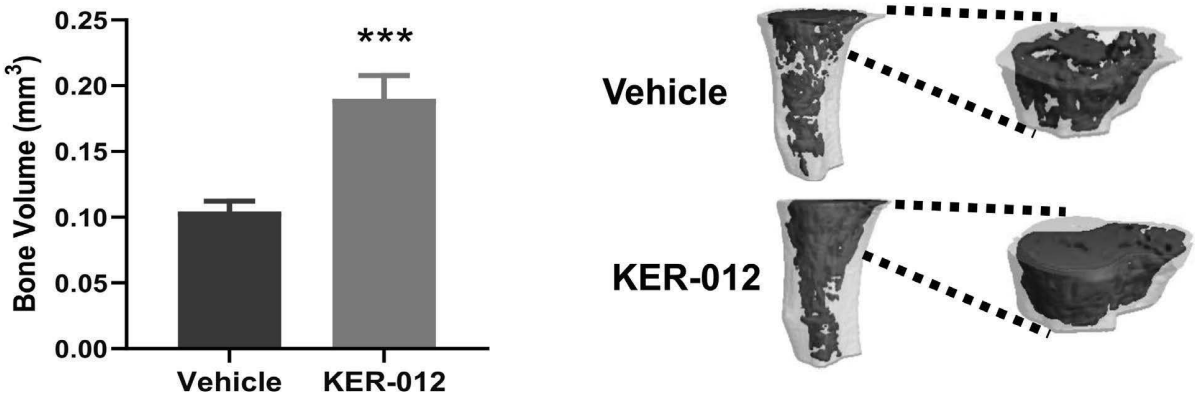
Cibotercept is a modified ActRIIB ligand trap that contains sequences from both wild-type ActRIIB and wild-type ActRIIA. In preclinical studies, cibotercept bound to and inhibited multiple ligands that signal through these cell surface receptors, including activin A, activin B and growth differentiation factor 11. These ligands are key regulators of bone remodeling that act to suppress bone growth. BMP9 is a ligand capable of signaling through the ActRIIB and bone morphogenetic receptor II. Inhibition of BMP9 results in disruption of vascular remodeling, which can lead to the development of epistaxis and telangiectasias. Cibotercept did not bind BMP9 or inhibit BMP9 signaling in preclinical studies. Consequently, we believe cibotercept has the potential to avoid bleeding.

*Treatment with cibotercept increased bone mineral density*

In preclinical studies conducted in wild-type mice, twice weekly intraperitoneal 20 mg/kg dosing of cibotercept increased bone mineral density compared to vehicle-treated mice 31 days post-treatment. Additionally, we observed that treatment with

cibotercept statistically significantly increased trabecular bone formation and mineral apposition rate, which we believe is consistent with an anabolic effect on bone.

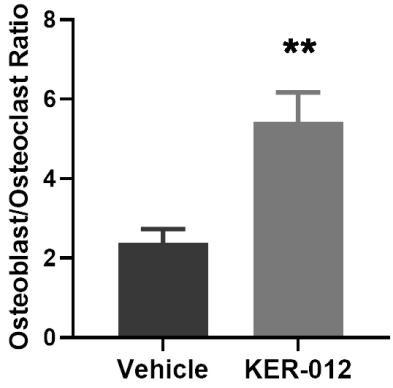
**Bone Mineral Density in Mice and Representative Microct Scans**




*** P value <0.001

In a separate preclinical study, we observed that treatment with cibotercept increased the ratio of osteoblasts, which are bone forming cells, to osteoclasts, which are bone resorbing cells, which further supports that cibotercept acts via an anabolic effect on bone. We also observed in preclinical studies conducted in mice with established osteoporosis that twice weekly intraperitoneal 20 mg/kg dosing of cibotercept increased bone mass compared to vehicle-treated mice 46 days post-treatment.

**Osteoblast-to-Osteoclast Ratio in Mice**

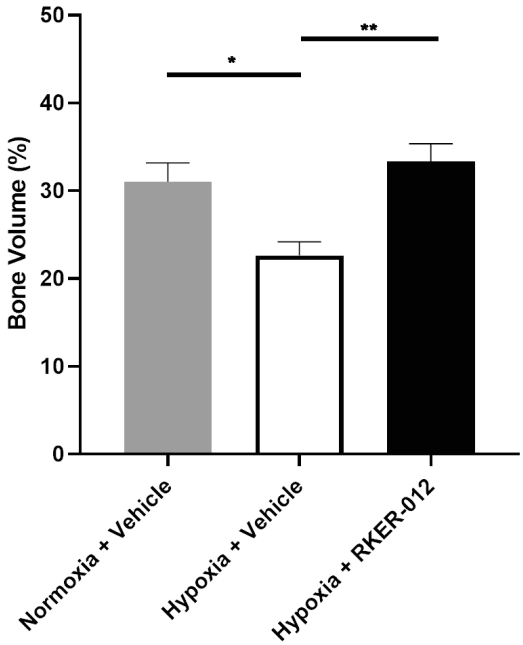



** P value <0.01

*Treatment with RKER-012 prevented bone loss from hypoxia in the rat model of PAH*

In the rat model of PAH, chronic hypoxia induced a catabolic state that resulted in wasting of tissue, including bone and muscle. Treatment with a subcutaneous 10 mg/kg dose of RKER-012 was observed to prevent bone loss in the rat model of PAH.

**Bone Volume Changes as a Result of Hypoxia in the Rat Model of PAH**

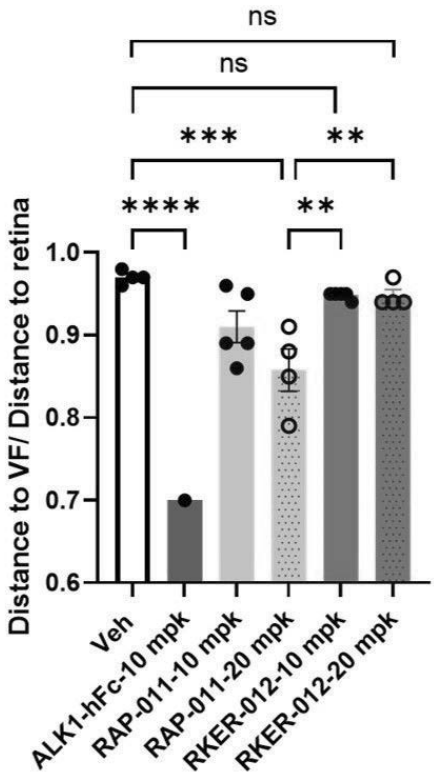



* P value <0.05; ** P value <0.01

*Treatment with RKER-012 did not inhibit retinal neovascularization in healthy newborn mice*

In the mouse model of retinal vascularization, which is an established model to study vascular growth and remodeling during development and disease, inhibition of BMP signaling leads to premature termination and increased density of blood vessels. Newborn mice were treated on postnatal day 1 and 3, and on day 8, retinas were dissected and stained to visualize the vasculature and measure vascular plexus. Administration of 10 mpk of ALK1-Fc (a potent inhibitor of BMP9 (which is required for normal vascular remodeling) and BMP10) significantly reduced retinal neovascularization. Additionally, administration of 20 mpk of a research form of sotatercept, RAP-011, which bound BMP9 with higher affinity than RKER-012, showed a dose-related inhibition of retinal vessel outgrowth. However, administration of 10 mpk and 20 mpk of RKER-012 did not inhibit retinal neovascularization. This lack of observed perturbation of retinal blood vessels of newborn mice treated with RKER-012 supports the potential for reduced bleeding risk with cibotercept.

**Quantification of Vascular Outgrowth**

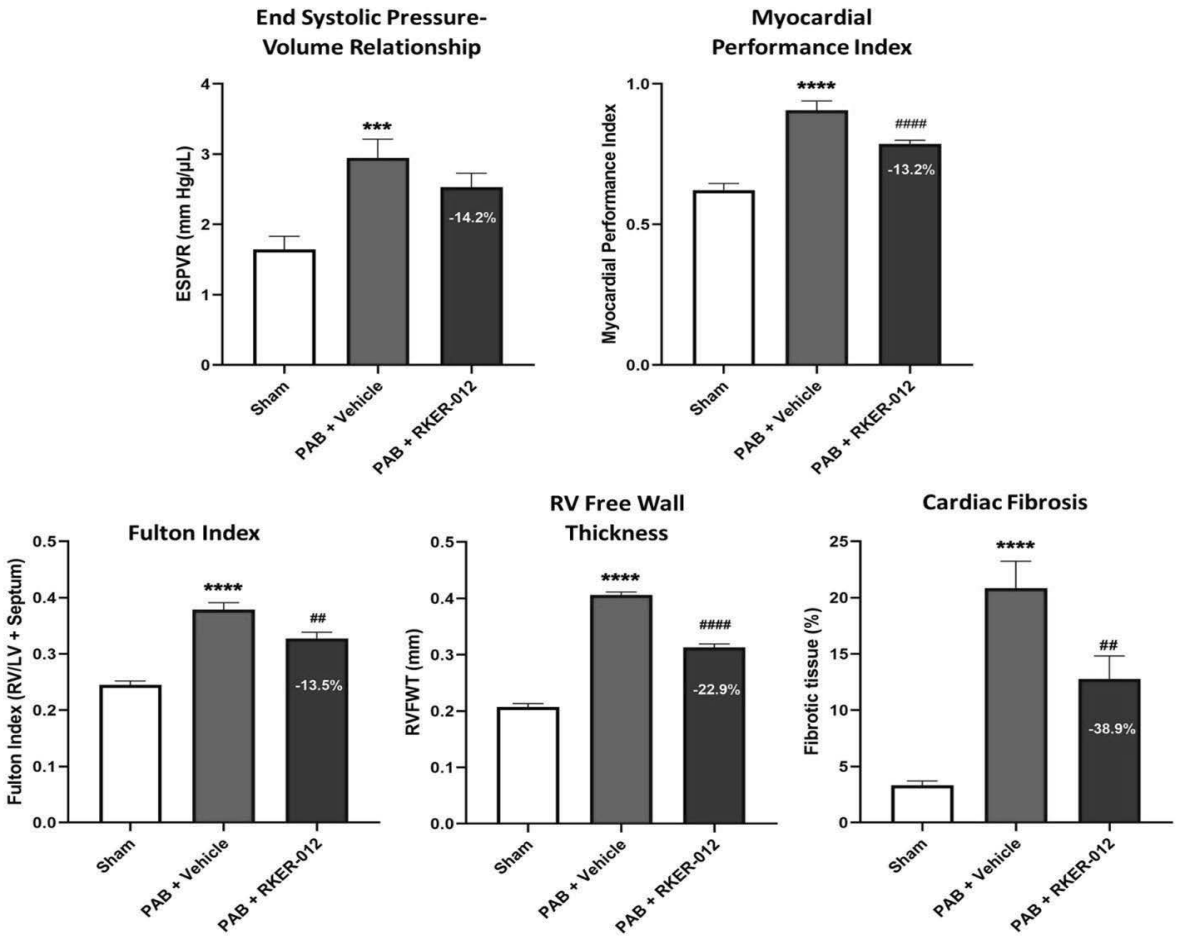



**P value <0.01; ***P value <0.001; ****P value <0.0001; ns = not significant

*Treatment with RKER-012 prevented cardiac dysfunction and remodeling in a mouse PAB model*

We used mechanical restriction of the pulmonary artery in mice to increase pressure in the right ventricular of the heart. In this model, increased ventricular pressure resulted in cardiac dysfunction, as demonstrated by increased end systolic pressure-volume relationship, or ESPVR, and increased myocardial performance index, or MPI. The increased ventricular pressure also results in cardiac remodeling, as evidenced by an increase in the Fulton index, an increase in the right ventricular free wall thickness, or RVFWT, and increased fibrosis in the heart. Treatment with twice weekly subcutaneous 10 mg/kg dosing of RKER-012 was observed to protect against both the PAB-related cardiac dysfunction and remodeling, which we believe demonstrates that cibotercept has the potential to have a cardioprotective effect that could potentially provide benefit in diseases such as PAH and other cardiovascular diseases in patients.

**ESPVR, MPI, Fulton Index, RVFWT and Cardiac Fibrosis in a Mouse PAB Model**




*** P value <0.001; **** P value <0.0001 vs. Sham; ## P value <0.01, #### P value <0.0001 vs. Vehicle

## Our Neuromuscular Franchise

### *KER-065*

KER-065 is a novel ligand trap comprised of a modified ligand-binding domain derived from ActRIIA and ActRIIB that is fused to the portion of the human antibody known as the Fc domain. KER-065 is designed to act as a ligand trap and inhibit the biological effects of myostatin and activin A, two ligands that signal through activin receptors, increase skeletal muscle regeneration, increase muscle size and strength, reduce body fat, reduce fibrosis of the skeletal muscle and increase bone strength. We are developing KER-065 for the treatment of neuromuscular diseases, with an initial focus on DMD.

*Neuromuscular Disease, including Duchenne Muscular Dystrophy*

Neuromuscular disease is a broad term that encompasses many diseases that either directly (via intrinsic muscle pathology) or indirectly (via nerve pathology) impair the functioning of muscles. Symptoms of neuromuscular disease include increasing generalized weakness and fatigue, dysphagia, dyspnea on exertion and at rest, sleepiness, morning headache, difficulties with concentration and mood changes. Most neuromuscular diseases are characterized by progressive muscular impairment leading to loss of muscle function and can lead to loss of ambulation, being wheelchair-bound, swallowing difficulties, respiratory muscle weakness and death. Neuromuscular disorders can progress rapidly or slowly. Decline in muscle mass can also be associated with secondary osteoporosis and obesity.

One example of a rapidly progressive condition is Duchenne muscular dystrophy, or DMD, which is the most common form of muscular dystrophy and results in muscle degeneration and premature death. DMD results from the lack of functional dystrophin protein that helps promote myofiber stability, caused by a gene mutation. The lack of dystrophin, an important structural component of muscle cells, causes muscle cells to have increased susceptibility to damage and to progressively die. Additionally, the absence of dystrophin in muscle cells leads to significant cell damage and ultimately causes muscle cell death and the replacement of muscle with fibrotic and fatty tissue. The replacement of muscle fibers with fatty and fibrotic tissue leads to progressive loss of muscle strength and function leading to immobility and respiratory and cardiac complications. In DMD patients, heart muscle cells progressively die and are replaced with scar tissue. This cardiomyopathy eventually leads to heart failure, which is currently the leading cause of death among those with DMD. The National

Organization for Rare Disorders estimates that approximately one in every 3,500 male births is affected by DMD worldwide. The symptoms of DMD typically manifest in the first few years of life. Patients experience progressive muscle weakness and muscle wasting and have difficulty standing up, climbing stairs, running, breathing and performing daily functions. As the disease progresses, the severity of damage to skeletal and cardiac muscles results in most patients experiencing total loss of ambulation in the pre-teenage or early teenage years. Progressive loss of upper extremity function is often observed in the mid-to-late teens followed by paralysis, respiratory and/or cardiac failure, resulting in early mortality in the third or fourth decade of life.

Reduced muscle strength, loss of ambulation and use of glucocorticoids in DMD contribute to the development of secondary osteoporosis. The most significant clinical complications are bone fragility and higher risk of bone fracture. Additionally, fracture can lead to premature loss of ambulation, which can have a detrimental effect on independent mobility and quality of life.

Decreased mobility along with the use of glucocorticoids are associated with increased risk of obesity and the associated negative health consequences, including type 2 diabetes and cardiovascular disease, in DMD patients.

*Limitations of Current Treatment Options for DMD*

Glucocorticoids have been the standard of care in DMD and help preserve muscle strength and function, leading to extension of independent ambulation for several years. While glucocorticoids help to maintain muscle function in DMD patients, long-term treatment with them can have significant negative side effects, including fluid retention, hyperglycemia, severe weight gain with fat deposits in the abdomen, face and neck, bone fragility, cataracts, high blood pressure and mood effects, leading many patients to forego long-term treatment. Additionally, glucocorticoid treatment is associated with lean mass loss, an effect mediated by myostatin.

There are four therapies approved by U.S. Food and Drug Administration, or the FDA, related to phosphorodiamidate morpholino oligomers-based oligonucleotide skipping, each addressing a specific exon skipping mutation: casimersen (exon 45), eteplirsen (exon 51), golodirsen (exon 53) and viltolarsen (exon 53). These products have all been approved using the accelerated approval pathway on the basis of dystrophin production. However, the FDA-approved labels for all four drugs state that continued approval may be contingent upon the verification of a clinical benefit in confirmatory clinical trials. These therapies require weekly intravenous infusions. Additionally, in June 2023, the FDA accelerated approval of ELEVIDYS, an adeno-associated virus-based gene therapy for the treatment of ambulatory pediatric patients aged four through five years with DMD with a confirmed mutation in the DMD gene. In June 2024, the FDA granted ELEVIDYS full approval for the treatment of ambulatory individuals aged four years and older, and accelerated approval for the treatment of non-ambulatory individuals aged four years and older. This product was approved using the accelerated approval pathway on the basis of expression of ELEVIDYS micro-dystrophin in patients treated with ELEVIDYS. Continued approval for this indication in non-ambulatory individuals aged four years and older may be contingent upon verification and description of clinical benefit in confirmatory clinical trials.

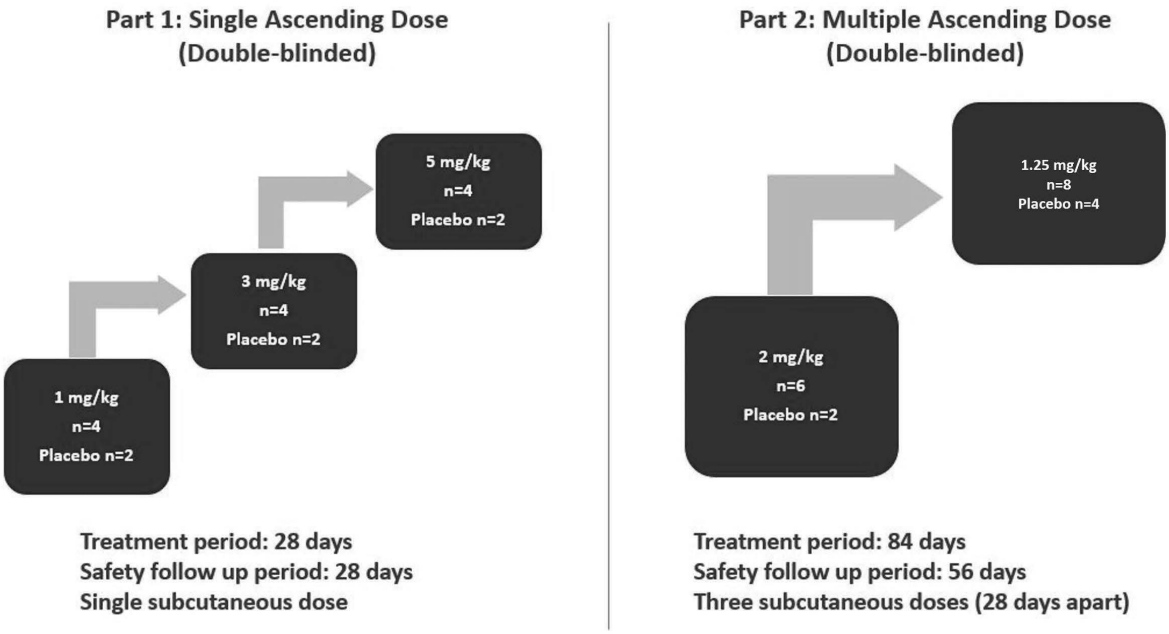
In March 2024, Italfarmaco S.p.A. announced that the FDA approved Duvyzat (givinostat), a histone deacetylase, or HDAC, inhibitor for the treatment of DMD in patients aged six years and older. HDAC inhibitors modulate the deregulated activity of HDACs in dystrophic muscle. However, Duvyzat can cause dose-related thrombocytopenia and other signs of myelosuppression, including anemia and neutropenia. Low platelet counts resulted in Duvyzat dose reduction in 28% of DMD patients in a randomized, double-blind, placebo-controlled 18-month trial.

Based on our preclinical data, we believe that KER-065 has the potential to treat multiple pathophysiologies of DMD by improving muscle and bone strength and reducing fat mass and cardiac fibrosis.

*Ongoing Phase 1 Clinical Trial in Healthy Volunteers*

We have initiated a randomized, double-blind, placebo-controlled, two-part Phase 1 clinical trial to evaluate single and multiple ascending doses of KER-065 in healthy volunteers. The primary objectives of this trial are to assess safety, tolerability and pharmacokinetics of KER-065. Exploratory endpoints include assessments of the pharmacodynamic effect on bone, adipose, muscle, cardiac tissue and fibrosis. To aid in the assessment of adipose tissue, volunteers will be required to have a BMI ≥ 27 to ≤ 35 $kg/m^2$ to be enrolled in Part 2 of this trial. The trial design is summarized in the figure below.

**Phase 1 Clinical Trial Design**




We expect to report initial data from this trial in the first quarter of 2025. We believe this trial has the potential to inform the development of KER-065 in neuromuscular indications, such as DMD.

*Preclinical Data*

We have generated preclinical data that we believe demonstrated proof-of-mechanism of KER-065 for the treatment of neuromuscular diseases, such as DMD. Specifically, in preclinical studies:

- KER-065 showed high affinity for and potent inhibition of ligands involved in the regulation of muscle and bone homeostasis;
- RKER-065 increased utrophin expression and muscle strength in a mouse model of DMD;
- Co-treatment with prednisolone and RKER-065 increased both muscle mass and strength and trabecular bone and strength;
- RKER-065 increased satellite cells in skeletal muscle; and
- Co-treatment with phosphorodiamidate morpholino oligomer, or PMO, therapy and RKER-065 improved grip strength and the efficiency of exon skipping.

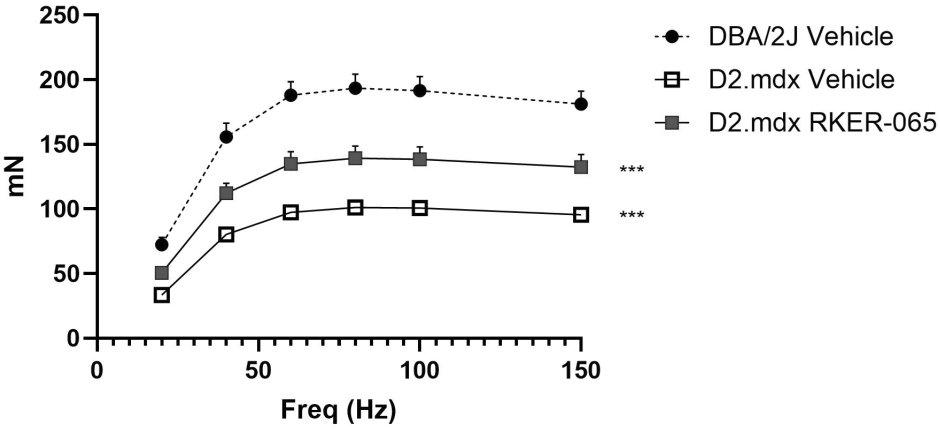
*KER-065 targeted ligands that signal through ActRIIA and ActRIIB to increase skeletal muscle and bone in preclinical studies*

KER-065 is a modified ActRII ligand trap that contains sequences from both wild-type ActRIIB and wild-type ActRIIA. In preclinical studies, KER-065 bound to and inhibited multiple ligands that signal through these cell surface receptors, including activin A and myostatin (GDF8). These ligands are key negative regulators of muscle and bone growth. Consequently, we believe KER-065 has the potential to increase skeletal muscle and bone mass, increase fat metabolism and reduce fibrosis.

*Treatment with RKER-065 increased utrophin expression and muscle strength in a mouse model of DMD*

In preclinical studies conducted in the MDX mouse model of DMD, twice weekly, intraperitoneal 10 mg/kg dosing of RKER-065 increased expression of utrophin in muscle fibers, potentially contributing to the observed increased strength.

**Evoked Force Maximum Gastrocnemius**

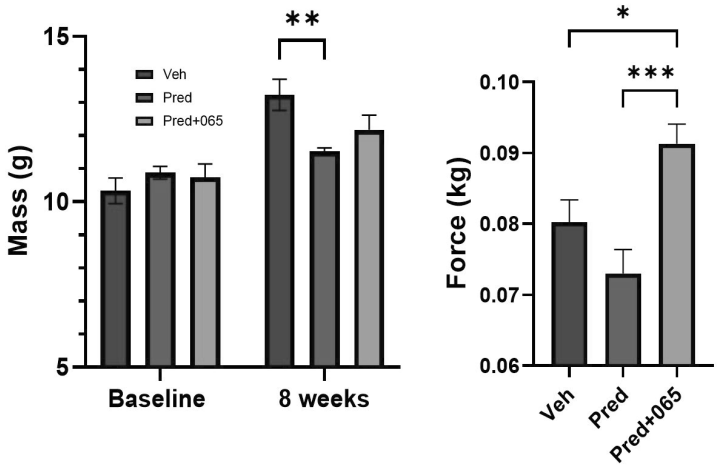



***P value <0.001

*Co-treatment with prednisolone and RKER-065 increased both muscle mass and strength and trabecular bone and strength*

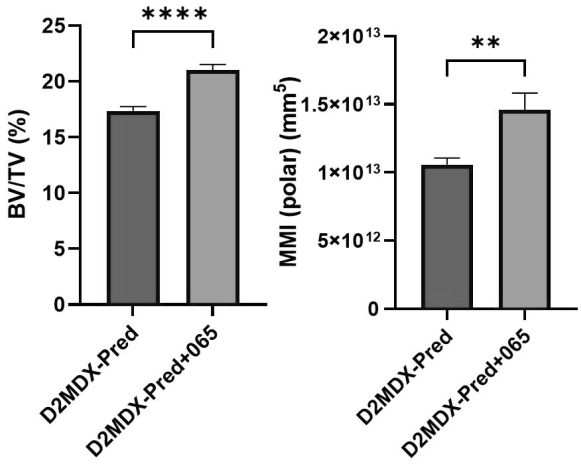
MDX mice were treated with vehicle or 2-prednisolone, or co-treated with 10 mg/kg of prednisolone and RKER-065 twice weekly. Prednisolone-treated MDX mice had less muscle mass and strength than vehicle-treated mice, while co-treatment with prednisolone and RKER-065 increased both muscle mass and strength and trabecular bone and strength.

**Lean Mass (Left) and Grip Strength (Right)**




*P value ≤0.05; **P value <0.01; ***P value <0.001

**Bone Volume Fraction (BV/TV; Left) and Polar Mass Moment of Inertia (MMI; Right)**

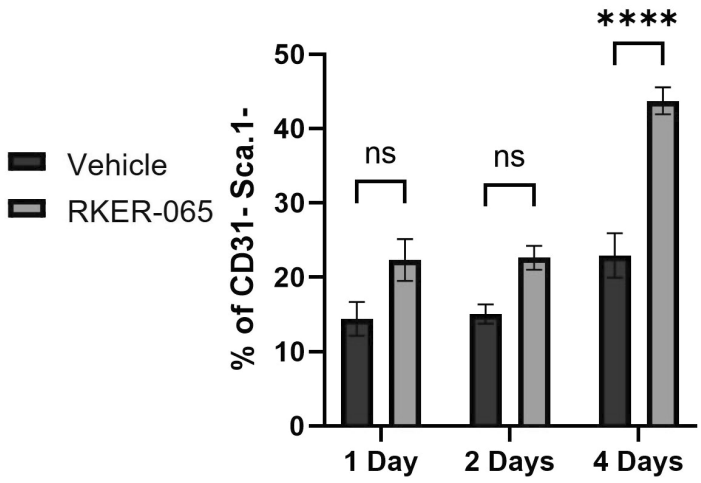



**P value <0.01; ****P value < 0.0001

*Treatment with RKER-065 increased satellite cells in skeletal muscle*

In young boys with DMD, muscle undergoes continuous rounds of degeneration and regeneration, but eventually the ability of the muscle to regenerate declines due to a decline in muscle progenitor cells known as satellite cells. To evaluate the activity of RKER-065 on satellite cells, wild-type mice were treated with a single 10 mg/kg dose of RKER-065 or vehicle. Muscles were dissected and processed to obtain single cell suspensions on day 1, day 2 and day 4. Treatment with RKER-065 increased the pool of satellite cells in wild-type mice, and observed relative expression of markers of satellite cell differentiation demonstrated the commitment and differentiation of satellite cells to muscle.

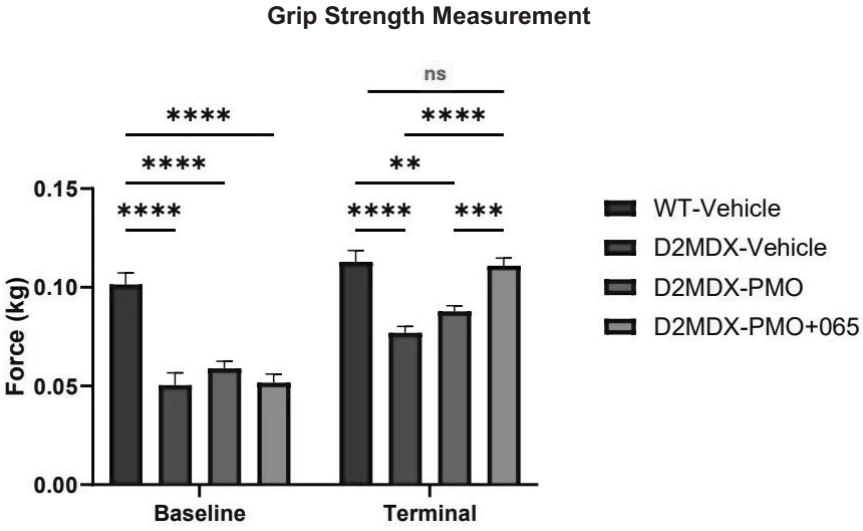
**Satellite Cell Population**



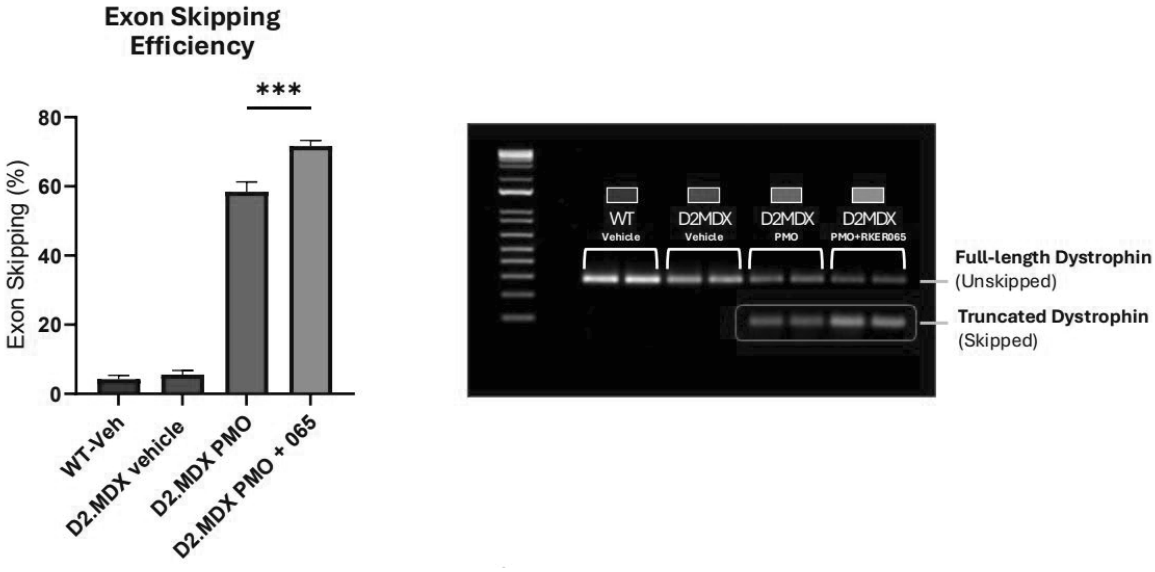

****P value < 0.0001; ns = not significant

*Co-treatment with PMO therapy and RKER-065 improved efficiency of exon skipping*

MDX mice were treated with vehicle, 25 mg/kg of PMO therapy, or co-treated with 10 mg/kg of RKER-065 twice weekly and 25 mg/kg of PMO therapy once weekly. Co-treatment with PMO therapy and RKER-065 improved grip strength and the efficiency of PMO-driven exon skipping.




**P value <0.01; ***P value <0.001; ****P value <0.0001; ns = not significant




***P value <0.001

## Our Hematology Franchise

Elritercept is designed to target TGF-ß signaling pathways to address diseases that arise from ineffective hematopoiesis.

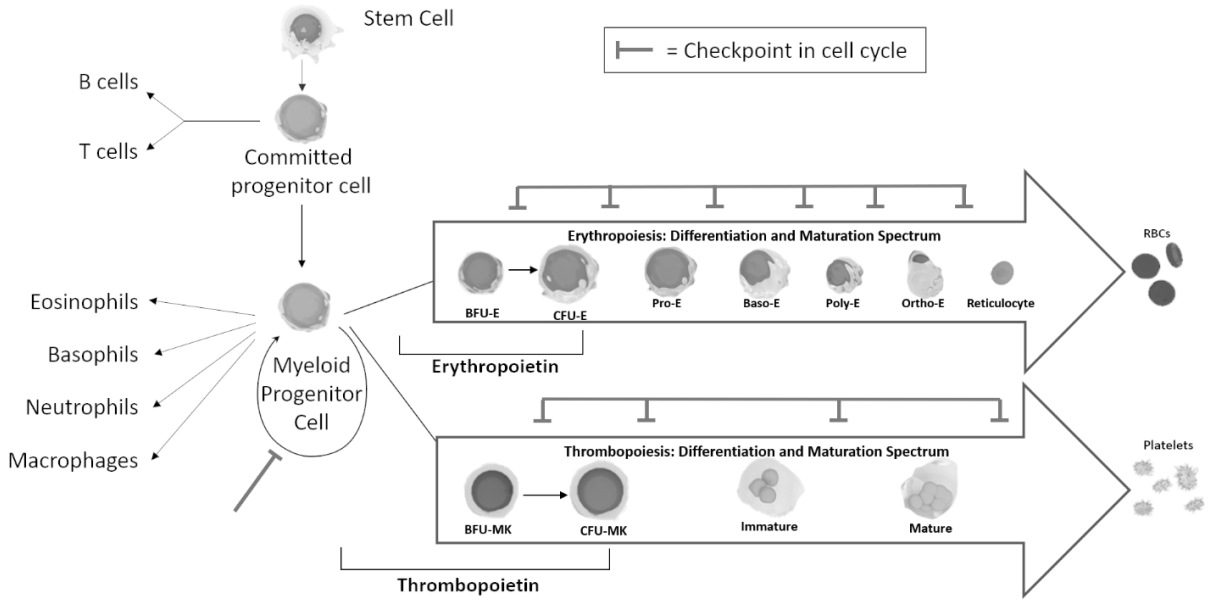
### *Hematopoiesis*

The primary cellular components of blood are red blood cells, white blood cells and platelets. The function of red blood cells is to distribute oxygen to tissues throughout the body and to carry waste carbon dioxide back to the lungs. White blood cells are responsible for the immune response through coordinated surveillance and targeting of pathogens, infected or aberrant cells and cell debris. Platelets are a key component of the coagulation system and are responsible for stopping bleeding by forming a blood clot.

Hematopoiesis is the production of red blood cells, white blood cells and platelets from common progenitor stem cells, or progenitor cells, in the bone marrow. This process begins when a hematopoietic progenitor cell becomes committed to a specific cellular lineage. These cells progress through a series of intermediate stages before becoming a mature cell with a specialized function. At any given time, pools of each progenitor cell are maintained and primed to rapidly respond to a

reduction of red blood cells, white blood cells and platelets. The graphic below depicts the stages of hematopoiesis for red blood cells and platelets.

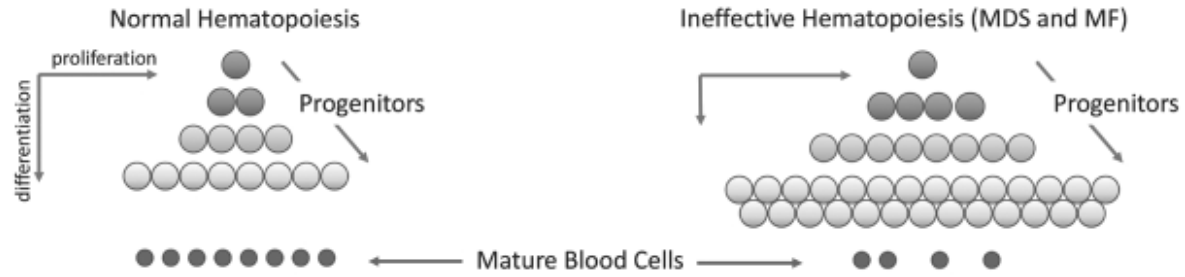
**Stages of Hematopoiesis**




TGF-ß signaling pathways involving activins prevent differentiation in order to maintain progenitor cells in a quiescent state while others involving BMPs promote differentiation of progenitor cells. Homeostasis of this process is essential to ensure all cell types are properly replenished in the blood.

In many hematological disorders, there is abnormal proliferation and differentiation of the progenitor cells for red blood cells, platelets and neutrophils. This failure to produce fully mature cells is termed ineffective hematopoiesis, and may be due to single or multiple defects that can lead to a hyperproliferation or a shortage of progenitor cells.

These changes have clinical consequences: a lack of red blood cells leads to anemia, a lack of platelets hampers clotting, resulting in increased incidence of bleeding events, and a lack of neutrophils increases susceptibility to infection. The failure of progenitor cells to differentiate can also lead to a build-up of these cells, resulting in bone marrow failure and fibrotic disease. The graphic below provides an illustration of the difference in the number of progenitor cells and mature bloods cells that are produced in normal hematopoiesis and in ineffective hematopoiesis.




Another critical component in red blood cell development is the production of hemoglobin, an iron-containing protein that delivers oxygen to cells and removes carbon dioxide. The synthesis of hemoglobin requires that sufficient levels of iron are present in the bone marrow and if iron levels are too low, it can result in a failure to produce sufficient numbers of red blood cells. Anemia is a common consequence of diseases where normal iron mobilization is hindered.

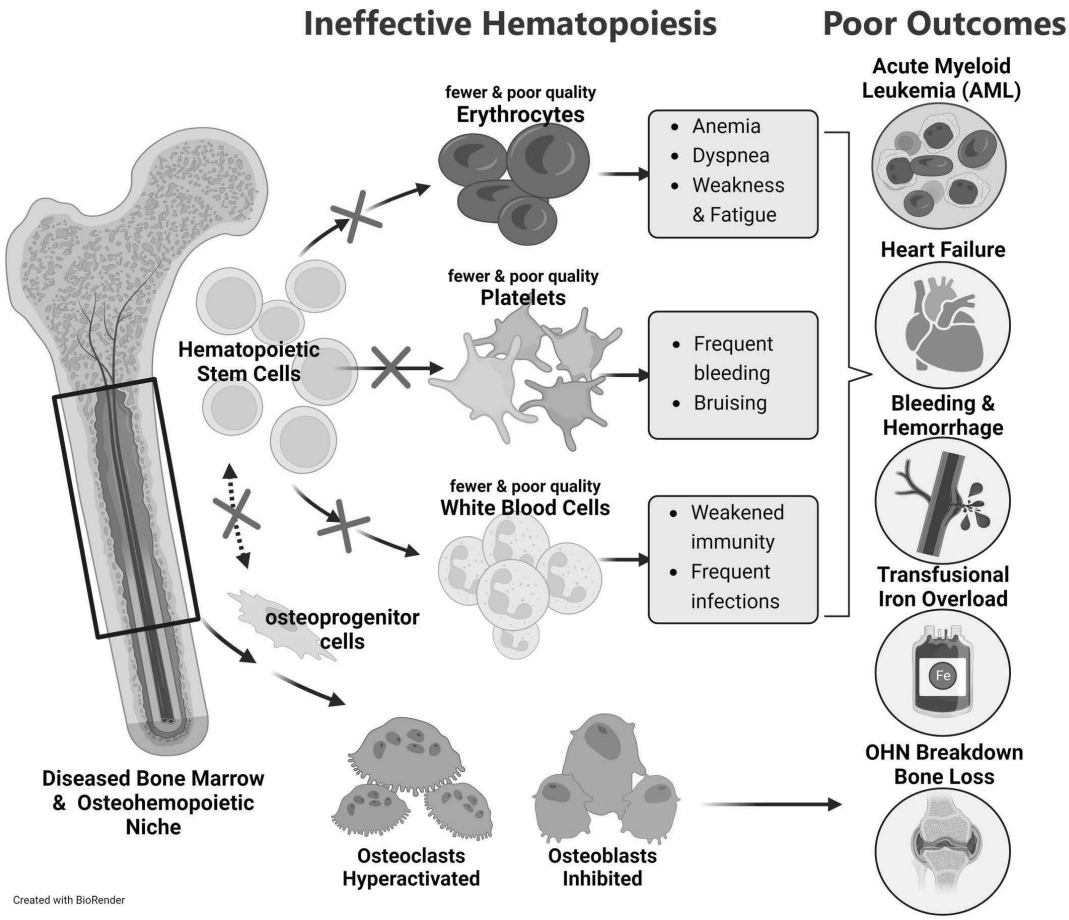
***Elritercept: For the Treatment of Ineffective Hematopoiesis to Address Cytopenias***

We are developing elritercept, our lead product candidate, for the treatment of cytopenias that occur due to ineffective hematopoiesis, including anemia and thrombocytopenia, in patients with MDS and in patients with myelofibrosis. Elritercept is designed to benefit patients suffering from defects in red blood cell and platelet differentiation and maturation across the spectrum from early through terminal stages of hematopoiesis. Consequently, elritercept may be effective for many patients that have limited treatment options or are refractory to available therapies.

*Myelodysplastic Syndromes*

MDS is a collection of bone marrow disorders characterized by ineffective hematopoiesis, often with a dramatic expansion of progenitor cells that are unable to mature into functioning blood cells. In the United States, there are 60,000 to 170,000 patients with MDS and 15,000 to 20,000 new cases of MDS reported each year. MDS predominantly affects older adults, with approximately 75% of patients aged 60 years or older at diagnosis. Median survival ranges from approximately nine years for very low-risk patients to less than a year for high-risk patients.

Cytopenias in MDS are caused by defects occurring across the various stages of hematopoiesis, from the self-renewal of progenitor cells to differentiation in early through terminal stages. Anemia is the most frequent consequence of ineffective hematopoiesis in patients with MDS due to low red blood cell production, and impacts 90% of MDS patients, with approximately 40% becoming transfusion dependent. Another consequence is thrombocytopenia, a deficiency of platelets in the blood, which is impaired blood clotting that can cause bleeding. The prevalence of thrombocytopenia in patients with MDS has been reported at 40% to 65%. A deficiency of neutrophils in the blood, or neutropenia, also increases the risk of serious infections in patients with MDS and has been reported to affect approximately 20% of patients with MDS.




To guide decisions on risk stratification and the treatment of patients with MDS, clinicians typically use the International Prognostic Scoring System-Revised, or the IPSS-R. The IPSS-R incorporates information on bone marrow blast percentage, karyotype and presence and severity of cytopenias in order to classify patients with MDS into groups based on the risk of progression to acute myeloid leukemia, ranging from very low-risk to high-risk. Patients are further classified into high transfusion burden and low transfusion burden categories based on the number of units of transfused red blood cells they receive.

A second classification system is the World Health Organization, or WHO, system, which is based on a combination of morphology, immunophenotype, genetics and clinical features. The WHO classification system includes a subgroup of patients with MDS that show the presence of iron deposits around the mitochondria, known as ring sideroblasts. These patients are commonly referred to as RS positive and comprise approximately 15% of incident patients with MDS, and splicing factor mutations, such as *SF3B1*, are highly correlated with these patients. Patients with splicing factor mutations often have been observed to have defects in the differentiation of red blood cells at the terminal stage. The majority of patients with MDS that develop cytopenias lack ring sideroblasts or a single, defining splicing factor mutation and are termed non-RS. These non-RS patients have differentiation and maturation defects occurring across the spectrum from early through terminal stages of hematopoiesis.

*Limitations of Current Treatment Options for Cytopenias in Patients with MDS*

Patients with MDS-associated anemia are generally treated with red blood cell transfusions and erythropoiesis-stimulating agents, or ESAs, which are not approved for such treatment. The current treatment of MDS-associated thrombocytopenia is platelet transfusions and platelet-stimulating agents.

Severe cytopenia and transfusion dependence are independent predictors of poor prognosis for patients with MDS and are inversely correlated with quality of life. Red blood cell and platelet transfusions provide temporary benefits to patients with MDS, but are associated with both acute and chronic health risks, including risk of bacterial infection and allergic reactions to the donor blood, and place a significant burden on both the patient and the healthcare system. Repeated red blood cell transfusions are also associated with iron overload, further exacerbating damage to the bone marrow and increasing the risk of acute myeloid leukemia progression and cardiovascular disease. Additionally, the benefit from a platelet transfusion is typically short-lived and availability is limited. Platelet-stimulating agents for the treatment of thrombocytopenia, which are not currently indicated for MDS, carry the risk of thromboembolic events and bone marrow fibrosis.

ESAs are a class of drugs that work on the proliferation stage of red blood cell development by expanding the pool of early-stage progenitor cells. While ESAs have been shown to alleviate anemia in a subset of patients with MDS, patients that have elevated endogenous erythropoietin levels are unlikely to respond. In two controlled Phase 3 clinical trials evaluating darbepoetin alfa (Aranesp) and epoetin alpha (Epogen/Procrit) for the treatment of MDS-associated anemia, 15% to 31% of patients responded, respectively. However, this response was limited to patients with low endogenous erythropoietin levels at baseline and to patients who had a low transfusion burden at baseline. These treatment options also represent a significant burden to patients; epoetin alpha must be administered up to three times a week. Additionally, the effect of ESAs is limited to the red blood cell lineage and, therefore, ESAs only treat MDS-associated anemia and do not provide benefit to cytopenia of other cell lineages, including thrombocytopenia and neutropenia.

Reblozyl, a TGF-ß-based erythroid maturation agent, is designed to promote the terminal differentiation of red blood cells through inhibition of selected endogenous TGF-ß superfamily ligands. The characteristics of response were defined in a Phase 2 clinical trial of Reblozyl in patients with MDS. Consistent with the mechanism of Reblozyl on the terminal stages of erythropoiesis, the majority of responders were determined to have an *SF3B1* splicing factor mutation. Additionally, the responders were characterized as having increased erythroid progenitor cells in the bone marrow, while patients with fewer erythroid progenitor cells in the bone marrow did not achieve hematological improvement. We believe this indicates that Reblozyl is limited to its effect on terminal differentiation of erythropoiesis and does not affect the early stages of differentiation.

Reblozyl received approval from the U.S. Food and Drug Administration, or the FDA, in April 2020 for the treatment of anemia in adult RS positive patients with very low- to intermediate-risk MDS that failed an erythropoiesis stimulating agent and required two or more units of red blood cells over eight weeks. The approval was based on a single Phase 3 clinical trial of Reblozyl that was conducted in RS positive, very low- to intermediate-risk patients with MDS. This trial included both patients with low transfusion dependence requiring fewer than four units of red blood cells over eight weeks and patients with high transfusion dependence requiring four or more units of red blood cells over eight weeks. In this trial, 37.9% of the RS positive patients treated with Reblozyl achieved the primary endpoint of transfusion independence, compared to 13.2% of patients that received placebo. The highest proportion of responders to Reblozyl were those with low transfusion dependence, while only a few high transfusion burden patients achieved transfusion independence despite being RS positive patients. The FDA also approved Reblozyl in August 2023 for the treatment of anemia without previous erythropoiesis stimulating agent use (ESA-naïve) in adult patients with very low- to intermediate-risk MDS who may require regular red blood cell transfusions.

Additionally, the FDA approved imetelstat (RYTELO) for the treatment of adult patients with low- to intermediate-1 risk MDS with transfusion-dependent anemia requiring four or more red blood cell units over eight weeks who have not responded to or have lost response to or are ineligible for erythropoiesis-stimulating agents.

We believe that additional treatment options will be needed to address anemia in the heterogeneous non-ring sideroblast MDS population, to provide clinical benefit to the RS positive population regardless of transfusion burden and to address other cytopenias, such as thrombocytopenia.

Elritercept is designed to alter TGF-ß signaling pathways at multiple stages of hematopoietic differentiation in both red blood cells and platelets. Consequently, we believe elritercept has the potential to provide therapeutic benefit in a broader subset of patients with MDS that have varying defects in commitment, differentiation and maturation of multiple cell types found in blood.

*Myelofibrosis*

Myelofibrosis is a group of rare cancers of the bone marrow in which the marrow is replaced by scar tissue and is not able to produce healthy blood cells. As a result, the spleen begins to produce cells to compensate for this ineffective hematopoiesis, which ultimately causes the spleen to enlarge. Myelofibrosis is characterized by ineffective hematopoiesis, an enlarged spleen, bone marrow fibrosis and shortened survival. Patients often experience multiple disease-associated and treatment-emergent cytopenias, including anemia and thrombocytopenia.

The ineffective hematopoiesis in myelofibrosis is driven by molecular abnormalities in the Janus kinase 2, or JAK2, -signal transducers and activators of transcription, or JAK-STAT, signaling pathway of transcriptional activators. Specifically, JAK2 activation leads to proliferation of red blood cell progenitors and platelet progenitors, or megakaryocytes, that fail to mature to platelets. Additionally, megakaryocyte dysplasia/hyperplasia has been implicated in inducing bone marrow fibrosis in patients with myelofibrosis. The inability of megakaryocytes to fully differentiate leads to the release of pro-inflammatory and pro-fibrotic factors that results in scarring of the bone marrow, which further exacerbates the myelofibrosis-associated cytopenias.

Myelofibrosis is a relatively rare condition with an identified prevalence of 16,000 to 18,500 patients in the United States. Approximately 3,000 new patients are diagnosed with myelofibrosis each year, and the median age at diagnosis is approximately 60 years. Currently, there are limited therapeutic options to address the myelofibrosis-associated cytopenias. Within a year of diagnosis, 38% of patients with myelofibrosis are red blood cell transfusion dependent and eventually nearly all will develop transfusion dependence. Additionally, within a year of diagnosis, 26% of patients with myelofibrosis will develop thrombocytopenia and 51% will develop anemia.

*Limitations of Current Treatment Options for Cytopenias in Patients with Myelofibrosis*

Currently approved products for the treatment of myelofibrosis, including JAK inhibitors ruxolitinib (Jakafi), fedratinib (Inrebic) and pacritinib (Vonjo), have been observed to exacerbate myelofibrosis-associated cytopenias. In a third-party Phase 3 clinical trial of Jakafi and a third-party Phase 3 clinical trial of Inrebic, treatment led to significant reductions in spleen volume and improvement in total symptom scores. However, JAK inhibitors interfere with normal hematopoiesis and treatment with Jakafi and Inrebic also resulted in clinically significant anemia and thrombocytopenia in these Phase 3 trials. Approximately 45% of patients in the Phase 3 clinical trial of Jakafi developed treatment-related grade 3 or 4 anemia. Grade 3 or higher adverse events of anemia and thrombocytopenia were observed in approximately 34% and 12%, respectively, of patients evaluated in the Phase 3 clinical trial of Inrebic. The treatment-related cytopenias led to severe complications, dose reductions and reduced compliance.

In September 2023, momelotinib (Ojjaara) received approval from the FDA for the treatment of intermediate or high-risk myelofibrosis in adults with anemia. In a third-party Phase 3 clinical trial of Ojjaara versus danazol in patients with myelofibrosis who were symptomatic and anemic and had been previously treated with an approved JAK inhibitor, 25% in the Ojjaara arm achieved the primary endpoint of total symptom score reduction of at least 50%, compared to 9% in the danazol arm. Additionally, 31% in the Ojjaara arm achieved the secondary endpoint of transfusion independence, compared to 20% in the danazol arm. In a separate third-party Phase 3 clinical trial of Ojjaara versus ruxolitinib in JAK-naïve patients, in the subset of patients with anemia, a numerically lower percent of patients treated with Ojjaara (25%) achieved a total symptom score reduction of 50% or more at Week 24 compared with ruxolitinib (36%). In this trial, similar reductions in spleen volume reduction were observed with both Ojjaara (31%) and ruxolitinib (33%).

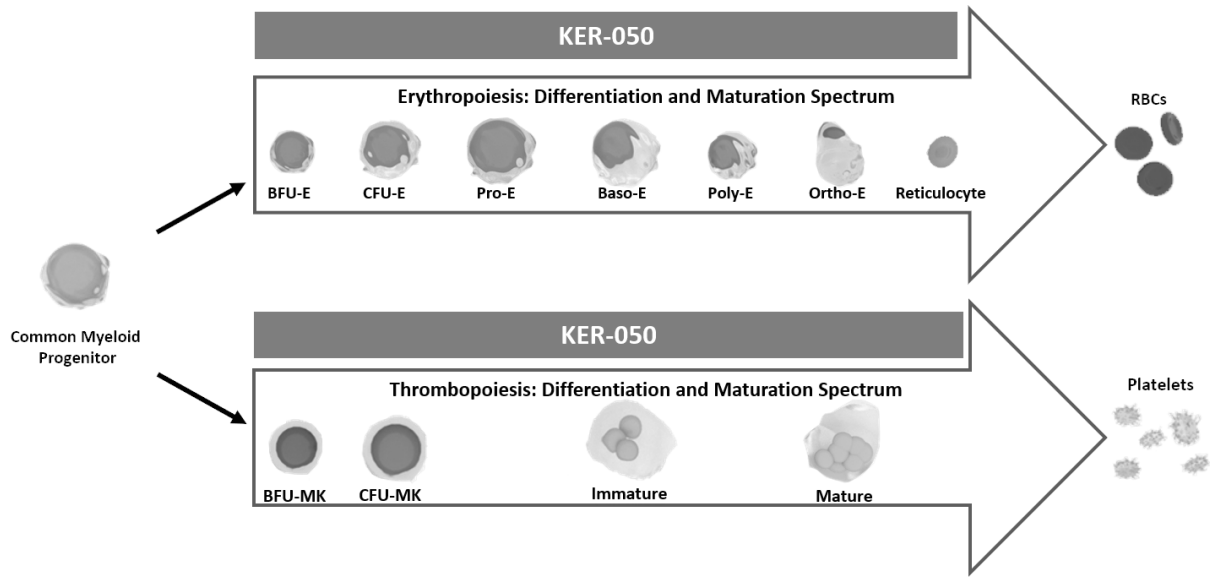
We believe elritercept has the potential to not only ameliorate myelofibrosis-associated cytopenias, but also improve spleen volume and patient-reported outcomes, alone or in combination with approved products regardless of the underlying mechanism of action of such products, including JAK inhibitors and Ojjaara.

*Our Solution: Elritercept*

Elritercept is a ligand trap comprised of a modified ligand-binding domain of ActRIIA that is fused to the portion of the human antibody known as the Fc domain. Elritercept is designed to bind to and inhibit the signaling of TGF-ß ligands involved in the regulation of hematopoiesis, including activin A, activin B and growth differentiation factor 11, that restrict blood cell progenitors from continuing through differentiation and developing into mature cells with specialized function. The elritercept-mediated inhibition of these regulators has been shown in preclinical studies to stimulate the progenitors to progress to maturation and, consequently, increase the number of mature cells in the blood.

Data from our Phase 1 clinical trial in healthy volunteers and our two ongoing Phase 2 clinical trials, one in patients with MDS and one in patients with myelofibrosis, also demonstrate that treatment with elritercept increased red blood cell and platelet production. These data indicate that elritercept is differentiated from available therapies because it appears to have both sustained and rapid effects on multiple cellular lineages in the hematopoietic pathway. We believe elritercept's promotion of differentiation of early- and terminal-stage progenitor cells contributes to these sustained and rapid effects, respectively, and consequently, elritercept may be effective for many patients that are refractory to available therapies and may potentially provide benefit in multiple cytopenias simultaneously.

**Mechanism of Action of Elritercept**




Consistent with our preclinical studies, which showed improvement in bone health, we observed an increase in bone-specific alkaline phosphatase, a biomarker of bone remodeling, in our Phase 1 clinical trial in healthy volunteers and our ongoing Phase 2 clinical trial in patients with MDS, following administration of elritercept. Based on these data, we believe elritercept also has the potential to regenerate a healthy bone marrow and slow disease progression.

Separately, in a preclinical study in wild type mice, treatment with ruxolitinib resulted in reductions in red blood cells, hemoglobin and hematocrit, recapitulating the anemia observed in myelofibrosis patients. Administration of RKER-050, a mouse version of elritercept, reversed the observed ruxolitinib-associated reductions in the red blood cell parameters, which we believe supports the potential of elritercept to mitigate the dose-limiting effects of ruxolitinib and enhance the duration of therapy in myelofibrosis patients.

We intend to develop elritercept for the treatment of both MDS- and myelofibrosis-associated cytopenias. We believe elritercept has the potential to overcome limitations of current treatment options for MDS- and myelofibrosis-associated cytopenias. We believe the potential advantages of elritercept compared to current treatment options include:

- *Dual mechanism affecting both the early and terminal stages of erythropoiesis.* Patients with MDS can have defects occurring anywhere along the differentiation and maturation spectrum of erythropoiesis, and often have multiple mutations that cause ineffective erythropoiesis. By acting on cell types throughout the erythropoiesis pathway, elritercept may lead to robust responses in RS positive patients who have a characteristic defect in terminal maturation, and may also address anemia in the broader MDS population, including non-RS patients, that has defects in earlier-stage erythroid cell development. Specifically related to red blood cells, we have demonstrated in multiple preclinical studies that administration of RKER-050 elicited increases in red blood cell production in healthy mice by stimulating multiple stages in the maturation of erythroid precursors. The rapid and sustained increase in red blood cells observed in these preclinical studies suggests that RKER-050 potentially stimulated both terminal maturation of late-stage erythroid precursors to rapidly increase red blood cells and maturation of early-stage precursor populations to increase the pool of progenitors that can be mobilized for a sustained upregulation of erythropoiesis. Additionally, by increasing the pool of early erythroid precursor cells and serum erythropoietin, we believe elritercept can potentially treat patients with MDS that have hypocellular bone marrow. We have also observed an increase in erythropoietin in healthy mice in preclinical studies of RKER-050, which we believe could contribute to the durability in red blood cell production and is supportive of the durability of the red blood cell increase we observed in our Phase 1 clinical trial of elritercept in healthy post-menopausal women.
- *Increased platelet counts in blood.* Ineffective hematopoiesis in patients with MDS and in patients with myelofibrosis can result in thrombocytopenia, which can lead to an increased risk of bleeding events. We believe treatment with elritercept has the potential to address the MDS- and myelofibrosis-associated thrombocytopenia. Additionally, by promoting thrombopoiesis, we believe elritercept has the potential to aid the differentiation of megakaryocytes to platelets in myelofibrosis patients and reactivate hematopoiesis in the bone marrow. We have demonstrated in preclinical studies that treatment with a single dose of RKER-050 resulted in rapid and sustained increases in platelets in healthy mice. We observed an increase in platelets 12 hours after administration of RKER-050, which we believe supports that elritercept can potentially promote production of platelets by blocking inhibitory TGF-ß ligands so that megakaryocytes can fully differentiate. Additionally, bone marrow analysis performed 24 hours post-dose demonstrated that administration of RKER-050 increased the megakaryocyte precursor population, and that these

cells had increased ploidy, compared to vehicle. These data suggest that RKER-050 promoted the maturation of early megakaryocyte populations and primed megakaryocytes for proplatelet production.

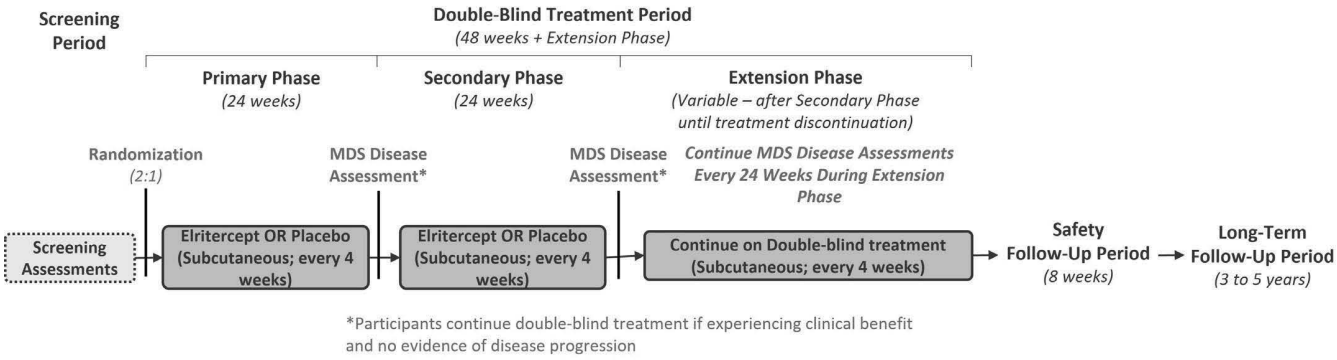
- *Reduced accumulation of progenitor cells.* Ineffective hematopoiesis in patients with MDS and in patients with myelofibrosis can be caused by excessive production of blood cell progenitors that are unable to complete differentiation and ultimately become mature blood cells. We believe treatment with elritercept will stimulate these progenitors to progress to maturation, ameliorating the accumulation of these cells that lead to MDS- and myelofibrosis-associated cytopenias.
- *Regeneration of the bone marrow microenvironment to potentially slow disease progression.* The bone marrow microenvironment is composed of bone cells, stromal cells, immune cells, blood vessels and nerves. Crosstalk in this osteo-hematopoietic niche determines the maintenance, self-renewal and eventual differentiation of hematopoietic stem cells and progenitor cells to blood cells. Accordingly, a disease-impacted bone marrow microenvironment contributes to ineffective hematopoiesis and bone loss. In a preclinical study, administration of RKER-050 in a mouse model of MDS prevented the anemia and bone loss observed in the vehicle-treated MDS mice. We believe these data support the potential of elritercept to alter the bone marrow microenvironment that is supportive of self-renewal and maintenance of normal hematopoietic stem cells and progenitor cells in patients with MDS and other hematological diseases, including myelofibrosis.
- *Robust and sustained increase in red blood cells, hemoglobin and reticulocytes, supporting monthly or less frequent dosing.* ESAs can require dosing up to three times a week. We believe that treatment with elritercept has the potential to reduce the frequency of dosing to every four weeks or less frequently, thereby decreasing the burden on patients and potentially improving compliance.

In December 2024, we entered into an exclusive license agreement with Takeda to further develop, manufacture and commercialize elritercept worldwide outside of mainland China, Hong Kong and Macau, which became effective on January 16, 2025. See the section titled “Business—Collaborations and License Agreement—2024 License Agreement with Takeda Pharmaceuticals U.S.A., Inc.” set forth in Part I, Item 1 of this Annual Report on Form 10-K for additional information regarding our license agreement with Takeda.

*Ongoing Phase 3 Clinical Trial in Patients with Myelodysplastic Syndromes*

In December 2024, we initiated a global, multicenter, double-blind, randomized, placebo-controlled Phase 3 clinical trial to evaluate the efficacy and safety of elritercept versus placebo in patients with transfusion-dependent anemia with lower-risk MDS, which we refer to as the RENEW trial. The primary endpoint is the proportion of patients achieving transfusion independence for at least eight weeks from baseline through week 24. A key secondary endpoint is the proportion of patients achieving transfusion independence for at least 24 weeks from baseline through week 48. The trial design is summarized in the figure below.

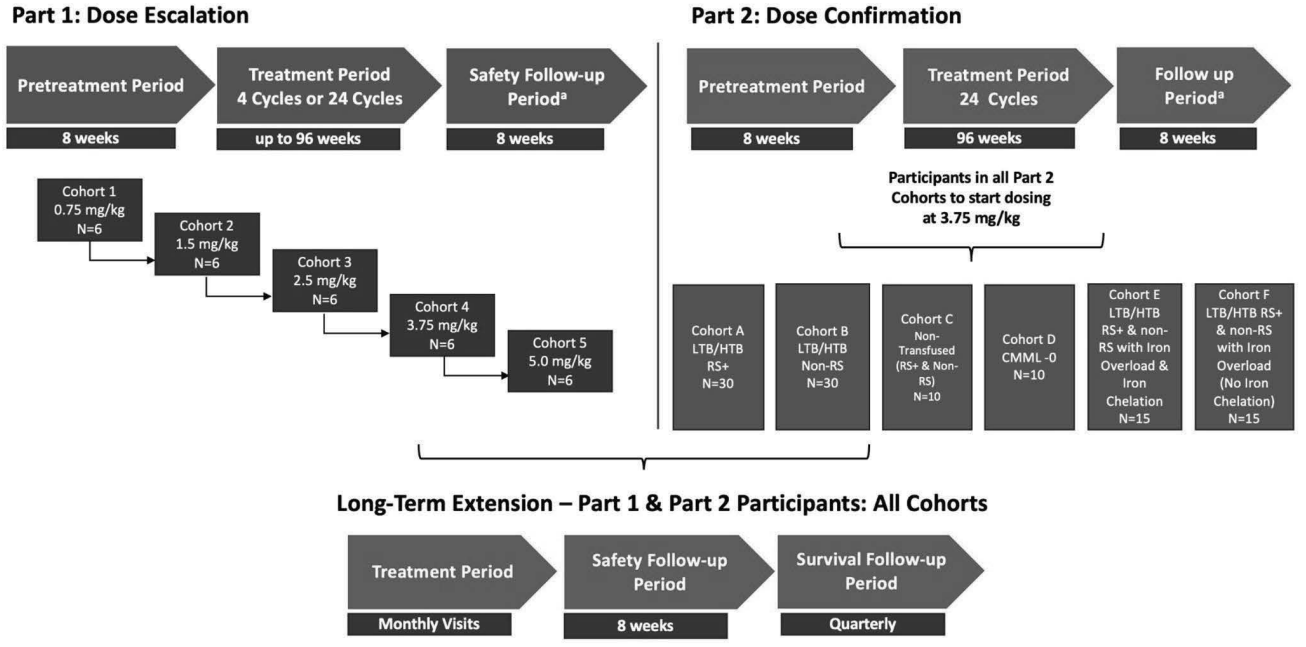
**Phase 3 Clinical Trial Design**




*Ongoing Phase 2 Clinical Trial in Patients with Myelodysplastic Syndromes*

We are conducting an open label, two-part, multiple ascending dose Phase 2 clinical trial to evaluate elritercept in patients with lower-risk MDS who either have or have not previously received treatment with an ESA. The primary objective of this trial is to assess the safety and tolerability of elritercept in patients with MDS that either have ring sideroblasts, or RS positive, or do not have ring sideroblasts, or non-RS. The primary objective of Part 2 of this trial is confirmation of the safety and tolerability of the selected dose levels. The secondary objectives of this trial are to evaluate the pharmacokinetics, pharmacodynamics and efficacy of elritercept. The trial design is summarized in the figure below.

**Phase 2 Clinical Trial Design**




CMML: chronic myelomonocytic leukemia

Elritercept is being administered to patients subcutaneously once every four weeks. In Part 2, the dose confirmation portion of the trial, an identical dosing schedule was followed, and patients initiated treatment at a starting dose of 3.75 mg/kg, the recommended Part 2 dose, or RP2D, with the opportunity to dose escalate to 5.0 mg/kg or to down-titrate based on individual titration rules. Following completion of Part 1, eligible patients were given the opportunity to escalate up to the RP2D and receive long-term treatment with elritercept for up to an additional 20 cycles, which we refer to as the Part 1 Extension.

In December 2024, we presented additional data from this ongoing trial at the 66th American Society of Hematology, or ASH, Annual Meeting and Exposition. As of August 30, 2024, which was the data cut-off date, 95 patients had received at least one dose of elritercept at RP2D, which we refer to as the safety population. 87 of these patients had completed at least 24 weeks of treatment or discontinued as of the data cut-off date, which we refer to as the $mITT_{24}$ patients. Data for hematological response and markers of hematopoiesis were presented from exploratory analyses of these $mITT_{24}$ patients.

Of the 95 patients in the safety population, 60.0% (n=57) had high transfusion burden, or HTB, while 24.2% (n=23) had low transfusion burden, or LTB, and 15.8% (n=15) were non-transfused, or NT.

Elritercept was generally well tolerated as of the data cut-off date. There were four cases of fatal treatment-emergent adverse events, or TEAEs, in the trial that were all determined to be unrelated to treatment. The most commonly reported TEAEs (in ≥15% of patients) were diarrhea, fatigue, COVID-19, dyspnea, dizziness, anemia, nausea and epistaxis. One patient had progressed to acute myeloid leukemia as of the data cutoff date.

As of the data cut-off date, 55.2% (n=48/87) of the $mITT_{24}$ patients achieved an overall erythroid response over the first 24 weeks of treatment, which is defined as meeting either modified International Working Group 2006 Hematological improvement-erythroid, or HI-E, or transfusion independence, or TI, for at least eight weeks in transfusion-dependent patients who required ≥ 2 red blood cell units transfused at baseline. The median duration of transfusion independence was 134.1 weeks. Due to ongoing TI responses as of the data cutoff date, the median duration of TI is expected to change as data continues to accumulate. 48.1% (n=13/27) of patients with a TI response had ongoing TI as of the data cutoff date, of which 92.3% (n=12/13) had ongoing TI for greater than 52 weeks.

Additional data from the $mITT_{24}$ patients, as of the data cut-off date, include:

- 39.1% (n=27/69) of the TI-evaluable patients achieved TI for at least eight weeks over the first 24 weeks of treatment.
- Of the patients with HTB, 31.4% (n=16/51) achieved TI for at least eight weeks during the first 24 weeks of treatment. Eight of those 16 patients (50.0%) achieved TI for at least 24 weeks over the first 48 weeks of treatment.

Studies in mainly lower-risk-MDS patients suggest that the majority (~90%) of patients have serum erythropoietin levels less than 500 U/L. Additionally, erythropoietin levels of ≥ 500 U/L are associated with lower erythroid response rates across

multiple treatments. Accordingly, we evaluated a subset of transfusion-dependent $mITT_{24}$ patients with a baseline erythropoietin level less than 500 U/L (n=55), and observed the following, as of the data cut-off date:

- 47.3% (n=26/55) achieved TI for at least eight weeks over the first 24 weeks of treatment.
- Of the $mITT_{24}$ patients with baseline erythropoietin level less than 500 U/L and HTB, 38.5% (n=15/39) achieved TI for at least eight weeks over the first 24 weeks of treatment.

The FACIT-Fatigue scale, a measure of self-reported fatigue and its impact upon daily activities and function, was utilized to assess health-related quality of life, including in a subgroup of patients (n=17) achieving TI for at least 24 weeks over the first 48 weeks of treatment. Patients in this subgroup showed clinically meaningful improvements in quality of life, and meaningful improvements in FACIT-Fatigue were observed early and generally continued to improve over time in patients with more durable TI responses.

The majority of patients enrolled in this ongoing trial had HTB and/or multi-lineage dysplasia, indicating a difficult-to-treat trial population. Durable TI responses continued to be observed in a broad range of patients with lower-risk MDS, including in those with HTB, which support the potential for elritercept to ameliorate ineffective hematopoiesis across multiple lineages in patients with MDS.

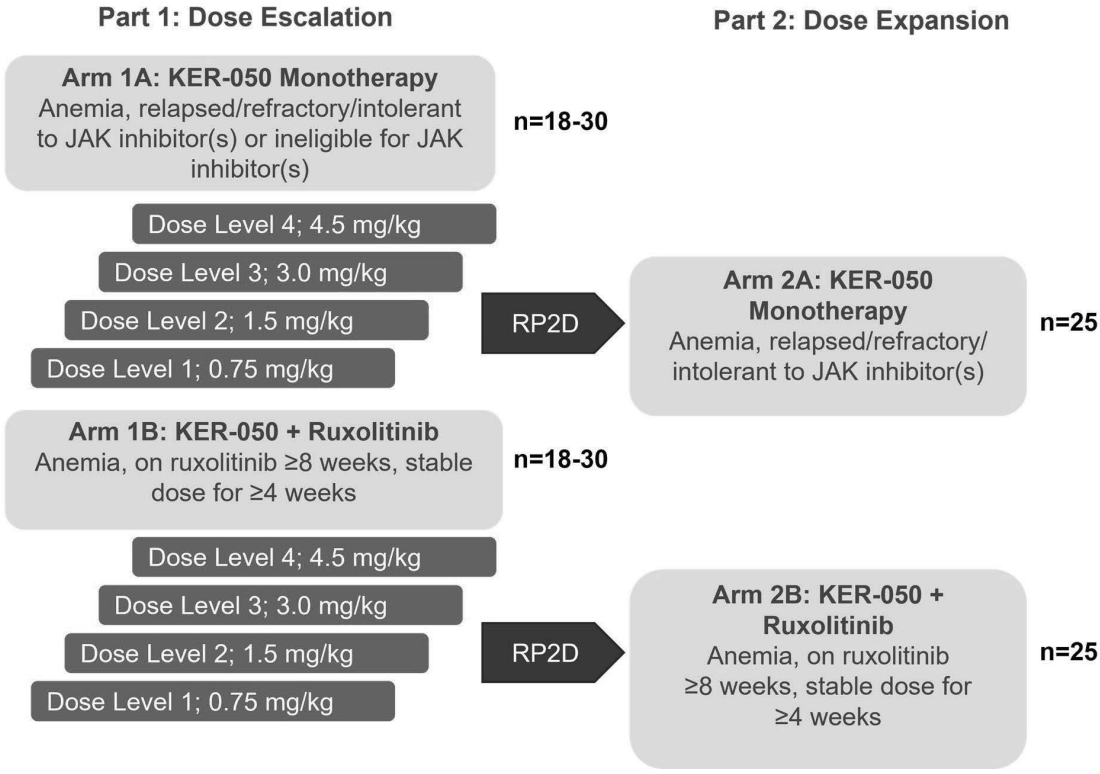
In a subgroup analysis of patients that were NT at baseline, treatment with elritercept showed:

- Robust hematological responses observed with 93.3% (n=14/15) of NT patients having an increase greater than 1.0 g/dL and 86.7% (n=13/15) having an HI-E response.
- Durable HI-E responses observed with elritercept treatment with 100% (n=13/13) achieving a continuous response duration of greater than 24 weeks and 76.9% (n=10/13) achieving a cumulative response duration greater than 52 weeks.
- Sustained and durable increases in hemoglobin and soluble transferrin receptor, a marker of erythropoietic activity, were observed in NT participants.
- Overall improvement in mean platelet and neutrophil counts along with decreases in mean ferritin and hepcidin were observed after only one dose and were generally maintained through 48 weeks, demonstrating that elritercept has the potential to address ineffective hematopoiesis across multiple lineages and improve iron utilization and reduce inflammation.
- NT patients achieved meaningful improvements in FACIT-Fatigue scores, with improvements seen early, generally within the first two treatment cycles.

*Ongoing Phase 2 Clinical Trial in Patients with Myelofibrosis-Associated Cytopenias*

We are conducting an open label, two-part, multiple ascending dose Phase 2 clinical trial to evaluate elritercept as a monotherapy and in combination with ruxolitinib in patients with myelofibrosis-associated cytopenias. The primary objective of this trial is to assess the safety and tolerability of elritercept in patients with myelofibrosis-associated cytopenias. The primary objective of Part 2 of this trial is confirmation of the safety and tolerability of the selected dose levels. The secondary objectives of this trial are to evaluate the pharmacokinetics, pharmacodynamics and efficacy of elritercept administered with or without ruxolitinib. The trial design is summarized in the figure below.

**Phase 2 Clinical Trial Design**




In December 2024, we presented additional data from this ongoing trial at the 66th ASH Annual Meeting and Exposition.

Safety data were presented for all patients that received at least one dose of elritercept (n=73) as of the August 30, 2024 data cutoff date. Evaluations of markers of hematopoiesis and anemia over 12 weeks, along with measurements of spleen volume and symptom scores (by the Myelofibrosis-Symptom Assessment form-Total Symptom Score, or MF-SAF-TSS) over 24 weeks, were presented for dose levels 1 through 4 in Part 1 and the RP2D, ranging from 0.75 mg/kg to 5.0 mg/kg, which we refer to as the efficacy evaluable patients. Enrollment of Part 1 of the trial, the dose escalation portion, is complete. Part 2, the dose expansion portion, is enrolling with an RP2D of 3.75 mg/kg with the option to up-titrate to 5.0 mg/kg.

Elritercept was generally well tolerated by the safety population as of the data cut-off date. There were six cases of fatal TEAEs in the trial that were each deemed unrelated to treatment. The most commonly reported TEAEs (in ≥15% of patients) were thrombocytopenia and diarrhea. The majority of treatment-related TEAEs were mild to moderate, with 12 patients experiencing Grade 3 or higher treatment-related TEAEs of thrombocytopenia. 93.3% (n=14/15) of patients with a TEAE of thrombocytopenia had baseline platelets below 150 x $10^9$/L.

Additional data from the efficacy evaluable patients as of the data cut-off date include:

- Increases in hemoglobin were observed in 82.8% (n=24/29) of evaluable non-transfusion dependent patients in both arms over a 12-week period within the first 24 weeks, suggesting that elritercept has the potential to address anemia due to MF and ruxolitinib-associated anemia.
- 63.4% (n=26/41) of patients that received at least three red blood cell units per 12 weeks at baseline in both arms and all dose levels tested showed reductions in transfusion burden over 12 weeks within the first 24 weeks. 24.4% (n=10/41) of the patients who showed reductions in transfusion burdens achieved TI.
  - Additionally, within the subgroup of these patients in the combination arm who received a starting dose of 3.0 mg/kg of elritercept or higher, 62.5% (n=10/16) had reductions of 50% or greater, and 37.5% (n=6/16) achieved TI.
- At week 24, reduction in spleen volume was observed in 40% (n=8/20) of patients with baseline spleen size ≥ 450 $cm^3$ and a week 24 spleen assessment, including three patients who had reductions of 35% or greater. Reductions in spleen volume in the combination arm generally occurred without an increase in ruxolitinib dose.
  - For evaluable patients in the combination arm with a starting dose of 3.0 mg/kg of elritercept or higher, 88% (n=7/8) had some reduction in spleen size at week 24.
- At week 24, reduction in disease symptoms was observed in 66.7% (n=18/27) of patients with at least two symptoms with an average score ≥ 3 or an average total score of ≥ 10 on the MF-SAF-TSS questionnaire at baseline and a week 24 MF-SAF-TSS assessment. Five patients had reductions of at least 50%, including three in the monotherapy arm and two in the combination arm.

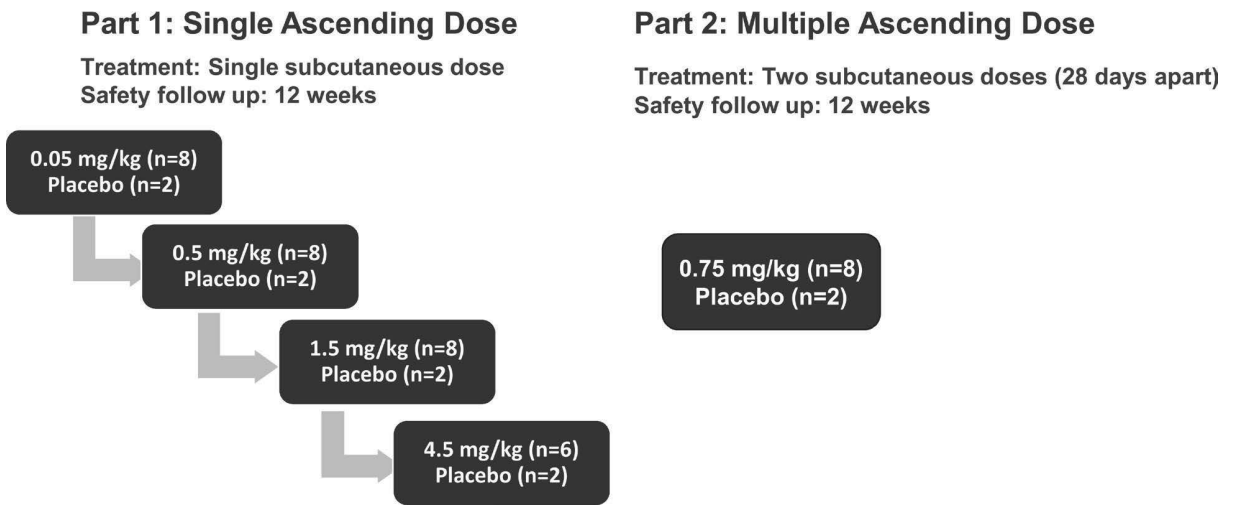
The data support the potential of elritercept to ameliorate ineffective hematopoiesis and address cytopenias due to myelofibrosis and associated with ruxolitinib, and provide broader clinical benefit in patients, as supported by the observed reduction in spleen volume and improvement in total symptom scores.

*Completed Phase 1 Clinical Trial*

In January 2020, we completed a randomized, double-blind, placebo-controlled, two-part, dose-escalation Phase 1 clinical trial of elritercept in 48 healthy post-menopausal women. The primary objectives of this trial were safety, tolerability and pharmacokinetics. We also investigated changes in hematology and bone biomarkers in this clinical trial.

In Part 1 of this trial, 30 subjects received a single dose of elritercept and eight subjects received a single dose of placebo, each administered subcutaneously with a 12-week safety follow-up. The subjects were enrolled in sequential single-ascending dose escalation cohorts of up to ten subjects each. In Part 2 of this trial, eight subjects received elritercept and two received placebo, administered subcutaneously, on two occasions 28 days apart, with a 12-week safety follow-up after the second dose. In Part 2 of this trial, only one dose level was evaluated, as it was deemed to provide the necessary data, in addition to that from Part 1 of the trial, to inform the design of the Phase 2 clinical trials of elritercept in patients with MDS and in patients with myelofibrosis.

The trial design is summarized in the figure below.




*Observed tolerability data*

Elritercept was well tolerated in this Phase 1 clinical trial at dose levels up to 4.5 mg/kg, the highest dose level tested, and multiple doses of 0.75 mg/kg. While one subject in the placebo group withdrew consent, there were no discontinuations due to treatment-related adverse events. No treatment-related serious adverse events were reported. The most common adverse events observed in subjects in this trial were nausea, gastroenteritis, injection site erythema and, consistent with the mechanism of action of elritercept, increased hemoglobin and hypertension. The reversible, mild hypertension events were observed in subjects with an approximately 3 g/dL increase in hemoglobin.

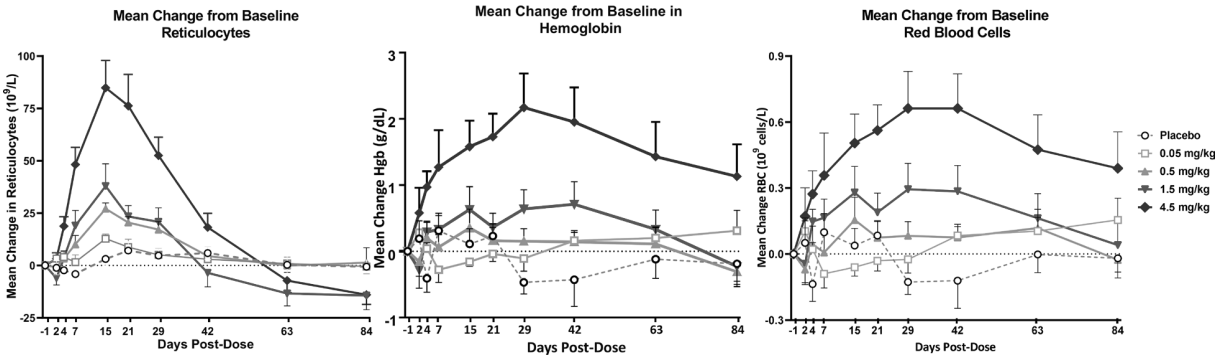
*Long half-life observed, potentially supporting monthly or less frequent dosing*

We observed that elritercept drug levels were dose proportional in Part 1 of this trial, with a mean half-life of approximately ten to 12 days. The half-life coupled with the pharmacodynamic effect observed in the hematologic parameters support the potential for administration of monthly or less frequent dosing, which we believe will decrease the burden on patients and improve compliance.

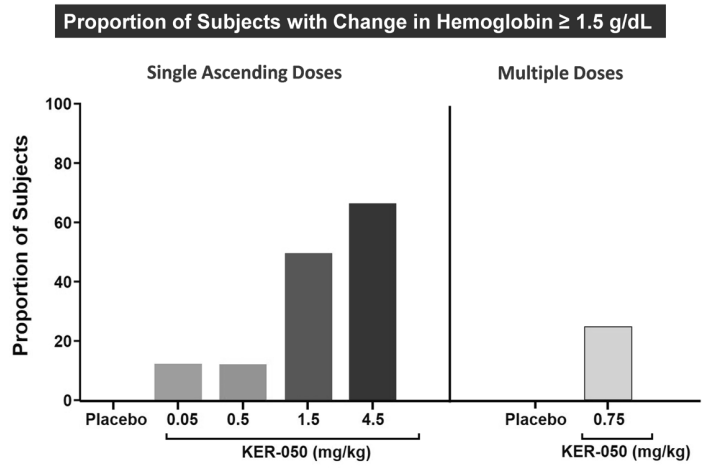
*Rapid and sustained increases in mean reticulocyte counts, hemoglobin, red blood cell counts and platelet counts observed*

In Part 1 of this trial, we observed rapid and sustained increases in mean reticulocyte counts, hemoglobin, red blood cell counts and platelet counts. Consistent with the underlying biology, increases in reticulocytes were observed early with increases of hemoglobin following thereafter. Increases in reticulocytes were observed as early as Day 2 and reached a peak

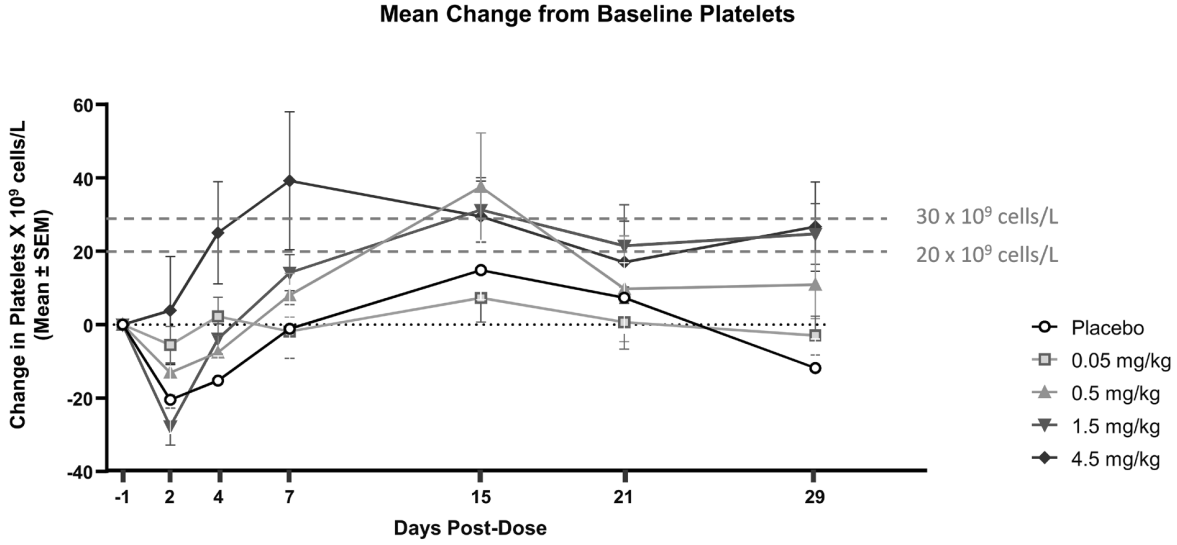
around Day 15. Increases in hemoglobin concentration were also observed as early as Day 2, reached a peak around Day 29 and remained elevated for several weeks.




We also observed a dose-dependent increase in the proportion of subjects with hemoglobin increases of at least 1.5 g/dL. We believe a 1.5 g/dL increase would be considered clinically meaningful in patients with low red blood cell counts.

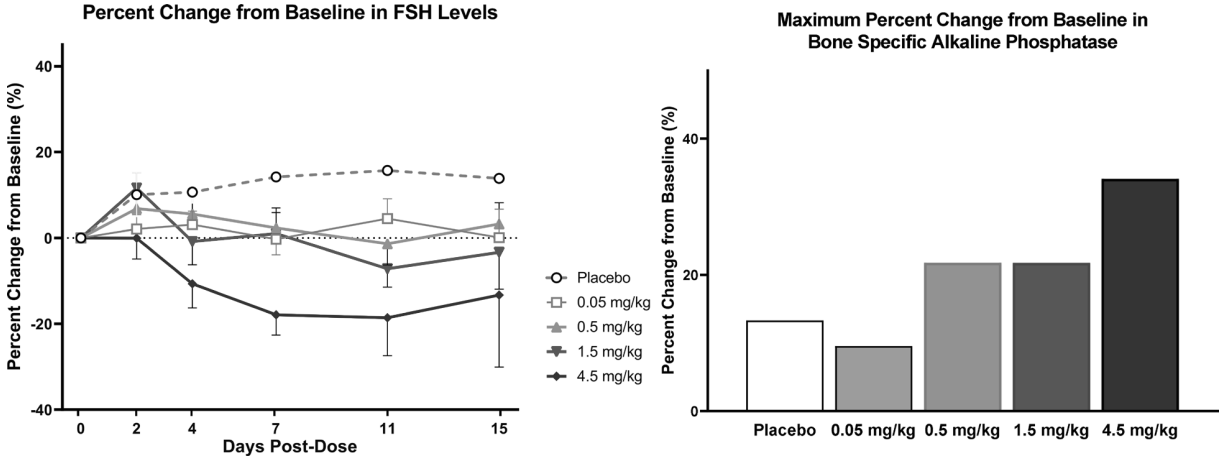



In addition to the changes in erythroid parameters, robust, dose-dependent increases in platelet count were observed after a single dose of elritercept. All subjects who received a 4.5 mg/kg dose of elritercept, the highest dose evaluated, demonstrated an increase of 30 x $10^9$ cells/L or greater at any one point in the trial, which we believe would be considered clinically meaningful in patients with low platelet counts.




We believe the rapid onset and durability of increased hemoglobin and platelet count observed in our Phase 1 clinical trial supports the potential for a dual effect of elritercept on both early-stage differentiation and terminal maturation.

Additionally, we observed reductions in follicle-stimulating hormone, a biomarker of activin inhibition, following administration of elritercept, which we believe is indicative of target engagement and activin inhibition. We also observed an increase in bone-specific alkaline phosphatase, a biomarker of bone remodeling, which we believe demonstrates that elritercept has the potential to increase bone mass.




We believe that the findings from this Phase 1 clinical trial demonstrate the translation of biological action from rodents to humans. We also believe that data from our preclinical studies and clinical trials support that treatment with elritercept has the potential to address ineffective hematopoiesis in diseases where multiple cytopenias arise from the blockage in progression of progenitor cells to mature blood cells, such as in MDS and myelofibrosis.

## Our Preclinical Pipeline

### *Our Proprietary Discovery Approach*

We believe, based on our previous experience with ActRII ligand traps using the endogenous and wild-type sequences, that observations in preclinical rodent models have the potential to translate to humans in the clinic. Specifically:

- Wild-type ActRIIA-Fc was associated with increased bone growth and red blood cell production in rodents and non-human primates. In a third-party clinical trial of ActRIIA-Fc, increased bone mineral density and red blood cell production was reported in healthy post-menopausal women. In this clinical trial, it was also reported that lower doses elicited the effect on red blood cells compared to bone, and thus, the dominant effect on red blood cell production prevented development in diseases with bone loss.
- In third-party preclinical studies in rodents and non-human primates, ActRIIB-Fc was associated with increased bone mineral density and lean muscle mass, but was not associated with changes in red blood cells. However, ActRIIB-Fc was also observed to cause nose and gum bleeding, which we believe is due to its effect of disrupting normal vascular remodeling. BMP9 signaling is required for normal vascular remodeling, but is not involved in regulation of muscle or bone tissues. ActRIIB-Fc potently inhibits BMP9 signaling, which is the mechanism behind the bleeding events observed with ActRIIB-Fc treatment.

We have developed a proprietary library of ActRII ligand traps by combining sequences from ActRIIA and ActRIIB. We have engineered molecules that are designed to have the therapeutic properties of either or both parent molecules without the dose-limiting effect on red blood cells observed with ActRIIA-Fc or the negative effect on blood vessels observed with wild-type ActRIIB-Fc. Our ActRII program has produced a broader pipeline of engineered ligand traps, and we currently have an expansive library of unique variants in preclinical development. These include:

- Molecules designed to increase bone mass without the dose-limiting effect on red blood cells observed with wild-type ActRIIA-Fc; and
- Molecules designed to increase muscle and bone mass with reduced BMP9 binding without impacting vascular remodeling that leads to weak blood vessels observed with the wild-type ActRIIB-Fc.

Our discovery approach has built on these initial observations to generate product candidates designed to target ActRII receptors without certain downsides observed in third-party preclinical studies and clinical trials of ActRIIA-Fc and ActRIIB-Fc.

We believe that we are well positioned to advance our product candidates and pursue the commercial opportunities in diseases where muscle and bone loss result in a debilitating impact on survival and quality of life, if our product candidates are successfully developed and approved. Our deep knowledge and expertise of the TGF-ß family of proteins provides a streamlined approach to screen and develop novel product candidates for hematological, pulmonary and cardiovascular disorders.

## Manufacturing

We rely, and expect to continue to rely for the foreseeable future, on third-party contract manufacturing organizations, or CMOs, to produce our product candidates for preclinical and clinical testing, as well as for commercial manufacture if our product candidates receive marketing approval. We require that our CMOs produce bulk drug substances and finished drug products in accordance with current Good Manufacturing Practices, or cGMPs, and all other applicable laws and regulations. We maintain agreements with our manufacturers that include confidentiality and intellectual property provisions to protect our proprietary rights related to our product candidates.

We have engaged CMOs to manufacture supply for preclinical and clinical use. Additional CMOs are used to label, package and distribute drug product for preclinical and clinical use. We obtain our supplies from these CMOs on a purchase order basis and do not have any long-term supply arrangements in place. We do not currently have arrangements in place for redundant supply. We could be unable to find alternative suppliers of acceptable quality, in the appropriate volumes and at an acceptable cost, if needed. As our development programs expand and we build new process efficiencies, we expect to continually evaluate this strategy with the objective of satisfying demand for registration trials and, if approved, the manufacture, sale and distribution of commercial products.

## Competition

The biotechnology and pharmaceutical industries are characterized by rapidly advancing technologies, intense competition and a strong emphasis on proprietary rights. While we believe that our product candidates, discovery programs, technology, knowledge, experience and scientific resources provide us with competitive advantages, we compete in the highly competitive markets and face significant competition from many sources, including pharmaceutical and biotechnology companies, as well as academic institutions, governmental agencies and private and public research institutions.

We compete in the segments of the biotechnology, pharmaceutical and other related industries that develop and market therapies in our target indications. There are many other companies, including large biotechnology and pharmaceutical companies, that have commercialized and/or are developing therapies for the same therapeutic areas that our product candidates target. For example, in March 2024, Merck & Co. Inc., or Merck, received FDA approval of its product, sotatercept (WINREVAIR), for the treatment of adults with PAH. In August 2024, Merck announced that the European Commission approved sotatercept for the treatment of adults with PAH. All of the other currently-approved therapies for PAH are vasodilators, which are medications that dilate blood vessels. Gossamer Bio, Inc. is developing seralutinib for the treatment of PAH.

Currently, patients with DMD are treated with corticosteroids to manage the inflammatory component of the disease. EMFLAZA (deflazacort) is an FDA-approved corticosteroid marketed by PTC Therapeutics, Inc. In October 2023, the FDA granted Agamree (vamorolone) approval in patients with DMD aged two years and older and Catalyst Pharmaceuticals, Inc. announced commercialization of this product in the United States in March 2024 following its North America exclusive license deal with Santhera Pharmaceuticals Holding AG. In addition, there are four FDA-approved exon skipping drugs: EXONDYS 51 (eteplirsen), VYONDYS 53 (golodirsen), and AMONDYS 45 (casimersen), which are phosphorodiamidate morpholino oligomers, or PMOs, approved for the treatment of patients with DMD who are amenable to exon 51, exon 53 and exon 45 skipping, respectively, and are marketed by Sarepta Therapeutics, Inc., or Sarepta, and VILTEPSO (vitolarsen), a PMO approved for the treatment of patients with DMD who are amenable to exon 53 skipping, which is marketed by Nippon Shinyaku Co. Ltd. Additionally, in June 2023, Sarepta announced that the FDA accelerated approval of its product, ELEVIDYS, an adeno-associated virus based gene therapy for the treatment of ambulatory pediatric patients aged 4 through 5 years with DMD with a confirmed mutation in the DMD gene. In June 2024, the FDA granted ELEVIDYS full approval for the treatment of ambulatory individuals aged four years and older, and accelerated approval for the treatment of non-ambulatory individuals aged four years and older.

In March 2024, Italfarmaco S.p.A. announced that the FDA approved Duvyzat (givinostat), a histone deacetylase inhibitor for the treatment of DMD in patients aged six years and older.

In addition, several companies are developing gene therapies to treat DMD, including Pfizer Inc., Audentes Therapeutics, Inc. and Solid Biosciences Inc. Gene editing treatments that are in preclinical development are also being pursued by Vertex Pharmaceuticals, Inc. and Sarepta. Additionally, Santhera Pharmaceuticals, in collaboration with ReveraGen Biopharma, Inc, is developing a steroid therapy for DMD, and Italfarmaco is developing a histone deacetylase (HDAC) inhibitor for DMD.

FibroGen Inc. and Astellas Pharma Inc. are developing product candidates for the treatment of anemia, and Merck, Bristol-Myers Squibb Company and Disc Medicine are developing product candidates targeting diseases associated with MDS and myelofibrosis, including chronic anemia. Additionally, in April 2020, Merck and Bristol-Myers Squibb Company received FDA approval of its product, Reblozyl, for the treatment of anemia failing an erythropoiesis stimulating agent and requiring two or more red blood cell units over eight weeks in adult patients with very low- to intermediate-risk MDS with ring sideroblasts or with myelodysplastic/myeloproliferative neoplasm with ring sideroblasts and thrombocytosis. In June 2020, Merck further announced that the European Commission approved Reblozyl for the treatment of transfusion-dependent anemia in adult patients with MDS or beta thalassemia and in September 2020, Merck announced that Health Canada approved Reblozyl for the treatment of adult patients with red blood cell transfusion-dependent anemia associated with beta thalassemia. In August

2023, Bristol-Myers Squibb Company announced that the FDA approved Reblozyl for the treatment of anemia without previous erythropoiesis stimulating agent use (ESA-naïve) in adult patients with very low- to intermediate-risk MDS who may require regular red blood cell transfusions. In April 2024, Bristol-Myers Squibb Company further announced that the European Commission expanded approval of Reblozyl to include treatment of adult patients with and without ring sideroblasts with transfusion-dependent anemia due to lower-risk MDS. In June 2024, Geron Corporation announced that the FDA approved imetelstat (RYTELO) for the treatment of adult patients with low- to intermediate-1 risk MDS with transfusion-dependent anemia requiring four or more red blood cell units over eight weeks who have not responded to or have lost response to or are ineligible for erythropoiesis-stimulating agents.

In March 2022, CTI BioPharma Corp. (which was acquired by Swedish Orphan Biovitrum AB in June 2023) received FDA accelerated approval of its product, pacritinib (Vonjo), for the treatment of adults with intermediate or high-risk primary or secondary (post-polycythemia vera or post-essential thrombocythemia) myelofibrosis with a platelet count below $50 \times 10^9$/L. In September 2023, GSK plc announced that the FDA approved its product, Ojjaara, for the treatment of intermediate or high-risk myelofibrosis, including primary myelofibrosis or secondary myelofibrosis (post-polycythaemia vera and post-essential thrombocythaemia), in adults with anemia. Additionally, MorphoSys AG (which was acquired by Novartis AG in July 2024) is also developing a product candidate as a treatment for myelofibrosis, and Incyte Corporation is developing an ALK2 inhibitor product candidate for the treatment of myelofibrosis. Geron Corporation is also developing imetelstat as a treatment for myelofibrosis.

Other companies that are developing product candidates that are designed to target the TGF-ß signaling pathways include Scholar Rock Holding Corporation, Biogen Inc. and Regeneron Pharmaceuticals, Inc.

Many of the companies against which we are competing or against which we may compete in the future, either alone or with their strategic collaborators, have significantly greater financial resources and expertise in research and development, manufacturing, preclinical testing, conducting clinical trials, obtaining regulatory approvals and marketing approved drugs than we do. Mergers and acquisitions in the biotechnology and pharmaceutical industries may result in even more resources being concentrated among a smaller number of our competitors. Smaller or early-stage companies may also prove to be significant competitors, particularly through collaborative arrangements with large and established companies or universities and research institutions. These competitors also compete with us in recruiting and retaining qualified scientific and management personnel and establishing clinical trial sites and enrolling patients for our clinical trials, as well as in acquiring technologies complementary to, or necessary for, our programs.

We could see a reduction or elimination of our commercial opportunity if our competitors develop and commercialize products that are safer, more effective, have fewer or less severe side effects, are more convenient or are less expensive than any products that we may develop. The availability of reimbursement from government and other third-party payors will also significantly affect the pricing and competitiveness of our products, if approved. 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 are able to enter the market.

### Collaborations and License Agreement

#### *2024 License Agreement with Takeda Pharmaceuticals U.S.A., Inc.*

In December 2024, we entered into a license agreement with Takeda, which became effective on January 16, 2025. Under the terms of the license agreement with Takeda, or the Takeda Agreement, we granted to Takeda the exclusive right to develop, manufacture and commercialize elritercept and certain derivative compounds globally, excluding the territories of mainland China, Hong Kong and Macau, which we refer to collectively as the Takeda Territory.

Pursuant to the terms of the Takeda Agreement, we received a $200.0 million upfront payment in February 2025. In addition to the upfront payment, we are entitled to receive up to an aggregate of (i) $370.0 million upon the achievement of specified development and commercial milestones and (ii) $740.0 million upon the achievement of specified sales milestones. If a licensed product is approved for marketing in the Takeda Territory, we will be entitled to receive royalty payments based on tiered increments of annual net sales in the Takeda Territory, with such percentage ranging from the low double-digits to high teens, subject to specified potential royalty reductions.

Takeda's obligation to pay royalties for a given licensed product in a given country in the Takeda Territory will begin on the date of the first commercial sale for such licensed product in such country and continue until the latest of (i) 10 years from the date of the first commercial sale for such licensed product in such region, (ii) the expiration of the last valid claim of certain licensed patents, and (iii) expiration of regulatory exclusivity in such region.

The Takeda Agreement will continue in force until the expiration of the royalty term. Takeda may terminate the Takeda Agreement (i) in its entirety or on a country-by-country basis for convenience, with notice or (ii) if Takeda reasonably determines that the development, manufacture, and commercialization of the licensed compound or licensed product pose a safety or public health risk. We may terminate the Takeda Agreement in its entirety in the event that Takeda or its affiliates bring a patent challenge. Either party may terminate the Agreement in its entirety (i) if the other party materially breaches the Takeda Agreement and fails to cure such breach; or (ii) upon the bankruptcy of the other party.

***2021 License Agreement with Hansoh (Shanghai) Healthtech Co., Ltd.***

In December 2021, we entered into a license agreement with Hansoh (Shanghai) Healthtech Co., Ltd., or Hansoh. Under the terms of the license agreement with Hansoh, or the Hansoh Agreement, we granted to Hansoh the exclusive right to develop, manufacture and commercialize elritercept and licensed products containing elritercept within the territories of mainland China, Hong Kong and Macau, which we refer to collectively as the Hansoh Territory.

In connection with the Hansoh Agreement, Hansoh will purchase clinical trial supply of elritercept from us, and the parties will also negotiate in good faith to enter into an agreement for commercial supply prior to any anticipated commercialization in the Hansoh Territory. In addition, Hansoh will use commercially reasonable efforts to develop, obtain regulatory approval for, and commercialize licensed products in any region in the Hansoh Territory.

Pursuant to the terms of the Hansoh Agreement, we received an upfront payment in 2022. In addition to the upfront payment and development milestones achieved to date, we are entitled to receive up to an aggregate of (i) $23.5 million upon the achievement of specified development milestones and (ii) $144.0 million upon the achievement of specified net sales thresholds for all licensed products in the Hansoh Territory. If a licensed product is approved for marketing in the Hansoh Territory, we will be entitled to receive royalty payments based on a tiered percentage of annual net sales in each region within the Hansoh Territory, with such percentage ranging from the low double digit to high teens, subject to specified potential royalty reductions.

Hansoh's obligation to pay royalties for a given licensed product in a given region in the Hansoh Territory will begin on the date of the first commercial sale for such licensed product in such region and continue until the latest of (i) ten years from the date of the first commercial sale for such licensed product in such region, (ii) the expiration of the last valid claim of certain licensed patents or joint patents, and (iii) expiration of regulatory exclusivity in such region. During the royalty term, neither party will directly or indirectly commercialize a competing product in the Hansoh Territory.

The Hansoh Agreement will continue in force on a region-by-region basis until the expiration of the royalty term. Hansoh may terminate the Hansoh Agreement in its entirety for convenience, with notice. We may terminate the Hansoh Agreement in its entirety for a patent challenge brought by Hansoh or its affiliates or their sublicensees. Either party may terminate the Hansoh Agreement in its entirety (i) if the other party materially breaches the Hansoh Agreement and fails to cure such breach or (ii) upon the bankruptcy of the other party.

***2016 Exclusive Patent License Agreement with The General Hospital Corporation***

In April 2016, we entered into an exclusive patent license agreement with The General Hospital Corporation, or MGH, which was subsequently amended in May 2017 and February 2018. Under the license agreement with MGH, or the MGH Agreement, we obtained an exclusive, worldwide license, with the right to sublicense, under certain patents and technical information of MGH, to make, have made, use, have used, sell, have sold, lease, have leased, import, have imported or otherwise transfer licensed products and processes for use in the treatment, diagnosis, palliation and prevention of diseases and disorders in humans and animals. We are required to use commercially reasonable efforts to develop and commercialize licensed products and processes, and must achieve certain required diligence milestones.

Under the terms of the MGH Agreement, we made an initial license payment of $100,000 and reimbursed MGH approximately $280,000 of prior patent prosecution expenses related to the licensed patents. We also issued MGH an aggregate of 358,674 shares of our common stock. Additionally, we are required to pay a low-five digit to mid-five digit annual maintenance fee prior to the first commercial sale of our first product or process, a mid-five digit annual maintenance fee after the first commercial sale of our first product or process that is creditable against royalties, certain clinical and regulatory milestone payments for the first three products or indications to achieve such milestones, which milestone payments are $8.6 million in the aggregate, and certain commercial milestone payments for the first three products or indications to achieve such milestones, which milestone payments are $18.0 million in the aggregate. We made payments of $50,000 and $300,000 in 2020 and 2021, respectively, for the achievement of the clinical and regulatory milestones of (i) filing of an IND in the first country and (ii) the completion of a Phase 1 clinical trial, respectively. We are also obligated to pay tiered royalties on net sales of licensed products ranging in the low-single digits to mid-single digits. The royalty rates are subject to up to a maximum 50% reduction for lack of a valid claim, in the event that it is necessary for us to obtain a license to any third-party intellectual property related to the licensed products, and generic competition. The obligation to pay royalties under the MGH Agreement expires on a licensed product-by-licensed product and country-by-country basis upon the later of expiry of the last valid claim of the licensed patents that cover such licensed product in such country and ten years from the first commercial sale of such product in such country. We are also obligated to pay a percentage of non-royalty related payments received by us from sublicensees ranging in the sub-teen double digits and a change of control fee equal to a low-single digit percentage of the payments received as part of any completed transaction up to a low-seven digit amount.

The MGH Agreement expires upon expiry of the last remaining royalty obligation for a licensed product or process. Under the MGH Agreement, MGH may terminate the agreement upon our uncured material breach or insolvency, a challenge by us of the licensed patents and certain other specified breaches of the MGH Agreement. We may terminate the agreement for any reason upon specified prior written notice to MGH.

## Intellectual Property

### *Overview*

We strive to protect the proprietary technology, inventions and improvements that we believe are commercially important to our business, including obtaining, maintaining, enforcing and defending our intellectual property rights, including patent rights, whether developed internally or licensed from third parties. We rely, in part, on trade secrets and know-how relating to our proprietary technology and drug candidates and continuing innovation to develop, strengthen and maintain our proprietary position. We also plan to rely, in part, on data exclusivity, market exclusivity and patent term extensions if and when available. Our commercial success will depend in part on our ability to obtain and maintain patent and other intellectual property protection for our technology, inventions and improvements; to preserve the confidentiality of our trade secrets; to defend and enforce our proprietary rights, including any patents that we own or may obtain in the future; and to operate without infringing, misappropriating or otherwise violating the valid and enforceable patents and other intellectual property rights of third parties. Intellectual property rights may not address all potential threats to our competitive advantage

As of February 21, 2025, our patent portfolio consisted of 14 issued U.S. patents, 33 pending U.S. patent applications, 23 issued ex-U.S. patents and 107 pending ex-U.S. applications, with expected expiry dates not earlier than between March 13, 2029 and January 9, 2046. Of these, 18 issued patents and 104 patent applications relate to cibotercept, KER-065 and elritercept, and 19 issued patents and 36 patent applications relate to other technologies, in each case as described in more detail below. Each of our pending international patent applications has been filed under the Patent Cooperation Treaty and has not yet entered any national jurisdictions. Our policy is to file patent applications to protect technology, inventions and improvements to inventions that may be commercially important to the development of our business.

We seek U.S. and international patent protection for a variety of technologies, and own patent applications with claims directed to ActRIIA ligand traps, ActRIIB ligand traps, ActRII chimera ligand traps, GDNF fusion polypeptides, ALK2 antibodies, crystal forms of an ALK2 inhibitor, and uses thereof. We also intend to seek patent protection or rely upon trade secret rights to protect other technologies that may be used to discover and validate targets, and that may be used to manufacture and develop novel products. We are a party to license agreements that give us rights to use specific technologies in our product candidates and in manufacturing our product candidates.

Patent applications directed to our most advanced programs are summarized below.

*Cibotercept*

Cibotercept is a modified ActRIIB ligand trap that is designed to bind to different TGF-ß ligands that signal through a TGF-ß signaling pathway. We own one issued U.S. patent, 14 pending U.S. patent applications, two issued ex-U.S. patents and 29 pending ex-U.S. applications that contain claims or supporting disclosure directed to ActRIIB ligand traps and use thereof to treat muscle disease, bone disease, anemia, fibrosis, pulmonary hypertension, metabolic disease, thrombocytopenia, and neutropenia, among others. Any patents issuing from these applications will have expiration dates between January 11, 2039 and February 27, 2045, absent any patent term adjustments or extensions.

*KER-065*

KER-065 is a ligand trap comprised of a modified ligand-binding domain derived from ActRIIA and ActRIIB that is designed to bind to different TGF-ß ligands that signal through a TGF-ß signaling pathway. We own 15 pending U.S. patent applications and 27 pending ex-U.S. applications that contain claims or supporting disclosure directed to ligand traps comprised of a modified ligand-binding domain derived from ActRIIA and ActRIIB and use thereof to treat muscle disease, bone disease, anemia, fibrosis, pulmonary hypertension, metabolic disease, thrombocytopenia, and neutropenia, among others. Any patents issuing from these applications will have expiration dates between March 19, 2041 and February 27, 2045, absent any patent term adjustments or extensions.

*Elritercept*

Elritercept is a modified ActRIIA ligand trap that is designed to bind to different TGF-ß ligands that signal through a TGF-ß signaling pathway. We own four issued U.S. patents, 11 issued ex-U.S. patents, 13 pending U.S. patent applications and 59 pending ex-U.S. applications that contain claims or supporting disclosure directed to ActRIIA ligand traps and use thereof to treat muscle disease, bone disease, metabolic disease, anemia, fibrosis, pulmonary hypertension, thrombocytopenia, and neutropenia, among others. Any patents issuing from these applications will have expiration dates between November 9, 2037 and February 27, 2045, absent any patent term adjustments or extensions.

*Other*

We plan to seek United States and international patent protection for a variety of additional technologies. We own two issued U.S. patents, four issued ex-U.S. patents, 12 pending U.S. patent applications and 22 pending ex-U.S. applications that contain claims or supporting disclosure directed to GDNF fusion polypeptides, ALK2 antibodies, crystal forms of an ALK2 inhibitor, ActRII chimera ligand traps, and uses of small molecule ALK2 inhibitors. Any patents issuing from these applications will have expiration dates between November 9, 2037 and January 9, 2046, absent any patent term adjustments or extensions.

### *Intellectual Property Protection*

Individual patents extend for varying periods depending on the date of filing of the patent application or the date of patent issuance and the legal term of patents in the countries in which they are obtained. Generally, patents issued for regularly filed applications in the United States are granted a term of 20 years from the earliest effective non-provisional filing date. In addition, in certain instances, a patent term can be extended to recapture a portion of the U.S. Patent and Trademark Office, or the USPTO, delay in issuing the patent as well as a portion of the term effectively lost as a result of the FDA regulatory review period. However, as to the FDA component, the restoration period cannot be longer than five years and the total patent term including the restoration period must not exceed 14 years following FDA approval. The duration of patents outside of the United States varies in accordance with provisions of applicable local law, but typically is also 20 years from the earliest effective filing date. However, 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.

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

Our commercial success will also depend in part on not infringing upon the proprietary rights of third parties. It is uncertain whether the issuance of any third-party patent would require us to alter our development or commercial strategies, or our product candidates or processes, obtain licenses or cease certain activities. Our breach of any license agreements or failure to obtain a license to proprietary rights that we may require to develop or commercialize our future product candidates may have an adverse impact on us. If third parties have prepared and filed patent applications prior to March 16, 2013 in the United States that also claim technology to which we have rights, we may have to participate in interference proceedings in the USPTO, to determine priority of invention. For more information, please see “Risk Factors—Risks Related to Intellectual Property.”

## Government 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, labeling, packaging, storage, distribution, record keeping, approval, advertising, promotion, marketing, post-approval monitoring and post-approval reporting of drug and biological products such as those we are developing.

Our product candidates are subject to regulation under the Food, Drug, and Cosmetic Act and the Public Health Service Act, and other federal, state, local and foreign statutes and regulations. We, along with third-party contractors, will be required to navigate the various preclinical, clinical and commercial approval requirements of the governing regulatory agencies of the countries in which we wish to conduct studies or seek approval or licensure of our product candidates.

### *U.S. Drug and Biological Product Regulation*

Our product candidates must be approved by the FDA through either a New Drug Application, or NDA, or a Biologics License Application, or BLA. The process required by the FDA before biopharmaceutical product candidates may be marketed in the United States generally involves the following:

- completion of extensive preclinical laboratory tests and animal studies performed in accordance with applicable regulations, including the FDA’s Good Laboratory Practice, or GLP, requirements;
- submission to the FDA of an Investigational New Drug, or IND, application which must become effective before human clinical trials may begin;
- approval by an independent institutional review board, or IRB, or ethics committee at each clinical site before the trial may be initiated;
- performance of adequate and well-controlled human 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 drug product for each proposed indication and to establish the safety, purity and potency of the investigational biologic product candidate for each proposed indication;
- preparation of and submission to the FDA of an NDA for a small molecule product candidate or a BLA for a biologic after completion of all pivotal clinical trials;
- payment of user fees for FDA review of the NDA or BLA;

- a determination by the FDA within 60 days of its receipt of the NDA or BLA to file the application for review;
- satisfactory completion of one or more FDA pre-approval inspections of the manufacturing facility or facilities at which the proposed product will be produced to assess compliance with current Good Manufacturing Practice, or cGMP, requirements and to assure that the facilities, methods and controls are adequate to preserve the product's continued identity, strength, quality and purity;
- potential FDA audit of the preclinical study and/or clinical trial sites that generated the data in support of the NDA or BLA;
- satisfactory completion of an FDA Advisory Committee review, if applicable;
- FDA review and approval of an NDA or licensure of a BLA, including consideration of the views of any FDA Advisory Committee, prior to any commercial marketing or sale of the product for particular indications for use in the United States; and
- compliance with any post-approval requirements, including the potential requirement to conduct post-approval studies.

***Preclinical and Clinical Development***

Before testing any drug or biologic candidate in humans in the United States, the product candidate must undergo rigorous preclinical testing. Preclinical studies include laboratory evaluation of product chemistry and formulation, as well as *in vitro* and animal studies to assess safety and in some cases to establish a rationale for therapeutic use. The conduct of preclinical studies is subject to federal and state regulations and requirements, including GLP regulations for safety/toxicology studies.

Prior to beginning the first clinical trial with a product candidate, we must submit the results of the preclinical studies, together with manufacturing information, analytical data, any available clinical data or literature and a proposed clinical protocol, to the FDA as part of an IND. An IND is a request for authorization from the FDA to administer an investigational new drug product to humans. The IND submission contains the general investigational plan and the protocol or protocols for preclinical studies and clinical trials, as well as results of in vitro and animal studies assessing the toxicology, pharmacokinetics, pharmacology and pharmacodynamic characteristics of the product, chemistry, manufacturing and controls information, and any available human data or literature to support the use of the investigational product. The IND automatically becomes effective 30 days after receipt by the FDA, unless the FDA, within the 30-day period, raises safety concerns or questions related to one or more proposed clinical trials and places the trial on clinical hold. In such a case, the IND sponsor and the FDA must resolve any outstanding concerns or questions before the clinical trial can begin. Submission of an IND therefore may or may not result in FDA authorization to begin a clinical trial.

The clinical stage of development involves the administration of the investigational product to human subjects under the supervision of qualified investigators in accordance with GCP requirements, which include the requirement that all research subjects provide their informed consent for their participation in any clinical study. These investigators are generally physicians who are not employed by or under the trial sponsor's control. Clinical trials are conducted under protocols detailing, among other things, the objectives of the study, dosing procedures, subject selection and exclusion criteria, and the parameters to be used in monitoring subject safety and assessing efficacy. Each protocol, and any subsequent amendments to the protocol, must be submitted to the FDA as part of the existing IND. Furthermore, each clinical trial must be reviewed and approved by an independent IRB for each institution at which the clinical trial will be conducted to ensure that the risks to individuals participating in the clinical trials are minimized and are reasonable in relation to anticipated benefits. The IRB also approves the informed consent form that must be provided to each clinical trial subject or his or her legal representative, and must monitor the study until completed. Regulatory authorities, the IRB or the sponsor may suspend a clinical trial at any time on various grounds, including a finding that the subjects are being exposed to an unacceptable health risk or that the trial is unlikely to meet its stated objectives. Some studies also include oversight by an independent group of qualified experts organized by the clinical study sponsor, known as a data safety monitoring board, which provides authorization for whether or not a study may move forward at designated check points based on access to certain data from the study and may halt the clinical trial if it determines that there is an unacceptable safety risk for subjects or other grounds, such as no demonstration of efficacy. There are also requirements governing the reporting of ongoing preclinical studies and clinical trials and clinical study results to public registries.

A sponsor who wishes to conduct a clinical trial outside of the United States may, but need not, obtain FDA authorization to conduct the clinical trial under an IND. If a foreign clinical trial is not conducted under an IND, the sponsor may submit data from the clinical trial to the FDA in support of an NDA. The FDA will accept a well-designed and well-conducted foreign clinical trial not conducted under an IND if the trial was conducted in accordance with GCP requirements and the FDA is able to validate the data through an onsite inspection, if deemed necessary, and the practice of medicine in the foreign country is consistent with the United States.

Human clinical trials in the United States are typically conducted in three sequential phases that may overlap or be combined:

- Phase 1 clinical trials generally involve a small number of healthy volunteers or patients with the target disease or condition. These studies are designed to test the safety, dosage tolerance, absorption, metabolism and distribution of the investigational product in humans, the side effects associated with increasing doses, and, if possible, to gain early evidence on effectiveness.

- Phase 2 clinical trials involve studies in a limited population of disease-affected patients to evaluate the preliminary efficacy, optimal dosages and dosing schedule and to identify possible adverse side effects and safety risks.
- Phase 3 clinical trials generally involve a large number of patients at multiple geographically dispersed clinical trial sites and are designed to further evaluate dosage, to provide statistically significant evidence of clinical efficacy and to further test for safety. 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.

When these phases overlap or are combined, the trials may be referred to as Phase 1/2 or Phase 2/3. A Phase 1/2 clinical trial is a human trial that investigates both safety and preliminary efficacy of an investigational therapy. A Phase 2/3 clinical trial is a human trial that investigates both preliminary and confirmatory efficacy and safety to potentially support submission of a marketing application with the applicable regulatory authorities.

In some cases, the FDA may require, or companies may voluntarily pursue, additional clinical trials after a product is approved to gain more information about the product. These so-called Phase 4 studies, 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 to FDA approval of an NDA or BLA.

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

During all phases of clinical development, regulatory agencies require extensive monitoring and auditing of all clinical activities, clinical data, and clinical study investigators. The FDA or the sponsor or its data safety monitoring board may suspend a clinical study at any time on various grounds, including a finding that the research subjects or patients are being exposed to an unacceptable health risk. Similarly, an IRB can suspend or terminate approval of a clinical study at its institution if the clinical study is not being conducted in accordance with the IRB's requirements or if the biological product candidate has been associated with unexpected serious harm to patients. FDA requires diversity plans to ensure that clinical trials aim to include broad racial and ethnic exposure data. There are also requirements governing the reporting of ongoing clinical trials and completed clinical trial results to public registries. Sponsors of clinical trials of FDA-regulated products, including biologics, are required to register and disclose certain clinical trial information, which is publicly available at www.clinicaltrials.gov.

***FDA Review Process***

Assuming successful completion of all required testing in accordance with all applicable regulatory requirements, the results of product development, nonclinical studies and clinical trials are submitted to the FDA as part of an NDA or BLA. The NDA or BLA is a request for approval to market the drug or biologic for one or more specified indications and must contain proof of safety and efficacy for a drug or safety, purity and potency for a biologic. The application must include all relevant data available from pertinent preclinical studies and clinical trials, including negative or ambiguous results of preclinical studies and clinical trials, as well as positive findings, together with detailed information relating to the product's chemistry, manufacturing, controls, and proposed labeling, among other things. 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 FDA.

Under the Prescription Drug User Fee Act, or PDUFA, as amended, each submission of an NDA or BLA requires payment of a substantial application user fee to the FDA, unless a waiver or exemption applies. 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 or BLAs for products designated as orphan drugs, unless the product application also includes a non-orphan indication.

The FDA reviews all submitted NDAs and BLAs before it accepts them for filing, and may request additional information rather than accepting the NDA or BLA for filing. The FDA must make a decision on accepting an NDA or BLA for filing within sixty days of receipt. Such decision could include either issue a refusal to file letter or acceptance of the NDA or BLA for filing, indicating that it is sufficiently complete to permit substantive review.

Once an NDA or BLA has been accepted for filing, the FDA begins an in-depth review of the NDA or BLA. Under the goals and policies agreed to by the FDA under PDUFA, the FDA aims to review standard applications within ten months from the filing date, during which it will complete its initial review of a new molecular entity NDA or original BLA and respond to the applicant, or within six months from the filing date of a new molecular entity NDA or original BLA designated for priority review. In both standard and priority reviews, the FDA does not always meet its PDUFA goal dates, and the review process is

often significantly extended by FDA requests for additional information or clarification. The FDA reviews the application to determine, among other things, whether a product is safe and effective, or for a biologic, safe, pure and potent for its intended use, and whether the facility in which it is manufactured, processed, packed or held meets standards designed to assure and preserve the product's identity, safety, strength, quality, potency and purity.

The FDA generally accepts data from foreign clinical trials in support of an NDA or BLA if the trials were conducted under an IND, and the IND requirements, unless waived, were met. If a foreign clinical trial is not conducted under an IND, the FDA nevertheless may accept the data in support of an NDA or BLA if the trial was conducted in accordance with GCPs and the FDA is able to validate the data through an on-site inspection, if deemed necessary. Although the FDA generally requests that marketing applications be supported by some data from domestic clinical studies, the FDA may accept foreign data as the sole basis for marketing approval if (1) the foreign data are applicable to the U.S. population and U.S. medical practice, (2) the trials were performed by clinical investigators with recognized competence, and (3) the data may be considered valid without the need for an on-site inspection or, if the FDA considers the inspection to be necessary, the FDA is able to validate the data through an on-site inspection or other appropriate means.

Before approving an NDA or BLA, the FDA will conduct a pre-approval inspection of the manufacturing facility or facilities for the new product to determine whether they comply with cGMP requirements. The FDA will not approve an application unless it determines that the manufacturing processes and facilities are in compliance with cGMP requirements and adequate to assure consistent production of the product within required specifications. The FDA also may audit data from clinical trials to ensure compliance with GCP requirements. Additionally, the FDA may refer applications for novel products or products which present difficult questions of safety or efficacy to an advisory committee, typically a panel that includes clinicians and other experts, for review, evaluation and a recommendation as to whether the application should be approved and under what conditions, if any. The FDA is not bound by recommendations of the advisory committee, but it considers such recommendations when making decisions on approval. Additionally, before approving an NDA or BLA, the FDA will typically inspect one or more clinical sites to assure compliance with GCPs. If the FDA determines that the application, manufacturing process or manufacturing facilities are not acceptable, it will outline the deficiencies in the submission and often will request additional testing or information. Notwithstanding the submission of any requested additional information, the FDA ultimately may decide that the application does not satisfy the regulatory criteria for approval.

After the FDA evaluates an NDA or BLA and conducts inspections of manufacturing facilities where the investigational product and/or its drug substance will be manufactured, the FDA will issue an approval letter or a Complete Response letter. An approval letter authorizes commercial marketing of the product with specific prescribing information for specific indications. A Complete Response letter indicates that the review cycle of the application is complete and the application will not be approved in its present form. A Complete Response letter usually describes all of the specific deficiencies that the FDA has identified in the NDA or BLA, except that where the FDA determines that the data supporting the application are inadequate to support approval, the FDA may issue the Complete Response letter without first conducting required inspections, testing submitted product lots and/or reviewing proposed labeling. In issuing the Complete Response letter, the FDA may recommend actions that the applicant might take to place the application in condition for approval, including requests for additional information or clarification, which may include the potential requirement for additional clinical studies, including the potential requirement to conduct additional clinical trial(s) and/or to complete other significant and time-consuming requirements related to clinical trials, or to conduct additional preclinical studies or manufacturing activities. If a Complete Response Letter is issued, the applicant may either resubmit the NDA or BLA, addressing all of the deficiencies identified in the letter, or withdraw the application or request an opportunity for a hearing. Even if such data and information are submitted, the FDA may decide that the NDA or BLA does not satisfy the criteria for approval. Data obtained from clinical trials are not always conclusive and the FDA may interpret data differently than we interpret the same data.

***Orphan Drug Designation***

Under the Orphan Drug Act, the FDA may grant orphan designation to a drug or biologic 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 more than 200,000 individuals in the United States for which there is no reasonable expectation that the cost of developing and making available in the United States a drug or biologic for this type of disease or condition will be recovered from sales in the United States for that drug or biologic. Orphan drug designation must be requested before submitting an NDA or BLA. After the FDA grants orphan drug designation, the generic identity of the therapeutic agent and its potential orphan use are disclosed publicly by the FDA. The orphan drug designation does not convey any advantage in, or shorten the duration of, the regulatory review or approval process.

If a product that has orphan drug designation subsequently receives the first FDA approval for the disease for which it has such designation, the product is entitled to orphan drug exclusivity, which means that the FDA may not approve any other applications, including a full NDA or BLA, to market the same product for the same indication for seven years, except in limited circumstances, such as a showing of clinical superiority to the product with orphan drug exclusivity or if the FDA finds that the holder of the orphan drug exclusivity has not shown that it can assure the availability of sufficient quantities of the orphan drug to meet the needs of patients with the disease or condition for which the drug was designated. Orphan drug exclusivity does not prevent the FDA from approving a different drug or biologic for the same disease or condition, or the

same drug or biologic for a different disease or condition. Among the other benefits of orphan drug designation are tax credits for certain research and a waiver of the application fee.

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

***Post-Approval Requirements***

Following approval of a new product, the manufacturer and the approved product are subject to pervasive and continuing regulation by the FDA, including, among other things, requirements relating to monitoring and record-keeping, reporting of adverse experiences, periodic reporting, product sampling and distribution, compliance with advertising and promotion requirements, which include restrictions on promoting the product for unapproved uses or patient populations, known as "off-label use," and limitations on industry-sponsored scientific and educational activities. Further, after approval, if there are any changes or modifications to the approved product, including changes in indications, labeling or manufacturing processes or facilities, the applicant may be required to submit and obtain FDA review and approval of a new NDA/BLA or NDA/BLA supplement, which may require the development of additional data or preclinical studies and clinical trials.

The FDA may also place other conditions on approvals including the requirement for a Risk Evaluation and Mitigation Strategy, or REMS, to assure the safe use of the product. If the FDA concludes a REMS is needed, the sponsor of the NDA or BLA must submit a proposed REMS. A REMS is a safety strategy to manage a known or potential serious risk associated with a product and to enable patients to have continued access to such medicines by managing their safe use, and could include medication guides, physician communication plans, or elements to assure safe use, such as restricted distribution methods, patient registries and other risk minimization tools. The FDA will not approve the NDA or BLA without an approved REMS, if required. The FDA also may condition approval on, among other things, changes to proposed labeling or the development of adequate controls and specifications. Once approved, the FDA may withdraw the product approval if compliance with pre- and post-marketing requirements is not maintained or if problems occur after the product reaches the marketplace. The FDA may require one or more Phase 4 post-market studies and surveillance to further assess and monitor the product's safety and effectiveness after commercialization, and may limit further marketing of the product based on the results of these post-marketing studies. Product approvals may be withdrawn for non-compliance with regulatory standards or if problems occur following initial marketing.

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

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

The FDA closely regulates the marketing, labeling, advertising and promotion of drugs and biologics. Drugs and biologics may be promoted only for the approved indications and in accordance with the provisions of the approved label. However, companies may share truthful and not misleading information that is otherwise consistent with a product's FDA approved labeling. The FDA and other agencies actively enforce the laws and regulations prohibiting the promotion of off-label uses. Failure to comply with these requirements can result in, among other things, adverse publicity, warning letters, corrective advertising and potential civil and criminal penalties. Physicians may prescribe legally available products for uses that are not described in the product's labeling and that differ from those tested by us and approved by the FDA. Such off-label uses are common across medical specialties. Physicians may believe that such off-label uses are the best treatment for many patients in varied circumstances. The FDA does not regulate the behavior of physicians in their choice of treatments. The FDA does, however, restrict manufacturer's communications on the subject of off-label use of their products.

***Biosimilars and Exclusivity***

The Patient Protection and Affordable Care Act, as amended by the Health Care and Education Reconciliation Act of 2010, or collectively the ACA, includes a subtitle called the Biologics Price Competition and Innovation Act of 2009, or BPCI Act, which created an abbreviated approval pathway for biological products shown to be similar to, or interchangeable with, an FDA-licensed reference biological product. To date, only a handful of biosimilars have been licensed under the BPCIA, although numerous biosimilars have been approved in the European Union. The FDA has issued several guidance documents outlining an approach to review and approval of biosimilars.

Biosimilarity, which requires that there be no clinically meaningful differences between the biological product and the reference product in terms of safety, purity, and potency, can be shown through analytical studies, animal studies, and a clinical study or studies. Interchangeability requires that a product is biosimilar to the reference product and the product must demonstrate that it can be expected to produce the same clinical results as the reference product and, for products administered multiple times, the biologic and the reference biologic may be switched after one has been previously administered without increasing safety risks or risks of diminished efficacy relative to exclusive use of the reference biologic. However, complexities associated with the larger, and often more complex, structure of biological products, as well as the process by which such products are manufactured, pose significant hurdles to implementation that are still being worked out by the FDA.

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

A biological product 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.

***Foreign Regulation***

In order to market any product outside of the United States, we would need to comply with numerous and varying regulatory requirements of other countries and jurisdictions regarding quality, safety, and efficacy and governing, among other things, clinical trials, marketing authorization, commercial sales and distribution of our products, if approved. Whether or not we obtain FDA approval for a product, we would need to obtain the necessary approvals by the comparable foreign regulatory authorities before we can commence clinical trials or marketing of the product in foreign countries and jurisdictions.

*Clinical Trials in the EU*

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

In the EU, clinical trials are governed by the Clinical Trials Regulation (EU) No 536/2014, or CTR, which entered into application on January 31, 2022 repealing and replacing the former Clinical Trials Directive 2001/20, or CTD.

The CTR is intended to harmonize and streamline clinical trial authorizations, simplify adverse-event reporting procedures, improve the supervision of clinical trials and increase transparency. Specifically, the CTR, which is directly applicable in all EU Member States, introduces a streamlined application procedure through a single-entry point, the "EU portal", the Clinical Trials Information System, or CTIS; a single set of documents to be prepared and submitted for the application; as well as simplified reporting procedures for clinical trial sponsors. A harmonized procedure for the assessment of applications for clinical trials has been introduced and is divided into two parts. Part I assessment is led by the competent authorities of a reference Member State selected by the trial sponsor and relates to clinical trial aspects that are considered to be scientifically harmonized across EU Member States. This assessment is then submitted to the competent authorities of all concerned Member States in which the trial is to be conducted for their review. Part II is assessed separately by the competent authorities and Ethics Committees in each concerned EU Member State. Individual EU Member States retain the power to authorize the conduct of clinical trials on their territory.

The CTR foresaw a three-year transition period that ended on January 31, 2025. Since this date, all new or ongoing trials are subject to the provisions of the CTR.

In all cases, clinical trials must be conducted in accordance with GCP and the applicable regulatory requirements and the ethical principles that have their origin in the Declaration of Helsinki. Medicines used in clinical trials, including ATMPs, must

be manufactured in accordance with the guidelines on cGMP and in a GMP licensed facility, which can be subject to GMP inspections.

*EU Review and Approval Process*

In the EU, medicinal products can only be commercialized after a related marketing authorization, or MA, has been granted. To obtain an MA for a product in the EU, an applicant must submit a Marketing Authorization Application, or MAA, either under a centralized procedure administered by the European Medicines Agency, or EMA, or one of the procedures administered by the competent authorities of EU Member States (decentralized procedure, national procedure or mutual recognition procedure). An MA may be granted only to an applicant established in the EU.

The centralized procedure provides for the grant of a single MA by the European Commission that is valid throughout the EEA (which is comprised of the 27 EU Member States plus Norway, Iceland and Liechtenstein). Pursuant to Regulation (EC) No 726/2004, the centralized procedure is compulsory for specific products, including for (i) medicinal products derived from biotechnological processes, (ii) products designated as orphan medicinal products, (iii) advanced therapy medicinal products, or ATMPs, and (iv) products with a new active substance indicated for the treatment of HIV/AIDS, cancer, neurodegenerative diseases, diabetes, auto-immune and other immune dysfunctions and viral diseases. For products with a new active substance indicated for the treatment of other diseases and products that are highly innovative or for which a centralized process is in the interest of patients, authorization through the centralized procedure is optional on related approval.

Under the centralized procedure, the EMA's Committee for Medicinal Products for Human Use, or CHMP, conducts the initial assessment of a product. The CHMP is also responsible for several post-authorization and maintenance activities, such as the assessment of modifications or extensions to an existing MA. The maximum timeframe for the evaluation of an MAA under the centralized procedure is 210 days, excluding clock stops when additional information or written or oral explanation is to be provided by the applicant in response to questions of the CHMP. Accelerated assessment may be granted by the CHMP in exceptional cases, when a medicinal product targeting an unmet medical need is expected to be of major interest from the point of view of public health and, in particular, from the viewpoint of therapeutic innovation. If the CHMP accepts a request for accelerated assessment, the time limit of 210 days will be reduced to 150 days (excluding clock stops). The CHMP can, however, revert to the standard time limit for the centralized procedure if it considers that it is no longer appropriate to conduct an accelerated assessment.

Unlike the centralized authorization procedure, the decentralized MA procedure requires a separate application to, and leads to separate approval by, the competent authorities of each EU Member State in which the product is to be marketed. This application is identical to the application that would be submitted to the EMA for authorization through the centralized procedure. The reference EU Member State prepares a draft assessment and drafts of the related materials within 120 days after receipt of a valid application. The resulting assessment report is submitted to the concerned EU Member States who, within 90 days of receipt, must decide whether to approve the assessment report and related materials. If a concerned EU Member State cannot approve the assessment report and related materials due to concerns relating to a potential serious risk to public health, disputed elements may be referred to the Heads of Medicines Agencies' Coordination Group for Mutual Recognition and Decentralised Procedures – Human, or CMDh, for review. The subsequent decision of the European Commission is binding on all EU Member States.

The mutual recognition procedure allows companies that have a medicinal product already authorized in one EU Member State to apply for this authorization to be recognized by the competent authorities in other EU Member States. Like the decentralized procedure, the mutual recognition procedure is based on the acceptance by the competent authorities of the EU Member States of the MA of a medicinal product by the competent authorities of other EU Member States. The holder of a national MA may submit an application to the competent authority of an EU Member State requesting that this authority recognize the MA delivered by the competent authority of another EU Member State.

An MA has, in principle, an initial validity of five years. The MA 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 in which the original MA was granted. To support the application, the MA holder must provide the EMA or the competent authority with a consolidated version of the Common Technical Document providing up-to-date data concerning the quality, safety and efficacy of the product, including all variations introduced since the MA was granted, at least nine months before the MA ceases to be valid. The European Commission or the competent authorities of the EU Member States may decide on justified grounds relating to pharmacovigilance, to proceed with one further five year renewal period for the MA. Once subsequently definitively renewed, the MA shall be valid for an unlimited period. Any authorization which is not followed by the actual placing of the medicinal product on the EU market (for a centralized MA) or on the market of the authorizing EU Member State within three years after authorization ceases to be valid (the so-called sunset clause).

Innovative products that target an unmet medical need and are expected to be of major public health interest may be eligible for a number of expedited development and review programs, such as the Priority Medicines, or PRIME, scheme, which provides incentives similar to the breakthrough therapy designation in the U.S. PRIME is a voluntary scheme aimed at enhancing the EMA's support for the development of medicinal products that target unmet medical needs. Eligible products must target conditions for which there is an unmet medical need (there is no satisfactory method of diagnosis, prevention or

treatment in the EU or, if there is, the new medicinal product will bring a major therapeutic advantage) and they must demonstrate the potential to address the unmet medical need by introducing new methods of therapy or improving existing ones. Benefits accrue to sponsors of product candidates with PRIME designation, including but not limited to, early and proactive regulatory dialogue with the EMA, frequent discussions on clinical trial designs and other development program elements, and potentially accelerated MAA assessment once a dossier has been submitted.

In the EU, a "conditional" MA may be granted in cases where all the required safety and efficacy data are not yet available. The European Commission may grant a conditional MA for a medicinal product if it is demonstrated that all of the following criteria are met: (i) the benefit-risk balance of the medicinal product is positive; (ii) it is likely that the applicant will be able to provide comprehensive data post-authorization; (iii) the medicinal product fulfils an unmet medical need; and (iv) the benefit of the immediate availability to patients of the medicinal product is greater than the risk inherent in the fact that additional data are still required. The conditional MA is subject to conditions to be fulfilled for generating the missing data or ensuring increased safety measures. It is valid for one year and must be renewed annually until all related conditions have been fulfilled. Once any pending studies are provided, the conditional MA can be converted into a traditional MA. However, if the conditions are not fulfilled within the timeframe set by the EMA and approved by the European Commission, the MA will cease to be renewed.

An MA may also be granted "under exceptional circumstances" where the applicant can show that it is unable to provide comprehensive data on efficacy and safety under normal conditions of use even after the product has been authorized and subject to specific procedures being introduced. These circumstances may arise in particular when the intended indications are very rare and, in the state of scientific knowledge at that time, it is not possible to provide comprehensive information, or when generating data may be contrary to generally accepted ethical principles. Like a conditional MA, an MA granted in exceptional circumstances is reserved to medicinal products intended to be authorized for treatment of rare diseases or unmet medical needs for which the applicant does not hold a complete data set that is required for the grant of a standard MA. However, unlike the conditional MA, an applicant for authorization in exceptional circumstances is not subsequently required to provide the missing data. Although the MA "under exceptional circumstances" is granted definitively, the risk-benefit balance of the medicinal product is reviewed annually, and the MA will be withdrawn if the risk-benefit ratio is no longer favorable.

*Pediatric Development in the EU*

In the EU, Regulation (EC) No 1901/2006 provides that all MAAs for new medicinal products have to include the results of trials conducted in the pediatric population, in compliance with a pediatric investigation plan, or PIP, agreed with the EMA's Pediatric Committee, or PDCO. The PIP sets out the timing and measures proposed to generate data to support a pediatric indication of the medicinal product for which MA is being sought. The PDCO can grant a deferral of the obligation to implement some or all of the measures provided in the PIP until there are sufficient data to demonstrate the efficacy and safety of the product in adults. Further, the obligation to provide pediatric clinical trial data can be waived by the PDCO when these data are not needed or appropriate because the product is likely to be ineffective or unsafe in children, the disease or condition for which the product is intended occurs only in adult populations, or when the product does not represent a significant therapeutic benefit over existing treatments for pediatric patients. Once the MA is obtained in all EU Member States and study results are included in the product information, even when negative, the product is eligible for a six-month extension to the Supplementary Protection Certificate, or SPC, if any is in effect at the time of authorization or, in the case of orphan medicinal products, a two-year extension of orphan market exclusivity.

*Manufacturing Regulation in the EU*

In addition to an MA, various other requirements apply to the manufacturing and placing on the EU market of medicinal products. The manufacturing of medicinal products in the EU requires a manufacturing authorization and import of medicinal products into the EU requires a manufacturing authorization allowing for import. The manufacturing authorization holder must comply with various requirements set out in the applicable EU laws, regulations and guidance, including EU cGMP standards. Similarly, the distribution of medicinal products within the EU is subject to compliance with the applicable EU laws, regulations and guidelines, including the requirement to hold appropriate authorizations for distribution granted by the competent authorities of EU Member States. Marketing authorization holders and/or manufacturing and import authorization, or MA holders and/or distribution authorization holders may be subject to civil, criminal or administrative sanctions, including suspension of manufacturing authorization, in case of non-compliance with the EU or EU Member States' requirements applicable to the manufacturing of medicinal products.

*Data and Market Exclusivity in the EU*

The EU provides opportunities for data and market exclusivity related to MAs. Upon receiving an MA, innovative medicinal products are generally entitled to receive eight years of data exclusivity and 10 years of market exclusivity. Data exclusivity, if granted, prevents regulatory authorities in the EU from referencing the innovator's data to assess a generic application or biosimilar application for eight years from the date of authorization of the innovative product, after which a generic or biosimilar MAA can be submitted, and the innovator's data may be referenced. The market exclusivity period prevents a successful generic or biosimilar applicant from commercializing its product in the EU until 10 years have elapsed from the

initial MA of the reference product in the EU. The overall ten-year period may, occasionally, be extended for a further year to a maximum of 11 years if, during the first eight years of those ten years, the MA 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. However, there is no guarantee that a product will be considered by the EU's regulatory authorities to be a new chemical/biological entity, and products may not qualify for data exclusivity.

In the EU, there is a special regime for biosimilars, or biological medicinal products that are similar to a reference medicinal product but that do not meet the definition of a generic medicinal product. For such products, the results of appropriate preclinical or clinical trials must be provided in support of an application for MA. Guidelines from the EMA detail the type of quantity of supplementary data to be provided for different types of biological product.

*Orphan Designation in the EU*

In the EU, Regulation (EC) No. 141/2000, as implemented by Regulation (EC) No. 847/2000 provides that a medicinal product can be designated as an orphan medicinal product by the European Commission if its sponsor can establish that: (i) the product is intended for the diagnosis, prevention or treatment of life-threatening or chronically debilitating conditions; (ii) either (a) such conditions affect not more than 5 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 developing the medicinal product; and (iii) there exists no satisfactory authorized method of diagnosis, prevention, or treatment of the condition that has been authorized in the EU, or even if such method exists, the product will be of significant benefit to those affected by that condition.

Regulation (EC) No 847/2000 sets out further provisions for implementation of the criteria for designation of a medicinal product as an orphan medicinal product. An application for the designation of a medicinal product as an orphan medicinal product must be submitted at any stage of development of the medicinal product but before filing of an MAA. An MA for an orphan medicinal product may only include indications designated as orphan. For non-orphan indications treated with the same active pharmaceutical ingredient, a separate marketing authorization has to be sought.

Orphan medicinal product designation entitles an applicant to incentives such fee reductions or fee waivers, protocol assistance, and access to the centralized marketing authorization procedure. Upon grant of a marketing authorization, orphan medicinal products are entitled to a ten-year period of market exclusivity for the approved therapeutic indication, which means that the EMA cannot accept another marketing authorization application or accept an application to extend for a similar product and the European Commission cannot grant a marketing authorization for the same indication for a period of ten years. The period of market exclusivity is extended by two years for orphan medicinal products that have also complied with an agreed PIP. No extension to any supplementary protection certificate can be granted on the basis of pediatric studies for orphan indications. Orphan medicinal product designation does not convey any advantage in, or shorten the duration of, the regulatory review and approval process.

The period of market exclusivity may, however, be reduced to six years if, at the end of the fifth year, it is established that the product no longer meets the criteria on the basis of which it received orphan medicinal product destination, including where it can be demonstrated on the basis of available evidence that the original orphan medicinal product is sufficiently profitable not to justify maintenance of market exclusivity or where the prevalence of the condition has increased above the threshold. Additionally, an MA may be granted to a similar medicinal product with the same orphan indication during the 10 year period if: (i) if the applicant consents to a second original orphan medicinal product application, (ii) if the manufacturer of the original orphan medicinal product is unable to supply sufficient quantities; or (iii) if the second applicant can establish that its product, although similar, is safer, more effective or otherwise clinically superior to the original orphan medicinal product. A company may voluntarily remove a product from the register of orphan products.

*Post-authorization Requirements in the EU*

Where an MA is granted in relation to a medicinal product in the EU, the holder of the MA is required to comply with a range of regulatory requirements applicable to the manufacturing, marketing, promotion and sale of medicinal products. Similar to the United States, both MA holders and manufacturers of medicinal products are subject to comprehensive regulatory oversight by the EMA, the European Commission and/or the competent regulatory authorities of the individual EU Member States. The holder of an MA must establish and maintain a pharmacovigilance system and appoint an individual qualified person for pharmacovigilance who is responsible for oversight of that system. Key obligations include expedited reporting of suspected serious adverse reactions and submission of periodic safety update reports, or PSURs.

All new MAAs must include a risk management plan, or RMP, describing the risk management system that the company will put in place and documenting measures to prevent or minimize the risks associated with the product. The regulatory authorities may also impose specific obligations as a condition of the MA. Such risk- minimization measures or post-authorization obligations may include additional safety monitoring, more frequent submission of PSURs, or the conduct of additional clinical trials or post-authorization safety studies.

In the EU, the advertising and promotion of medicinal products are subject to both EU and EU Member States' laws governing promotion of medicinal products, interactions with physicians and other healthcare professionals, misleading and comparative advertising and unfair commercial practices.

General requirements for advertising and promotion of medicinal products, such as direct-to-consumer advertising of prescription medicinal products are established in EU law. However, the details are governed by regulations in individual EU Member States and can differ from one country to another. For example, applicable laws require that promotional materials and advertising in relation to medicinal products comply with the product's Summary of Product Characteristics, or SmPC, which may require approval by the competent national authorities in connection with an MA. The SmPC is the document that provides information to physicians concerning the safe and effective use of the product. Promotional activity that does not comply with the SmPC is considered off-label and is prohibited in the EU.

***Other Healthcare Laws and Compliance Requirements***

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. Such laws include, without limitation: the U.S. federal Anti-Kickback Statute, the civil False Claims Act, U.S. federal Health Insurance Portability and Accountability Act of 1996, or HIPAA, and similar foreign, federal and state fraud and abuse, transparency and privacy laws.

The U.S. federal Anti-Kickback Statute prohibits, among other things, persons and entities from knowingly and willfully soliciting, receiving, offering or paying remuneration, to induce, or in return for, either the referral of an individual, or the purchase or recommendation of an item or service for which payment may be made under any federal healthcare program. The term remuneration has been interpreted broadly to include anything of value, including stock options. The U.S. federal Anti-Kickback Statute has been interpreted to apply to arrangements between pharmaceutical manufacturers on one hand and prescribers, purchasers, and others on the other hand. There are a number of statutory exceptions and regulatory safe harbors protecting some common activities from prosecution, but they are drawn narrowly, and practices that involve remuneration, such as consulting agreements, that may be alleged to be intended to induce prescribing, purchasing or recommending may be subject to scrutiny if they do not qualify for an exception or safe harbor. Failure to meet all of the requirements of a particular applicable statutory exception or regulatory safe harbor does not make the conduct per se illegal under the U.S. federal Anti-Kickback Statute. Instead, the legality of the arrangement will be evaluated on a case-by-case basis based on a cumulative review of all of its facts and circumstances. Our practices may not in all cases meet all of the criteria for protection under a statutory exception or regulatory safe harbor. A person or entity does not need to have actual knowledge of the statute or specific intent to violate it in order to have committed a violation. In addition, a claim including items or services resulting from a violation of the U.S. federal Anti-Kickback Statute constitutes a false or fraudulent claim for purposes of the civil False Claims Act.

Civil and criminal false claims laws, including the civil False Claims Act, which can be enforced through civil whistleblower or *qui tam* actions, and civil monetary penalty laws prohibit, among other things, individuals or entities from knowingly presenting, or causing to be presented, claims for payment to the federal government, including federal healthcare programs, that are false or fraudulent. For example, the civil False Claims Act prohibits any person or entity from knowingly presenting, or causing to be presented, a false claim for payment to the federal government or knowingly making, using or causing to be made or used a false record or statement material to a false or fraudulent claim to the federal government. A claim includes "any request or demand" for money or property presented to the U.S. government. Pharmaceutical and other healthcare companies have been prosecuted under these laws for allegedly providing free product to customers with the expectation that the customers would bill federal programs for the product.

HIPAA created additional federal civil and criminal liability for, among other things, executing a scheme to defraud any healthcare benefit program, including private third-party payors, and making false statements relating to healthcare matters. Similar to the U.S. federal Anti-Kickback Statute, a person or entity does not need to have actual knowledge of the statute or specific intent to violate it in order to have committed a violation. In addition, HIPAA, as amended by the Health Information Technology for Economic and Clinical Health Act, or HITECH, and their implementing regulations, impose certain requirements on HIPAA covered entities, which include certain healthcare providers, healthcare clearing houses and health plans, and individuals and entities that provide services on their behalf that involve individually identifiable health information, known as business associates, as well as their covered subcontractors, relating to the privacy, security and transmission of individually identifiable health information.

The U.S. federal Physician Payments Sunshine Act requires certain manufacturers of drugs, devices, biologics and medical supplies that are reimbursable under Medicare, Medicaid or the Children's Health Insurance Program, with specific exceptions, to report annually to the Centers for Medicare & Medicaid Services, or CMS, information related to certain payments and other transfers of value made in the prior year to physicians (defined to include doctors, dentists, optometrists, podiatrists, and chiropractors), other healthcare professionals (such as physician assistants and nurse practitioners), and teaching hospitals, as well as ownership and investment interests held by such physicians and their immediate family members.

We are also subject to additional similar U.S. state and foreign law equivalents of each of the above federal laws, such as anti-kickback and false claims laws which may apply to sales or marketing arrangements and claims involving healthcare

items or services reimbursed by non-governmental third-party payors, including private insurers, or that apply regardless of payor, state laws which require pharmaceutical companies to comply with the pharmaceutical industry's voluntary compliance guidelines and the relevant compliance guidance promulgated by the federal government, state and local laws which require pharmaceutical companies to report information related to payments and other transfers of value to physicians and other healthcare providers or marketing expenditures, state laws which require the reporting of information related to drug pricing, state and local laws requiring the registration of pharmaceutical sales representatives, and state and foreign laws governing the privacy and security of health information which, in some cases, differ from each other in significant ways, and may not have the same effect, thus complicating compliance efforts. 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, significant civil, criminal and administrative penalties, damages, fines, exclusion from government-funded healthcare programs, such as Medicare and Medicaid or similar programs in other countries or jurisdictions, integrity oversight and reporting obligations to resolve allegations of non-compliance, disgorgement, imprisonment, contractual damages, reputational harm, diminished profits and the curtailment or restructuring of our operations.

***Coverage and Reimbursement***

Significant uncertainty exists as to the coverage and reimbursement status of any pharmaceutical or biological product for which we obtain regulatory approval. Sales of any product, if approved, depend, in part, on the extent to which such product will be covered by third-party payors, such as federal, state, and foreign government healthcare programs, commercial insurance and managed healthcare organizations, and the level of reimbursement, if any, for such product by third-party payors. No uniform policy for coverage and reimbursement exists in the United States, and coverage and reimbursement can differ significantly from payor to payor. Decisions regarding whether to cover any of our product candidates, if approved, the extent of coverage and amount of reimbursement to be provided are made on a plan-by-plan basis Third-party payors often rely upon Medicare coverage policy and payment limitations in setting their own reimbursement rates, but also have their own methods and approval process apart from Medicare determinations. Further, coverage policies and third-party reimbursement rates may change at any time. Even if favorable coverage and reimbursement status is attained for one or more products for which we receive regulatory approval, less favorable coverage policies and reimbursement rates may be implemented in the future. As a result, the coverage determination process is often a time-consuming and costly process that will require us to provide scientific and clinical support for the use of our product candidates to each payor separately, with no assurance that coverage and adequate reimbursement will be applied consistently or obtained in the first instance.

For products administered under the supervision of a physician, obtaining coverage and adequate reimbursement may be particularly difficult because of the higher prices often associated with such drugs. Additionally, separate reimbursement for the product itself or the treatment or procedure in which the product is used may not be available, which may impact physician utilization. In addition, companion diagnostic tests require coverage and reimbursement separate and apart from the coverage and reimbursement for their companion pharmaceutical or biological products. Similar challenges to obtaining coverage and reimbursement, applicable to pharmaceutical or biological products, will apply to companion diagnostics.

In addition, the U.S. government, state legislatures and foreign governments have continued implementing cost-containment programs, including price controls, restrictions on coverage and reimbursement and requirements for substitution of generic products. Third-party payors are increasingly challenging the prices charged for medical products and services, examining the medical necessity and reviewing the cost effectiveness of pharmaceutical or biological products, medical devices and medical services, in addition to questioning safety and efficacy. Adoption of price controls and cost-containment measures, and adoption of more restrictive policies in jurisdictions with existing controls and measures, could further limit sales of any product that receives approval. Decreases in third-party reimbursement for any product or a decision by a third party not to cover a product could reduce physician usage and patient demand for the product. No regulatory authority has granted approval for a personalized cancer immunotherapy based on a vaccine approach, and there is no model for reimbursement of this type of product.

In the EU, pricing and reimbursement schemes vary widely from country to country. Some EU Member States may approve a specific price for a product, or they may instead adopt a system of direct or indirect controls on the profitability of the company placing the product on the market. Other EU 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.

In addition, in order to obtain reimbursement for our products in some European countries, including some EU Member States, we may be required to compile additional data comparing the cost-effectiveness of our products to other available therapies. This Health Technology Assessment, or HTA, of medicinal products is becoming an increasingly common part of the pricing and reimbursement procedures in some EU Member States, including those representing the larger markets. The HTA process is the procedure to assess therapeutic, economic and societal impact of a given medicinal product in the national healthcare systems of the individual country. The outcome of an HTA will often influence the pricing and reimbursement status granted to these medicinal products by the competent authorities of individual EU Member States. The extent to which pricing and reimbursement decisions are influenced by the HTA of the specific medicinal product currently varies between EU Member States. In December 2021, Regulation No 2021/2282 on HTA, was adopted in the EU. This Regulation, which entered into application on January 12, 2025 and has a phased implementation, is intended to boost cooperation among EU Member States in assessing health technologies, including new medicinal products, and providing the

basis for cooperation at EU level for joint clinical assessments in these areas. The Regulation permits EU Member States to use common HTA tools, methodologies, and procedures across the EU, working together in four main areas, including joint clinical assessment of the innovative health technologies with the most potential impact for patients, joint scientific consultations whereby developers can seek advice from HTA authorities, identification of emerging health technologies to identify promising technologies early, and continuing voluntary cooperation in other areas. Individual EU Member States continue to be responsible for assessing non-clinical (e.g., economic, social, ethical) aspects of health technologies, and making decisions on pricing and reimbursement.

***Healthcare Reform***

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

The ACA, which was enacted in March 2010, substantially changed the way healthcare is financed by both governmental and private insurers in the United States, and significantly affected the pharmaceutical industry. Since its enactment, there have been judicial, Congressional and executive branch challenges and amendments to certain aspects of the ACA. For example, on August 16, 2022, the Inflation Reduction Act of 2022, or the IRA, was signed into law, which among other things, extends enhanced subsidies for individuals purchasing health insurance coverage in ACA marketplaces through plan year 2025. The IRA also eliminates the “donut hole” under the Medicare Part D program beginning in 2025 by significantly lowering the beneficiary maximum out-of-pocket cost and creating a new manufacturer discount program. It is unclear how any such challenges and additional healthcare reform measures of the second Trump administration will impact the ACA and our business.

Other legislative changes have been proposed and adopted since the ACA was enacted, including aggregate reductions of Medicare payments to providers of 2% per fiscal year and reduced payments to several types of Medicare providers. These reductions went into effect in April 2013 and, due to subsequent legislative amendments to the statute, will remain in effect through 2032, unless additional action is taken by Congress. Additionally, on March 11, 2021, the American Rescue Plan Act of 2021 was signed into law, which eliminates the statutory Medicaid drug rebate cap, currently set at 100% of a drug’s average manufacturer price, for single source and innovator multiple source drugs, beginning January 1, 2024. In addition, Congress is considering additional health reform measures as part of the other reform measures.

Moreover, there has recently been heightened governmental scrutiny over the manner in which manufacturers set prices for their marketed products, which has resulted in several Congressional inquiries and proposed and enacted federal and state legislation designed to, among other things, bring more transparency to product pricing, review the relationship between pricing and manufacturer patient programs, and reform government program reimbursement methodologies for drug products. At the federal level, the IRA, among other things, (i) directs the U.S. Department of Health and Human Services, or HHS, to negotiate the price of certain high-expenditure, single-source drugs that have been on the market for at least 7 years and biologics that have been on the market for at least 7 years covered under Medicare, and subject drug manufacturers to civil monetary penalties and a potential excise tax by offering a price that is not equal to or less than the negotiated “maximum fair price” for such drugs and biologics under the law, or the“Medicare Drug Price Negotiation Program, and (ii) imposes rebates with respect to certain drugs and biologics covered under Medicare Part B or Medicare Part D to penalize price increases that outpace inflation. The IRA permits HHS to implement many of these provisions through guidance, as opposed to regulation, for the initial years. These provisions began to take effect progressively in fiscal year 2023, although they may be subject to legal challenges. On August 15, 2024, HHS announced the list agreed-upon price of the first ten drugs that will be were subject to price negotiations, although the Medicare Drug Price Negotiation Program is currently subject to legal challenges. On January 17, 2025, HHS selected fifteen additional products covered under Part D for price negotiation in 2025. Each year thereafter more Part B and Part D products will become subject to the Medicare Drug Price Negotiation Program. At the state level, legislatures have increasingly passed legislation and implemented regulations designed to control pharmaceutical product pricing, including price or patient reimbursement constraints, discounts, restrictions on certain product access and marketing cost disclosure and transparency measures, and, in some cases, designed to encourage importation from other countries and bulk purchasing.

***Additional Regulation***

In addition to the foregoing, state and federal laws regarding environmental protection and hazardous substances, including the Occupational Safety and Health Act, the Resource Conservation and Recovery Act and the Toxic Substances Control Act, affect our business. These and other laws govern the use, handling and disposal of various biologic, chemical and radioactive substances used in, and wastes generated by, operations. If our operations result in contamination of the environment or expose individuals to hazardous substances, we could be liable for damages and governmental fines. Equivalent laws have been adopted in other countries that impose similar obligations.

### *U.S. Foreign Corrupt Practices Act*

The U.S. Foreign Corrupt Practices Act, or FCPA, prohibits U.S. corporations and individuals from engaging in certain activities to obtain or retain business abroad or to influence a person working in an official capacity. It is illegal to pay, offer to pay or authorize the payment of anything of value to any foreign government official, government staff member, political party or political candidate in an attempt to obtain or retain business or to otherwise influence a person working in an official capacity. The scope of the FCPA includes interactions with certain healthcare professionals in many countries. Equivalent laws have been adopted in other foreign countries that impose similar obligations.

## Employees and Human Capital Resources

As of December 31, 2024, we had 169 full-time employees, including 52 who hold Ph.D. or M.D. degrees. Of these full-time employees, 135 employees are engaged in research and development and 34 employees are engaged in management or general and administrative activities. All of our employees are based in the United States. None of our employees are subject to a collective bargaining agreement or represented by a trade or labor union. We consider our relationship with our employees to be good.

### *Diversity and Inclusion*

At Keros, diversity means making a conscious effort to reflect the many experiences and identities of the world outside, while treating each other with fairness and without bias. Inclusion is the choice we make every day to foster an environment where people of all backgrounds not only belong but excel, so that together, as a company, we can succeed. Keros strives to foster an inclusive community, both inside and out of the office.

### *Retention, Training and Development*

The development, attraction and retention of our employees is a critical success factor for Keros. We cultivate a culture of learning and offer formal and informal training and development opportunities for employees at all levels. We actively promote from within and continue to fill our team with strong and experienced management talent.

### *Compensation and Benefits*

An important part of attracting and retaining key talent is competitive pay and benefits. To ensure our compensation and benefits programs are competitive, we engage a nationally recognized outside compensation and benefits consulting firm to independently evaluate the effectiveness of our programs and to provide benchmarking against our peers within the industry. Our pay for performance philosophy seeks to motivate and reward employees while accomplishing our short and long-term strategic goals. As part of our performance management process, employees are evaluated both on what they accomplished and on their experience managing and mentoring other employees. Annual salary increases and incentive bonuses are based on merit and include individual and corporate performance factors.

To encourage our employees to think like owners and share in the Company's success, all employees are granted stock options. All employees are eligible for health insurance, paid and unpaid leaves including paid parental leave, retirement plans with an employer contribution match and life and disability/accident coverage. Additionally, to continually develop and facilitate the growth of our employees, we also offer all full-time employees the option to participate in our education assistance program, where we reimburse employees for a portion of tuition fees and eligible expenses.

### *Conduct and Ethics*

At Keros, we are committed to fostering a culture of integrity and ensuring each of our employees is equipped with resources to help them do the right thing. We believe it is imperative that the board of directors and senior management strongly support a no-tolerance stance for workplace harassment, biases and unethical behavior. All employees are required to abide by, review and confirm compliance to the Company's Code of Business Conduct and Ethics and Insider Trading policies upon hire and on an annual basis thereafter.

## Corporate Information

We were originally incorporated under the laws of the State of Delaware under the name Keros Therapeutics, Inc. in December 2015. Our principal executive office is located at 1050 Waltham Street, Suite 302, Lexington, Massachusetts 02421. Our telephone number is (617) 314-6297. We completed our initial public offering in April 2020 and our common stock is listed on the Nasdaq Global Market under the symbol "KROS."

## Available Information

Our website address is www.kerostx.com and our investor relations website address is https://ir.kerostx.com. Our Annual Reports on Form 10-K, Quarterly Reports on Form 10-Q, current reports on Form 8-K and amendments to those reports filed or furnished pursuant to Sections 13(a) and 15(d) of the Securities Exchange Act of 1934, as amended, or the Exchange Act, are available free of charge on our investor relations website as soon as reasonably practicable after we electronically file such material with, or furnish it to, the Securities and Exchange Commission, or the SEC. The SEC maintains an internet site

that contains reports, proxy and information statements and other information. The address of the SEC's website is www.sec.gov.

Further corporate governance information, including our corporate governance guidelines and board committee charters, is also available on our investor relations website under the heading "Corporate Governance." The contents of our websites are not intended to be incorporated by reference into this Annual Report on Form 10-K or in any other report or document we file with the SEC, and any references to our websites are intended to be inactive textual references only.

## ITEM 1A. RISK FACTORS

*Our business is subject to numerous risks. You should consider carefully the risks and uncertainties described below, in addition to other information contained in this Annual Report on Form 10-K as well as our other public filings with the Securities and Exchange Commission, or the SEC. Any of the following risks could have a material adverse effect on our business, financial condition, results of operations and growth prospects and cause the trading price of our common stock to decline.*

### SUMMARY OF SELECTED RISKS ASSOCIATED WITH OUR BUSINESS

Our business faces significant risks and uncertainties. If any of the following risks are realized, our business, financial condition and results of operations could be materially and adversely affected. Some of the more significant risks include the following:

- We have a limited operating history, have incurred net losses in every year since our inception and anticipate that we will continue to incur net losses in the future.
- We will need substantial additional funding in order to complete the development and commence commercialization of our product candidates. Failure to obtain this necessary capital when needed may force us to delay, reduce or eliminate certain of our product development or research operations.
- We are heavily dependent on the success of our product candidates, which are in clinical development. If we are unable to advance our current or future product candidates through clinical trials, obtain marketing approval and ultimately commercialize any product candidates we develop, or experience significant delays in doing so, our business will be materially harmed.
- All of our product candidates are in preclinical or clinical development stages. Clinical trials are difficult to design and implement, and they involve a lengthy and expensive process with uncertain outcomes. We may experience delays in completing, or ultimately be unable to complete, the development and commercialization of cibotercept (KER-012), KER-065, elritercept (KER-050) or any future product candidates.
- If we are unable to successfully commercialize any product candidate for which we receive regulatory approval, or experience significant delays in doing so, our business will be materially harmed.
- We face significant competition from other biotechnology and pharmaceutical companies, and our operating results will suffer if we fail to compete effectively.
- Our success depends in part on our ability to protect our intellectual property. It is difficult and costly to protect our proprietary rights and technology, and we may not be able to ensure their protection.
- We rely, and expect to continue to rely, on third parties, including independent clinical investigators, contracted laboratories and contract research organizations, to conduct our preclinical studies and clinical trials. If these third parties do not successfully carry out their contractual duties 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 rely on third parties to supply and manufacture our product candidates, and we expect to continue to rely on third parties to manufacture our products, if approved. The development of such product candidates and the commercialization of any products, if approved, could be stopped, delayed or made less profitable if any such third party fails to provide us with sufficient quantities of product candidates or products or fails to do so at acceptable quality levels or prices or fails to maintain or achieve satisfactory regulatory compliance.
- We are dependent on our existing third-party collaborations with Takeda Pharmaceuticals U.S.A., Inc., or Takeda, and Hansoh (Shanghai) Healthtech Co., Ltd., or Hansoh, to commercial elritercept, and if Takeda and Hansoh are not successful in commercializing elritercept in their respective licensed territories, we will lose a significant source of potential revenue.
- Our current and future collaborations are and will be important to our business. If we are unable to enter into new collaborations, or if these or our current collaborations are not successful, our business could be adversely affected.

- Public health crises could adversely impact our business, including the timing or results of our preclinical studies and clinical trials.

## Risks Related to Our Financial Position and Need for Additional Capital

***We have a limited operating history, have incurred net losses in every year since our inception and anticipate that we will continue to incur net losses in the future.***

We are a clinical-stage biopharmaceutical company with a limited operating history. Since our inception in 2015, we have invested most of our resources in developing our product candidates, building our intellectual property portfolio, developing our supply chain, conducting business planning, raising capital and providing general and administrative support for these operations. Consequently, we have no meaningful operations upon which to evaluate our business and predictions about our future success or viability may not be as accurate as they could be if we had a longer operating history or a history of successfully developing and commercializing drug products. Investment in biopharmaceutical product development is highly speculative because it entails substantial upfront capital expenditures and significant risk that any potential product candidate will fail to demonstrate adequate effect or an acceptable safety profile, gain regulatory approval and become commercially viable. We have not yet demonstrated the ability to progress any product candidate through late-stage clinical trials, we have no products approved for commercial sale and we have not generated any revenue from product sales to date. We continue to incur significant research and development and other expenses related to our ongoing operations. As a result, we are not profitable and have incurred losses in each period since our inception. For the years ended December 31, 2024 and 2023, we reported a net loss of $187.4 million and $153.0 million, respectively. As of December 31, 2024, we had an accumulated deficit of $568.8 million. We expect to continue to incur significant losses for the foreseeable future, and we expect these losses to increase as we continue our research and development of, and seek regulatory approvals for, our lead product candidate, cibotercept, our second product candidate, KER-065, our most advanced product candidate, elritercept, and any future product candidates we may develop.

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

- progress and complete our ongoing Phase 2 clinical trial of cibotercept in patients with pulmonary arterial hypertension, or PAH;
- progress and complete our ongoing Phase 1 clinical trial of KER-065 in healthy volunteers;
- commence a Phase 3 clinical trial of elritercept in patients with lower-risk myelodysplastic syndrome, or MDS;
- continue the research and development of our other clinical- and preclinical-stage product candidates and discovery-stage programs;
- increase the amount of research and development activities to identify and develop product candidates using our proprietary discovery approach;
- make milestone, royalty or other payments under in-license or collaboration agreements;
- maintain, expand and protect our intellectual property portfolio;
- expand our operational, financial and management systems and increase personnel, including personnel to support our clinical development, manufacturing and commercialization efforts and our operations as a public company;
- establish a sales, marketing, medical affairs and distribution infrastructure to commercialize any products for which we may obtain marketing approval and intend to commercialize on our own or jointly with third parties;
- invest in or in-license other technologies; and
- experience any delays or encounter any issues with any of the above, including but not limited to failed studies, complex results, manufacturing challenges, safety issues or other regulatory challenges.

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

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

***We will need substantial additional funding in order to complete the development and commence commercialization of our product candidates. Failure to obtain this necessary capital when needed may force us to delay, reduce or eliminate certain of our product development or research operations.***

To date, we have funded our operations primarily through private placements of our equity securities, upfront and expense reimbursement payments received from our collaborators, from our initial public offering, or IPO, in April 2020, from our public offerings of common stock in November 2020 and January 2024, and from our "at the market offering," in connection with our Sales Agreement with Leerink Partners LLC, or Leerink, as agent, pursuant to which we may offer and sell, from time to time, shares of our common stock having an aggregate offering price of up to $350.0 million through Leerink, or the ATM Offering. We expect our expenses to increase in connection with our ongoing activities, particularly as we progress and complete our Phase 2 clinical trial of cibotercept in patients with PAH and our Phase 1 clinical trial of KER-065 in healthy volunteers, and continue to research, develop and initiate clinical trials of any other future product candidates. In addition, if we obtain regulatory approval for any of our product candidates, we expect to incur significant commercialization expenses related to product manufacturing, marketing, sales and distribution. Furthermore, we expect to incur additional costs associated with operating as a public company. Accordingly, we will need to obtain substantial additional funding in connection with our continuing operations. If we are unable to raise capital when needed or on attractive terms, we could be forced to delay, reduce or eliminate our product development programs or any future commercialization efforts.

As of December 31, 2024, we had $559.9 million in cash and cash equivalents. Based on our current operating assumptions, we expect that our existing cash and cash equivalents as of December 31, 2024, together with the $200.0 million upfront payment pursuant to the license agreement with Takeda, or the Takeda Agreement, which we received in February 2025, will enable us to fund our operating expenses and capital expenditure requirements into 2029. We have based this estimate on assumptions that may prove to be wrong, and we could use our capital resources sooner than we currently expect. Our future capital requirements for cibotercept, KER-065, elritercept or our other preclinical programs will depend on many factors, including:

- the progress, timing and completion of preclinical studies and clinical trials for our current or any future product candidates, as well as the associated costs, including any unforeseen costs we may incur as a result of preclinical study or clinical trial delays due to public health crises or other causes;
- the timing and amount of milestone and royalty payments we are required to make or are eligible to receive under our license agreements with each of The General Hospital Corporation and Hansoh (Shanghai) Healthtech Co., Ltd., or Hansoh;
- the number of potential new product candidates we identify and decide to develop;
- the need for additional or expanded preclinical studies and clinical trials beyond those that we plan to conduct with respect to our current and future product candidates;
- the costs involved in growing our organization to the size needed to allow for the research, development and potential commercialization of our current or any future product candidates;
- the costs involved in filing patent applications, maintaining and enforcing patents or defending against infringement or other claims raised by third parties;
- the maintenance of our existing license and collaboration agreements and the entry into new license and collaboration agreements;
- the time and costs involved in obtaining regulatory approval for our product candidates and any delays we may encounter as a result of evolving regulatory requirements or adverse results with respect to any of our product candidates;
- the effect of competing technological and market developments;
- the cost of manufacturing cibotercept, KER-065, elritercept and future product candidates for clinical trials in preparation for marketing approval applications and in preparation for commercialization;
- the cost of establishing sales, marketing and distribution capabilities for any product candidates for which we may receive regulatory approval in regions where we choose to commercialize our products, if approved, on our own;
- the amount of revenues, if any, we may derive either directly or in the form of royalty payments from future sales of our product candidates, if approved; and
- market acceptance of any approved product candidates.

We do not have any committed external source of funds or other support for our development efforts and we cannot be certain that additional funding will be available on acceptable terms, or at all. Further, in the event that the Takeda Agreement is terminated, we may not receive any additional fees or milestone payments under that agreement. Absent the funding support obtained under the Takeda Agreement, our further development of elritercept would require significant additional capital from us, or the establishment of alternative collaborations with third parties, which may not be possible. Until we can generate sufficient product or royalty revenue to finance our cash requirements, which we may never do, we expect to finance our future cash needs through a combination of public or private equity offerings, debt financings, collaborations, strategic alliances, licensing arrangements and other marketing or distribution arrangements.

Our ability to raise additional funds will depend on financial, economic and market conditions and other factors, over which we may have no or limited control. Disruptions in the financial markets in general, geopolitical conflicts and economic instability, 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. If we are unable to obtain additional funding, we could be forced to delay, reduce or eliminate some or all of our research and development programs and clinical development efforts, which would adversely affect our business prospects, or we may be unable to continue operations.

***Raising additional capital may cause dilution to holders of our common stock, 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 operations with our existing cash and cash equivalents and revenue from our collaborations. In order to further advance development of our product candidates, discover additional product candidates and pursue our other business objectives, we will need to seek additional funds.

We cannot guarantee that future financing will be available in sufficient amounts or on commercially reasonable terms, if at all. Moreover, the terms of any financing may adversely affect the holdings or the rights of holders of our common stock 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 common stock to decline. The sale of additional common stock or securities convertible or exchangeable into common stock would dilute all of our existing stockholders and the terms of these securities may include liquidation or other preferences that adversely affect your rights as a holder of our common stock. The incurrence of indebtedness could 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 or declare dividends, 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. If we raise additional capital through marketing and distribution arrangements or other collaborations, strategic alliances or licensing arrangements with third parties, we may have to relinquish certain valuable rights to our product candidates, technologies, future revenue streams or research programs or grant licenses on terms that may not be favorable to us. We also could be required to seek collaborators for cibotercept, KER-065, elritercept or any future product candidate at an earlier stage than otherwise would be desirable or relinquish our rights to product candidates or technologies that we otherwise would seek to develop or commercialize ourselves. Further, any additional fundraising efforts may divert our management from its day-to-day activities, which may adversely affect our ability to develop and commercialize our product candidates.

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

### Risks Related to the Discovery, Development and Regulatory Approval of our Product Candidates

***We are heavily dependent on the success of our product candidates, which are in clinical development. If we are unable to advance our current or future product candidates through clinical trials, obtain marketing approval and ultimately commercialize any product candidates we develop, or experience significant delays in doing so, our business will be materially harmed.***

Before obtaining marketing approval from regulatory authorities for the sale of our product candidates, we must conduct extensive clinical trials to demonstrate the safety and efficacy of the product candidates in humans. We are early in our product candidate development efforts, as cibotercept, KER-065 and elritercept are still in clinical trials. If any of elritercept, cibotercept or KER-065 encounters safety or efficacy problems, development delays or regulatory issues or other problems, our development plans and business would be significantly harmed. For example, in January 2025, we announced the early termination of our Phase 2 clinical trial evaluating cibotercept in patients with PAH, which we refer to as the TROPOS trial, based on an ongoing safety review due to the unanticipated observation of pericardial effusion adverse events in the trial. Following completion of the TROPOS trial, we plan to evaluate the appropriate development strategy for cibotercept, including in PAH and other potential indications.

Our ability to generate product revenues, which we do not expect will occur for several years, if ever, will depend heavily on the successful development and eventual commercialization of cibotercept, KER-065, elritercept and any future product candidates we develop, which may never occur. Cibotercept, KER-065, elritercept and any future product candidates we develop will require additional preclinical and clinical development, management of clinical, preclinical and manufacturing activities, marketing approval in the United States and other jurisdictions for specific indications for use, demonstrating effectiveness to pricing and reimbursement authorities, obtaining sufficient manufacturing supply for both clinical development and commercial production, building of a commercial organization and substantial investment and significant marketing efforts before we generate any revenues from product sales. The success of our current and future product candidates will depend on several factors, including the following:

- successful and timely completion of clinical trials and preclinical studies for which the U.S. Food and Drug Administration, or the FDA, or any comparable foreign regulatory authority agree with the design, endpoints or implementation;
- sufficiency of our financial and other resources to complete the necessary preclinical studies and clinical trials;
- receiving regulatory approvals or authorizations for conducting our planned clinical trials or future clinical trials;

- commencement of and successful patient enrollment in, and completion of, additional clinical trials on a timely basis;
- our ability to demonstrate to the satisfaction of the FDA or any comparable foreign regulatory authority that the applicable product candidate is safe and effective as a treatment for our targeted indications or, in the case of an applicable product candidate which is regulated as a biological product, that the applicable product candidate is safe, pure, and potent for our targeted indications;
- our ability to demonstrate to the satisfaction of the FDA or any comparable foreign regulatory authority that the applicable product candidate's risk-benefit ratio for its proposed indication is acceptable;
- timely receipt of marketing approvals for our product candidates from applicable regulatory authorities;
- the extent of any required post-marketing approval commitments to applicable regulatory authorities;
- establishing and scaling up, either alone or with third-party manufacturers, manufacturing capabilities of clinical supply for our clinical trials and commercial manufacturing, if any of our product candidates are approved;
- obtaining and maintaining patent and trade secret protection or regulatory exclusivity for our product candidates, both in the United States and internationally;
- successfully scaling a sales and marketing organization and launching commercial sales of our product candidates, if approved;
- acceptance of our product candidates' benefits and uses, if approved, by patients, the medical community and third-party payors;
- maintaining a continued acceptable safety profile of our product candidates following approval;
- effectively competing with companies developing and commercializing other therapies in the indications which our product candidates target;
- obtaining and maintaining healthcare coverage and adequate reimbursement from third-party payors; and
- enforcing and defending intellectual property rights and claims.

If we are not successful with respect to one or more of these factors in a timely manner or at all, we could experience significant delays or an inability to successfully commercialize cibotercept, KER-065, elritercept or any future product candidates we develop, which would materially harm our business. If we do not receive marketing approvals for our current and future product candidates, we may not be able to continue our operations.

***All of our product candidates are in preclinical or clinical development stages. Clinical trials are difficult to design and implement, and they involve a lengthy and expensive process with uncertain outcomes. We may experience delays in completing, or ultimately be unable to complete, the development and commercialization of cibotercept, KER-065, elritercept or any future product candidates.***

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 and our future clinical trial results may not be successful. We cannot guarantee that any of our ongoing and planned clinical trials will be conducted as planned or completed on schedule, if at all. Moreover, even if these trials are initiated or conducted on a timely basis, issues may arise that could result in the suspension or termination of such clinical trials. For example, in January 2025, we announced the early termination of our TROPOS trial evaluating cibotercept in patients with PAH, based on an ongoing safety review due to the unanticipated observation of pericardial effusion adverse events in the trial.

To date, we have not completed any pivotal clinical trials required for the approval of any of our product candidates. Although we have completed our Phase 1 clinical trial of elritercept and our Phase 1 clinical trial of cibotercept, both in healthy volunteers, we may experience delays in our ongoing clinical trials or preclinical studies and we do not know whether planned clinical trials will begin on time, need to be redesigned, enroll patients on time, have sufficient drug supply for our product candidates on a timely basis or be completed on schedule, if at all. A failure of one or more clinical trials can occur at any stage of testing, and our ongoing and future clinical trials may not be successful. We also may experience numerous unforeseen events during our clinical trials that could delay or prevent our ability to receive marketing approval or commercialize cibotercept, KER-065, elritercept or any future product candidates, including:

- delays in or failure to obtain regulatory authorizations to commence a trial;
- delays in reaching a consensus with regulatory agencies as to the design or implementation of our clinical trials;
- delays in or failure to reach agreement on acceptable terms with prospective contract research organizations, or CROs, and clinical trial sites, the terms of which can be subject to extensive negotiation and may vary significantly among different CROs and trial sites;
- delays in or failure to obtain institutional review board, or IRB, or positive ethics committee opinions at each site;
- delays in or failure to recruit a sufficient number of suitable patients to participate in a trial;
- failure to have patients complete a trial or return for post-treatment follow-up, including disruptions in our ability to treat patients or conduct post-treatment follow-up due to public health crises;
- clinical sites deviating from trial protocol, missing data or dropping out of a trial;
- delays in adding new clinical trial sites;
- failure to manufacture sufficient quantities of our product candidates for use in clinical trials in a timely manner;
- occurrence of adverse events associated with the product candidate that are viewed to outweigh its potential benefits, or safety or tolerability concerns that could cause us or our collaborators, as applicable, to suspend or terminate a trial if we or our collaborators find that the participants are being exposed to unacceptable health risks;

- failure to perform clinical trials in accordance with the FDA's or any comparable foreign regulatory authority's good clinical practices, or GCP, requirements, or regulatory guidelines in other countries;
- changes in regulatory requirements, policies and guidelines;
- failure of our third-party research contractors to comply with regulatory requirements or meet their contractual obligations to us in a timely manner, or at all;
- delays in establishing the appropriate dosage levels and frequency of dosing in clinical trials;
- the quality or stability of our product candidates falling below acceptable standards; and
- business interruptions resulting from geopolitical actions, including war, such as the current Russia-Ukraine war and the war in Israel, and terrorism or the perception that such hostilities may be imminent, another outbreak of a contagious disease, or natural disasters including earthquakes, typhoons, floods and fires.

In addition, public health crises may increase the likelihood that we encounter additional difficulties and delays in the future. We could also encounter delays if a clinical trial is suspended or terminated by us, the IRBs of the institutions in which such trials are being conducted, or the FDA or comparable foreign regulatory authorities, or recommended for suspension or termination by the Safety Review Committee for such trial. A suspension or termination may be imposed due to a number of factors, including failure to conduct the clinical trial in accordance with regulatory requirements or our clinical protocols, inspection of the clinical trial operations or trial site by the FDA or comparable foreign regulatory authorities resulting in the imposition of a clinical hold, unforeseen safety issues or adverse side effects, failure to demonstrate a benefit from using a product or treatment, failure to establish or achieve clinically meaningful trial endpoints, changes in governmental regulations or administrative actions or lack of adequate funding to continue the clinical trial. Many of the factors that cause, or lead to, a delay in the commencement or completion of clinical trials may also ultimately lead to the denial of regulatory approval of our product candidates. Further, the FDA or comparable foreign regulatory authorities may disagree with our clinical trial design and our interpretation of data from clinical trials, or may change the requirements for approval even after they have reviewed and commented on the design for our clinical trials.

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

***Our clinical trials may fail to demonstrate substantial evidence of the safety and efficacy or safety, purity and potency of our product candidates or any future product candidates, which would prevent or delay or limit the scope of regulatory approval and commercialization.***

To obtain the requisite regulatory approvals to market and sell any of our product candidates, including cibotercept, KER-065, elritercept and any other future product candidates, we must demonstrate through extensive preclinical studies and clinical trials that our investigational drug products are safe and effective for use in each targeted indication, and in the case of our product candidates regulated as biological products, such as cibotercept, KER-065 and elritercept, that the product candidate is safe, pure and potent for use in its targeted 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 development process. Most product candidates that begin clinical trials are never approved by regulatory authorities for commercialization. We may be unable to establish clinical endpoints that applicable regulatory authorities would consider clinically meaningful, and a clinical trial can fail at any stage of testing. Further, the process of obtaining regulatory approval is expensive, often takes many years following the commencement of clinical trials and can vary substantially based upon the type, complexity and novelty of the product candidates involved, as well as the target indications, patient population and regulatory agency. Prior to obtaining approval to commercialize cibotercept, KER-065, elritercept and any future product candidates in the United States or abroad, we, our collaborators or our potential future collaborators must demonstrate with substantial evidence from adequate and well-controlled clinical trials, and to the satisfaction of the FDA or comparable foreign regulatory authorities, that such product candidates are safe and effective for their intended uses.

Clinical trials that we conduct may not demonstrate the efficacy and safety necessary to obtain regulatory approval to market our product candidates. In some instances, there can be significant variability in safety or efficacy results between different clinical trials of the same product candidate due to numerous factors, including changes in trial procedures set forth in protocols, differences in the size and type of the patient populations, changes in and adherence to the clinical trial protocols and the rate of dropout among clinical trial participants. If the results of our ongoing or future clinical trials are inconclusive with respect to the efficacy of our product candidates, if we do not meet the clinical endpoints with statistical and clinically meaningful significance, or if there are safety concerns associated with our product candidates, we may be delayed in obtaining marketing approval, if at all. Additionally, any safety concerns observed in any one of our clinical trials in our targeted indications could limit the prospects for regulatory approval of our product candidates in those and other indications. For example, in January 2025, we announced the early termination of our TROPOS trial evaluating cibotercept in patients with PAH, based on an ongoing safety review due to the unanticipated observation of pericardial effusion adverse events in the trial.

Even if the trials are successfully completed, clinical data are often susceptible to varying interpretations and analyses, and we cannot guarantee that the FDA or comparable foreign regulatory authorities will interpret the results as we do, and more trials could be required before we submit our product candidates for approval. We cannot guarantee that the FDA or comparable foreign regulatory authorities will view our product candidates as having efficacy even if positive results are observed in clinical trials. Moreover, results acceptable to support approval in one jurisdiction may be deemed inadequate by another regulatory authority to support regulatory approval in that other jurisdiction. To the extent that the results of the trials are not satisfactory to the FDA or comparable foreign regulatory authorities for support of a marketing application, approval of cibotercept, KER-065, elritercept and any future product candidates may be significantly delayed, or we may be required to expend significant additional resources, which may not be available to us, to conduct additional trials in support of potential approval of our product candidates. Even if regulatory approval is secured for a product candidate, the terms of such approval may limit the scope and use of the specific product candidate, which may also limit its commercial potential.

***The results of preclinical studies and early-stage clinical trials of our product candidates may not be predictive of the results of later-stage clinical trials. Initial success in our ongoing clinical trials may not be indicative of results obtained when these trials are completed or in later-stage trials.***

The results of nonclinical and preclinical studies and clinical trials may not be predictive of the results of later-stage clinical trials. Product candidates in later stages of clinical trials may fail to show the desired safety and efficacy traits despite having progressed through preclinical studies and initial clinical trials. For example, in a Phase 1 clinical trial evaluating cibotercept in healthy volunteers, cibotercept was generally well tolerated at doses up to 4.5 mg/kg, and there were no reported pericardial effusion adverse events. However, in January 2025, we announced the early termination of our TROPOS trial evaluating cibotercept in patients with PAH, based on an ongoing safety review due to the unanticipated observation of pericardial effusion adverse events in the trial. Furthermore, there can be no assurance that any of our clinical trials will ultimately be successful or support further clinical development of any of our product candidates. There is a high failure rate for product candidates proceeding through clinical trials. Many companies in the biotechnology and pharmaceutical industries have suffered significant setbacks in late-stage clinical trials after achieving positive results in early-stage development and we cannot be certain that we will not face similar setbacks. These setbacks have been caused by, among other things, preclinical findings made while clinical trials were underway, or safety or efficacy observations made in preclinical studies and clinical trials, including previously unreported adverse events. Moreover, preclinical and clinical data are often susceptible to varying interpretations and analyses and many companies that believed their product candidates performed satisfactorily in preclinical studies and clinical trials nonetheless failed to obtain FDA or comparable foreign regulatory authority approval. Any such setbacks in our clinical development could have a material adverse effect on our business, financial condition and results of operations.

Additionally, some of the clinical trials we conduct may include open-label trials conducted at a limited number of clinical sites on a limited number of patients. For example, our ongoing Phase 2 clinical trials for elritercept, one in patients with lower-risk MDS and one in patients with myelofibrosis, are open-label trials. An “open-label” clinical trial is one where both the patient and investigator know whether the patient is receiving the investigational product candidate or either an existing approved product or placebo. Most typically, open-label clinical trials test only the investigational product candidate and sometimes may do so at different dose levels. For example, in our ongoing Phase 2 clinical trial for elritercept in patients with lower-risk MDS, the dose levels for Cohorts 1, 2, 3, 4 and 5 of Part 1 of the trial were 0.75 mg/kg, 1.5 mg/kg, 2.5 mg/kg, 3.75 mg/kg and 5.0 mg/kg, respectively.

Open-label clinical trials are also subject to various limitations that may exaggerate any therapeutic effect as patients in open-label clinical trials are aware when they are receiving treatment. Open-label clinical trials may be subject to a “patient bias” where patients perceive their symptoms to have improved merely due to their awareness of receiving an experimental treatment. Moreover, patients selected for early-stage clinical trials often include the most severe sufferers and their symptoms may have been bound to improve notwithstanding the new treatment. In addition, open-label clinical trials may be subject to an “investigator bias” where those assessing and reviewing the physiological outcomes of the clinical trials are aware of which patients have received treatment and may interpret the information of the treated group more favorably given this knowledge. Given that two open-label Phase 2 clinical trials are ongoing for elritercept, one in patients with lower-risk MDS and one in patients with myelofibrosis, the results from these clinical trials may not be predictive of future clinical trial results with these or other product candidates for which we include an open-label clinical trial, when studied in a controlled environment with a placebo or active control.

***Our product candidates may be associated with serious adverse, undesirable or unacceptable side effects or other properties or safety risks, which may delay or halt their clinical development, or prevent marketing approval. If such side effects are identified during the development of our product candidates or following approval we may suspend or abandon our development of such product candidates, the commercial profile of any approved label may be limited, or we may be subject to other significant negative consequences following marketing approval.***

Undesirable side effects that may be caused by our product candidates could cause us or regulatory authorities to interrupt, delay or halt clinical trials and could result in a more restrictive label or the delay or denial of regulatory approval by the FDA or comparable foreign regulatory authorities. For example, in December 2024, we announced that we voluntarily halted dosing in the 3.0 mg/kg and 4.5 mg/kg treatment arms in our TROPOS trial evaluating cibotercept in patients with PAH based on a safety review due to the unanticipated observation of pericardial effusion adverse events at those dose levels.

Subsequently, we announced in January 2025 that we voluntarily halted all dosing in the TROPOS trial, including the 1.5 mg/kg and placebo treatment arms, based on the ongoing safety review due to new observations of pericardial effusion adverse events. While KER-065 and elritercept have generally been well tolerated in our preclinical studies and clinical trials to date, the results from future preclinical studies and clinical trials, including of cibotercept and our other product candidates, may identify additional safety concerns or other undesirable properties of our product candidates.

The results of our ongoing Phase 2 clinical trials of elritercept, our ongoing Phase 1 clinical trial of KER-065 and future clinical trials of these and other product candidates, including cibotercept, may show that our product candidates cause undesirable or unacceptable side effects or even death. In such an event, our trials could be suspended or terminated and the FDA or comparable foreign regulatory authorities could order us to cease further development of or deny approval of our product candidates for any or all targeted indications. The drug-related side effects could affect patient recruitment or the ability of enrolled patients to complete the trial or result in potential product liability claims. Any of these occurrences may harm our business, financial condition and results of operations significantly.

Moreover, if our product candidates are associated with undesirable side effects in preclinical studies or clinical trials or have characteristics that are unexpected, we may elect to abandon their development or limit their development to more narrow uses or subpopulations in which the undesirable side effects or other characteristics are less prevalent, less severe or more acceptable from a risk-benefit perspective, which may limit the commercial expectations for the product candidate, if approved. For example, following completion of the TROPOS trial, we plan to evaluate the appropriate development strategy for cibotercept, including in PAH and other potential indications.

Additionally, adverse developments in clinical trials of pharmaceutical and biopharmaceutical products conducted by others may cause the FDA or other foreign regulatory oversight bodies to suspend or terminate our clinical trials or to change the requirements for approval of any of our product candidates.

In addition, if any of our product candidates receives marketing approval and we or others later identify undesirable or unacceptable side effects caused by such products, a number of potentially significant negative consequences could result, including:

- regulatory authorities may withdraw approvals of such product and require us to take our approved product off the market;
- regulatory authorities may require the addition of labeling statements, specific warnings, a contraindication or field alerts to physicians and pharmacies;
- regulatory authorities may require a medication guide outlining the risks of such side effects for distribution to patients, or that we implement a risk evaluation and mitigation strategy, or REMS, plan to ensure that the benefits of the product outweigh its risks;
- we may be required to conduct additional clinical trials, which may lead to additional interactions with regulatory authorities;
- we may be required to change the way the product is administered, conduct additional clinical trials or change the labeling of the product;
- we may be subject to limitations on how we may promote the product;
- sales of the product may decrease significantly;
- we may be subject to litigation or product liability claims; and
- our reputation may suffer.

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

***We may find it difficult to enroll patients in our clinical trials, which could delay or prevent us from proceeding with, or otherwise adversely affect, clinical trials of our product candidates.***

Identifying and qualifying patients to participate in clinical trials of our product candidates is critical to our success. The timely completion of our clinical trials in accordance with their protocols depends, among other things, on our ability to recruit a sufficient number of eligible patients to participate and remain in the trial until its conclusion. Patients may be unwilling to participate in our clinical trials because of negative publicity from adverse events related to novel therapeutic approaches, competitive clinical trials for similar patient populations, the existence of current treatments or for other reasons, including public health crises. For example, the unanticipated observation of pericardial effusion adverse events in our TROPOS trial evaluating cibotercept in patients with PAH may impact our ability to enroll patients in any future clinical trials of cibotercept. Any delays related to patient enrollment or difficulties related to patient retention could result in increased costs, delays in advancing our product candidates, delays in testing the effectiveness of our product candidates or termination of the clinical trials altogether. We may not be able to identify, recruit and enroll a sufficient number of patients, or those with the required or desired characteristics, to complete our clinical trials in a timely manner. Patient enrollment and trial completion is affected by many factors, including the:

- size and nature of the patient population and process for identifying patients;

- proximity and availability of clinical trial sites for prospective patients;
- ability of patients to travel to clinical trial sites;
- eligibility and exclusion criteria for the trial;
- design of the clinical trial;
- safety profile, to date, of the product candidate under study;
- perceived risks and benefits of the product candidate under study;
- perceived risks and benefits of our approach;
- approval of competing product candidates currently under investigation for the treatment of similar diseases or conditions, or competing clinical trials for similar product candidates or targeting patient populations meeting our patient eligibility criteria;
- severity of the disease under investigation;
- degree of progression of the patient's disease at the time of enrollment and throughout the clinical trial;
- ability to obtain and maintain patient consent;
- risk that enrolled patients will drop out before completion of the trial;
- patient referral practices of physicians; and
- ability to adequately monitor patients during and after treatment.

Enrollment risks are heightened with respect to indications that are rare or orphan diseases, which may limit the pool of patients that may be enrolled in our planned clinical trials. In addition, our clinical trials will compete with other clinical trials for product candidates that are in the same therapeutic areas as our product candidates, and this competition will reduce the number and types of patients available to us, because some patients who might have opted to enroll in our trials may instead opt to enroll in a trial being conducted by one of our competitors. Since the number of qualified clinical investigators is limited, we expect to conduct some of our clinical trials at the same clinical trial sites that some of our competitors use, which will reduce the number of patients who are available for our clinical trials in such clinical trial site.

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

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

From time to time, we may publish interim, topline or preliminary data from our clinical trials. Preliminary and interim data from our clinical trials may change as more participant data become available. For example, in June 2021, we announced preliminary results from Cohorts 1 and 2 of our Phase 2 clinical trial evaluating elritercept for the treatment of anemia and thrombocytopenia in patients with lower-risk MDS, which only included a small subset of the patients expected to be enrolled in the trial. We also announced additional preliminary efficacy results from Parts 1 and 2 of that trial most recently in December 2024. Preliminary or interim data from our clinical trials are not necessarily predictive of final results. Preliminary and interim data are subject to the risk that one or more of the clinical outcomes may materially change as enrollment continues, more trial data become available and we issue our final clinical trial report. Interim, topline and preliminary data also remain subject to audit and verification procedures that may result in the final data being materially different from the preliminary data we previously published. As a result, preliminary, topline and interim data should be viewed with caution until the final data are available. Material adverse changes in the final data compared to the interim data could significantly harm our business prospects.

Further, others, including regulatory agencies, may not accept or agree with our assumptions, estimates, calculations, conclusions or analyses or may interpret or weigh the importance of data differently, which could impact the value of the particular program, the approvability or commercialization of the particular product candidate or product, if any, and our company in general. In addition, the information we choose to publicly disclose regarding a particular preclinical study or clinical trial is based on what is typically extensive information, and you or others may not agree with what we determine is the material or otherwise appropriate information to include in our disclosure, and any information we determine not to disclose may ultimately be deemed significant with respect to future decisions, conclusions, views, activities or otherwise regarding a particular product, if any, product candidate or our business. If the preliminary and interim data that we report differ from actual results, or if others, including regulatory authorities, disagree with the conclusions reached, our ability to obtain approval for, and commercialize, our product candidates may be harmed, which could harm our business, operating results, prospects or financial condition.

***Preclinical development is uncertain. Our preclinical programs may experience delays or may never advance to clinical trials, which would adversely affect our ability to obtain regulatory approvals or commercialize these programs on a timely basis or at all, which would have an adverse effect on our business.***

Before we can commence clinical trials for any product candidate, we must complete extensive preclinical studies that support any future Investigational New Drug, or IND, applications in the United States, or similar applications in other jurisdictions. All of our completed clinical trials have, to date, been conducted outside of the United States. However, we submitted and cleared an IND with the FDA for our Phase 2 clinical trial for elritercept in patients with MDS in October 2022,

submitted and cleared an IND with the FDA for our Phase 2 clinical trial for cibotercept in patients with PAH in July 2023 and submitted and cleared an IND with the FDA for our Phase 2 clinical trial for elritercept in patients with myelofibrosis in February 2025. Conducting preclinical testing is a lengthy, time-consuming and expensive process and delays associated with product candidates for which we are directly conducting preclinical testing and studies may cause us to incur additional operating expenses. While we are conducting a Phase 2 clinical trial for elritercept in patients with myelofibrosis and a Phase 1 clinical trial for KER-065 in healthy volunteers outside of the United States, we cannot be certain of the timely completion or outcome of our preclinical testing and studies for our other product candidates and cannot predict if the FDA will accept our proposed clinical programs or if the outcome of our preclinical testing and foreign clinical trials will ultimately support the further development of our other product candidates. As a result, we cannot be sure that we will be able to submit INDs or similar applications for our preclinical programs on the timelines we expect, if at all, and we cannot be sure that submission of INDs or similar applications will result in the FDA or comparable foreign regulatory authorities allowing clinical trials to begin.

***Our research and development activities could be affected or delayed as a result of shortages in animal availability or possible restrictions on animal testing.***

Certain laws and regulations require us to test our product candidates on animals before initiating clinical trials involving humans. Failure to access or a significant delay in accessing animal research models that meet our needs or that fulfill regulatory requirements may materially adversely affect our ability to advance our preclinical and clinical programs and successfully develop our product candidates, and this could result in significant harm to our business.

Additionally, animal testing activities have been the subject of controversy and adverse publicity. Animal rights groups and other organizations and individuals have attempted to stop animal testing activities by pressing for legislation and regulation in these areas and by disrupting these activities through protests and other means. To the extent the activities of these groups are successful, our research and development activities may be interrupted, delayed or become more expensive.

***The regulatory approval processes of the FDA and comparable foreign regulatory authorities are lengthy, time-consuming and inherently unpredictable, and if we are ultimately unable to obtain regulatory approval for our product candidates, our business will be substantially harmed.***

The time required to obtain approval by the FDA and comparable foreign regulatory authorities is unpredictable but typically takes many years following the commencement of clinical trials and depends upon numerous factors, including the substantial discretion of the regulatory authorities. In addition, approval policies, laws or regulations, or the type and amount of clinical data necessary to gain approval may change during the course of a product candidate's clinical development and may vary among jurisdictions. We have not obtained regulatory approval for any product candidate and it is possible that none of our existing product candidates or any product candidates we may seek to develop in the future will ever obtain regulatory approval.

Our product candidates could fail to receive regulatory approval for many reasons, including the following:

- the FDA or comparable foreign regulatory authorities may disagree with the design or implementation of our clinical trials;
- we may be unable to demonstrate to the satisfaction of the FDA or comparable foreign regulatory authorities that a product candidate is safe and effective as a treatment for our targeted indications, or, in the case of a product candidate regulated as a biological product, that the product candidate is safe, pure and potent for its proposed indication;
- the population studied may not be sufficiently broad or representative to assure safety or efficacy in the population for which we seek approval;
- the results of clinical trials may not meet the level of statistical significance required by the FDA or comparable foreign regulatory authorities for approval;
- we may be unable to demonstrate that a product candidate's clinical and other benefits outweigh its safety risks;
- the FDA or comparable foreign regulatory authorities may disagree with our interpretation of data from preclinical studies or clinical trials;
- the FDA or comparable foreign regulatory authorities may require additional preclinical studies or clinical trials beyond those that we currently anticipate;
- the data collected from clinical trials of our product candidates may not be sufficient to support the submission of a New Drug Application, or NDA, or a Biologics License Application, or BLA, as applicable, to the FDA or other submission or to obtain regulatory approval in the United States or elsewhere;
- the FDA or comparable foreign regulatory authorities may find deficiencies with or fail to approve the manufacturing processes or facilities of third-party manufacturers with which we contract for clinical and commercial supplies; and
- the approval policies or regulations of the FDA or any comparable foreign regulatory authorities or the laws they enforce may significantly change in a manner rendering our clinical data insufficient for approval.

This lengthy approval process as well as the unpredictability of future clinical trial results may result in our failing to obtain regulatory approval to market any of our product candidates, which would significantly harm our business, financial condition and results of operations. The FDA and comparable foreign regulatory authorities have substantial discretion in the approval process, and determining when or whether regulatory approval will be obtained for any of our product candidates. Even if we

believe the data collected from clinical trials of our product candidates are promising, such data may not be sufficient to support approval by the FDA or comparable foreign regulatory authorities. If global health concerns such as a pandemic 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 or comparable foreign regulatory authorities to timely review and process our regulatory submissions, which could have a material adverse effect on our business.

In addition, 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, may not approve the price we intend to charge for our products, if any, 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.

***The FDA and any comparable foreign regulatory authorities may not accept data from trials conducted in locations outside of their jurisdiction.***

The acceptance of trial data by the FDA or any comparable foreign regulatory authority from clinical trials conducted outside of their respective jurisdictions may be subject to certain conditions or may not be accepted at all. In cases where data from foreign clinical trials are intended to serve as the 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 are performed by clinical investigators of recognized competence and pursuant to compliance with current GCP requirements and (iii) the FDA is able to validate the data through an on-site inspection or other appropriate mean. Similar requirements and limitations regarding the acceptability of foreign clinical trial data may apply in other countries. Additionally, the FDA's clinical trial requirements, including the adequacy of the patient population studied and statistical powering, must be met. In addition, such foreign trials are 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 applicable foreign regulatory authority will accept data from trials conducted outside of its applicable jurisdiction. If the FDA or any applicable foreign regulatory authority does not accept such data, it would result in the need for additional trials, which would be costly and time-consuming and delay aspects of our business plan, and which may result in our product candidates not receiving approval for commercialization in the applicable jurisdiction.

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

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

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

Any regulatory approvals that we receive for our product candidates may be subject to limitations on the approved indicated uses for which the product may be marketed or to the conditions of approval, or contain requirements for potentially costly post-marketing testing, including Phase 4 clinical trials and surveillance to monitor the safety and efficacy of the product candidate. The FDA may also require a REMS program as a condition of approval of our product candidates, which could entail requirements for long-term patient follow-up, a medication guide, physician communication plans or additional elements to ensure safe use, such as restricted distribution methods, patient registries and other risk minimization tools. Comparable foreign regulatory authorities may impose similar requirements to the FDA REMS program. As an example, the European Commission may require the implementation of a risk mitigation plan in order to collect additional information on a medicine's safety profile which may include plans for pharmacovigilance activities and measures to minimize risks. In addition, if the FDA or a comparable foreign regulatory authority approves our product candidates, we will have to comply with requirements including submissions of safety and other post-marketing information and reports and registration.

The FDA or comparable foreign regulatory authorities may impose consent decrees, or similar requirements, or withdraw approval if compliance with regulatory requirements and standards is not maintained or if problems occur after the product reaches the market. Later discovery of previously unknown problems with our product candidates, including adverse events of unanticipated severity or frequency, or with our third-party manufacturers or manufacturing processes, or failure to comply with regulatory requirements, may result in revisions to the approved labeling to add new safety information; imposition of

post-market studies or clinical trials to assess new safety risks; or imposition of distribution restrictions or other restrictions under a REMS program, or comparable foreign program. Other potential consequences include, among other things:

- restrictions or suspensions on operations including on the marketing or manufacturing of our products, if approved, withdrawal of the product from the market or voluntary or mandatory product recalls;
- fines, warning letters or holds on clinical trials;
- refusal by the FDA or comparable foreign regulatory authorities to approve pending applications or supplements to approved applications filed by us or suspension or revocation of license approvals;
- product seizure or detention or refusal to permit the import or export of our product candidates; and
- injunctions or the imposition of civil or criminal penalties.

The FDA and comparable foreign regulatory authorities strictly regulate marketing, labeling, advertising, and promotion of products that are placed on the market. Products may be promoted only for the approved indications and in accordance with the provisions of the approved label. The FDA and other agencies and comparable foreign regulatory authorities 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, among other things, adverse publicity, warning letters, corrective advertising and potential civil and criminal penalties. Physicians may prescribe, in their independent professional medical judgment, legally available products for uses that are not described in the product's labeling and that differ from those tested by us and approved by the FDA or comparable foreign regulatory authorities. Physicians may believe that such off-label uses are the best treatment for many patients in varied circumstances. The FDA and comparable foreign regulatory authorities do not govern the behavior of physicians in their choice of treatments. The FDA and comparable foreign regulatory authorities do, however, restrict manufacturer's communications on the subject of off-label use of their products. As an example, the United States federal government has levied large civil and criminal fines against companies for alleged improper promotion of off-label use and has enjoined companies from engaging in off-label promotion. The FDA and other foreign regulatory agencies have also required that companies enter into consent decrees or permanent injunctions under which specified promotional conduct is changed or curtailed. However, companies may share truthful and not misleading information that is otherwise consistent with a product's approved labeling.

The holder of an NDA or BLA and equivalent foreign applications must submit new or supplemental applications and obtain approval for certain changes to the approved product, product labeling, or manufacturing process. We could also be asked to conduct post-marketing clinical trials to confirm the safety and efficacy of our products, if approved, in general or in specific patient subsets. If original marketing approval was obtained via the accelerated approval pathway, we could be required to conduct a successful post-marketing clinical trial to confirm clinical benefit for our products, if approved. An unsuccessful post-marketing study or failure to complete such a study could result in the withdrawal of marketing approval.

The policies of the FDA and of comparable foreign regulatory authorities may change and additional government regulations may be enacted that could prevent, limit or delay regulatory approval of our product candidates. We cannot predict the likelihood, nature or extent of government regulation that may arise from future legislation or administrative action, either in the United States or abroad. As an example, the regulatory landscape related to clinical trials in the EU has evolved. The EU Clinical Trials Regulation, or CTR, which was adopted in April 2014 and repeals the EU Clinical Trials Directive, became applicable on January 31, 2022. The CTR permits trial sponsors to make a single submission to both the competent authority and an ethics committee in each EU Member State, leading to a single decision for each EU Member State. The assessment procedure for the authorization of clinical trials has been harmonized as well, including a joint assessment of some elements of the application by all EU Member States in which the trial is to be conducted, and a separate assessment by each EU Member State with respect to specific requirements related to its own territory, including ethics rules. Each EU Member State's decision is communicated to the sponsor through a centralized EU portal, the Clinical Trial Information System, or CTIS. In addition, the CTR establishes a general principle according to which information contained in CTIS shall be made publicly accessible unless confidentiality is justified on grounds of protecting personal data, or commercially confidential information, necessary to protect confidential communications between EU Member States in relation to the preparation of an assessment report, or necessary to ensure effective supervision of the conduct of a clinical trial by EU Member States. This confidentiality exception may be overruled if there is an overriding public interest in disclosure. In addition, the EMA has limited the amount of data and documents that will be made public. The publication of data and documents in relation to the conduct of a clinical trial will take place in accordance with specific timelines. The timelines are established by the European Medicines Agency, or the EMA, and are determined based on the documents and the categorization of the clinical trial. The CTR provides a three-year transition period. The extent to which ongoing clinical trials will be governed by the CTR varies. The CTR foresaw a three-year transition period that ended on January 31, 2025. Since this date, all new or ongoing trials are subject to the provisions of the CTR. Our compliance with the CTR requirements and that of our third-party service providers, such as CROs, may impact our developments plans.

In addition, on April 26, 2023, the European Commission adopted a proposal for a new Directive and Regulation to revise the existing pharmaceutical legislation and on April 10, 2024, the Parliament adopted its related position. The proposed revisions remain to be agreed and adopted by the European Council. Moreover, on December 1, 2024, a new European Commission took office. The proposal could, therefore, still be subject to revisions. If adopted in the form proposed, the European Commission proposals to revise the existing EU laws governing authorization of medicinal products may result in a number of

changes to the regulatory framework governing medicinal products, including a decrease in data and market exclusivity for our product candidates in the EU.

If we are slow or unable to adapt to changes in existing requirements or the adoption of new requirements or policies, or if we are not able to maintain regulatory compliance, we may lose any marketing approval that we may have obtained and we may not achieve or sustain profitability.

***If approved, our investigational products regulated as biologics, including cibotercept, KER-065 and elritercept, may face competition from biosimilars approved through an abbreviated regulatory pathway.***

We are developing cibotercept for the treatment of PAH and for the treatment of cardiovascular disorders, KER-065 for the treatment of neuromuscular diseases, and elritercept for the treatment of cytopenias, including anemia and thrombocytopenia, in patients with MDS and myelofibrosis, each of which we anticipate will be regulated as a biological product. The Patient Protection and Affordable Care Act, as amended by the Health Care and Education Reconciliation Act of 2010, or collectively the ACA, includes a subtitle called the Biologics Price Competition and Innovation Act of 2009, or BPCIA, which created an abbreviated approval pathway for biological products that are biosimilar to or interchangeable with an FDA-licensed reference biological product. Under the BPCIA, an application for a biosimilar product may not be submitted to the FDA until four years following the date that the reference product was first licensed by the FDA. In addition, the approval of a biosimilar product may not be made effective by the FDA until 12 years from the date on which the reference product was first licensed. During this 12-year period of exclusivity, another company may still market a competing version of the reference product if the FDA approves a BLA for the competing product containing the sponsor's own preclinical data and data from adequate and well-controlled clinical trials to demonstrate the safety, purity, and potency of the other company's product. The law is complex and is still being interpreted and implemented by the FDA. As a result, its ultimate impact, implementation, and meaning are subject to uncertainty.

We believe that any of our product candidates approved as a biological product under a BLA should qualify for the 12-year period of exclusivity. However, there is a risk that this exclusivity could be shortened due to congressional action or otherwise, or that the FDA will not consider our investigational medicines to be reference products for competing products, potentially creating the opportunity for generic competition sooner than anticipated. Other aspects of the BPCIA, some of which may impact the BPCIA exclusivity provisions, have also been the subject of litigation. Moreover, the extent to which a biosimilar, once licensed, will be substituted for any one of our reference products in a way that is similar to traditional generic substitution for non-biological products is not yet clear, and will depend on a number of marketplace and regulatory factors that are still developing.

If competitors are able to obtain marketing approval for biosimilars referencing our products, if approved, our products may become subject to competition from such biosimilars, with the attendant competitive pressure and consequences.

The EU also provides opportunities for data and market exclusivity related to marketing authorizations. Upon receiving a marketing authorization, innovative medicinal products are generally entitled to receive eight years of data exclusivity and 10 years of market exclusivity. Data exclusivity, if granted, prevents regulatory authorities in the EU from referencing the innovator's data to assess a generic application or biosimilar application for eight years from the date of authorization of the innovative product, after which a generic or biosimilar marketing authorization application can be submitted, and the innovator's data may be referenced. The market exclusivity period prevents a successful generic or biosimilar applicant from commercializing its product in the EU until 10 years have elapsed from the initial marketing authorization of the reference product in the EU. The overall 10-year period may, occasionally, be extended for a further year to a maximum of 11 years if, during the first eight years of those 10 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. However, there is no guarantee that a product will be considered by the EU's regulatory authorities to be a new chemical/biological entity, and products may not qualify for data exclusivity.

In the EU, there is a special regime for biosimilars, or biological medicinal products that are similar to a reference medicinal product but that do not meet the definition of a generic medicinal product. For such products, the results of appropriate preclinical or clinical trials must be provided in support of an application for marketing authorization. Guidelines from the EMA detail the type of quantity of supplementary data to be provided for different types of biological product.

We also believe that our product candidates in the EU should benefit from this data and market exclusivity. As with the United States, however, if competitors obtain marketing authorization for their biosimilar products, our products may become subject to competition from these biosimilars, with the attendant competitive pressure and consequences.

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

We are exposed to potential product liability and professional indemnity risks that are inherent in the research, development, manufacturing, marketing and use of biopharmaceutical products. Currently, we have no products that have been approved for commercial sale; however, the current and future use of product candidates by us and our collaborators in clinical trials, and the potential sale of any approved products in the future, may expose us to liability claims. These claims might be made by patients who use the product, healthcare providers, pharmaceutical companies, our collaborators or others selling such

products. Any claims against us, regardless of their merit, could be difficult and costly to defend and could materially adversely affect the market for our product candidates or any prospects for commercialization of our product candidates. Regardless of the merits or eventual outcome, liability claims may result in:

- decreased demand for our products, if approved, due to negative public perception;
- injury to our reputation;
- withdrawal of clinical trial participants or difficulties in recruiting new trial participants;
- initiation of investigations by regulators;
- costs to defend or settle the related litigation;
- a diversion of management's time and our resources;
- substantial monetary awards to trial participants or patients;
- product recalls, withdrawals or labeling, marketing or promotional restrictions;
- loss of revenues from product sales; and
- the inability to commercialize any of our product candidates, if approved.

Although we believe we maintain adequate product liability insurance for our product candidates, it is possible that our liabilities could exceed our insurance coverage. We intend to expand our insurance coverage to include the sale of commercial products if we obtain marketing approval for any of our product candidates. However, we may not be able to maintain insurance coverage at a reasonable cost or obtain insurance coverage that will be adequate to satisfy any liability that may arise. If a successful product liability claim or series of claims is brought against us for uninsured liabilities or in excess of insured liabilities, our assets may not be sufficient to cover such claims and our business operations could be impaired. Should any of the events described above occur, this could have a material adverse effect on our business, financial condition and results of operations.

***Due to our limited resources and access to capital, we must, and have in the past decided to, prioritize development of certain product candidates over other potential product candidates. These decisions may prove to have been wrong and may adversely affect our ability to develop our own programs, our attractiveness as a commercial partner and may ultimately have an impact on our commercial success.***

Because we have limited resources and access to capital to fund our operations, we must decide which product candidates to pursue and the amount of resources to allocate to each. For example, in November 2023, we announced the deprioritization of our small molecule product candidate, KER-047, a potent and selective inhibitor of activin receptor-like kinase-2, a TGF-ß superfamily receptor, including our decision to pause all development activities associated with this asset. Our decisions concerning the allocation of research, collaboration, management and financial resources toward particular proprietary molecules in our library, product candidates or therapeutic areas may not lead to the development of viable commercial products and may divert resources away from better opportunities. Similarly, our decisions to delay, terminate or collaborate with third parties in respect of certain product development programs may also prove not to be optimal and could cause us to miss valuable opportunities. If we make incorrect determinations regarding the market potential of our product candidates or misread trends in the biopharmaceutical industry, in particular for cibotercept, KER-065 and elritercept, our business, financial condition and results of operations could be materially adversely affected.

***We may seek Fast Track Designation by the FDA for product candidates that we develop, and we may be unsuccessful. If we are successful, the designation may not actually lead to a faster development or regulatory review or approval process.***

We may seek Fast Track Designation for product candidates we develop. If a product is intended for the treatment of a serious or life-threatening condition and preclinical or clinical data demonstrate the potential to address an unmet medical need for this condition, the product sponsor may apply for Fast Track Designation. The FDA has broad discretion whether or not to grant this designation, so even if we believe a particular product candidate is eligible for this designation, we cannot assure you that the FDA would decide to grant it. We received Fast Track Designation for elritercept for the treatment of anemia in adults with lower-risk MDS, however we may not experience a faster development process, review or approval compared to conventional FDA procedures. The FDA may rescind the Fast Track Designation if it believes that the designation is no longer supported by data from our clinical development activities.

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

As part of our business strategy, we may seek orphan drug designation for any product candidates we develop, which meets the related applicable criteria, and we may be unsuccessful. Regulatory authorities in some jurisdictions, including the United States, may designate drugs for relatively small patient populations as orphan drugs. Under the Orphan Drug Act in the United States, 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 greater than 200,000 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 certain clinical trial costs, tax advantages and user-fee waivers.

Generally in the United States, 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 from approving another marketing application for the same drug and indication for seven years, except in limited circumstances.

Even if we obtain orphan drug exclusivity for any of our product candidates, that exclusivity may not effectively protect the product candidate from competition because different therapies can be approved for the same condition and the same therapies can be approved for different conditions but used off-label. Even after an orphan drug is approved, the FDA can subsequently approve the same drug for the same condition if the FDA concludes that the later drug is clinically superior in that it is shown to be safer, more effective or makes a major contribution to patient care. In addition, a designated orphan drug may not receive orphan drug exclusivity if it is approved for a use that is broader than the indication for which it received orphan designation. Moreover, orphan drug exclusive marketing rights in the United States may be lost if the FDA later determines that the request for designation was materially defective or if the manufacturer is unable to assure sufficient quantity of the drug to meet the needs of patients with the rare disease or condition.

In the EU, the European Commission, on the basis of the opinion of the EMA Committee for Orphan Medicinal Products, grants orphan drug designation for medicines to be developed for the diagnosis, prevention or treatment of diseases that are life-threatening or chronically debilitating, for which either no satisfactory method of diagnosis, prevention, or treatment exists, or if such method exists, the medicine is of significant benefit to those affected by such condition. To benefit from such designation, either the prevalence of such condition must not be more than five in 10,000 people across the EU or, if more prevalent, it must be unlikely that the marketing of the medicine would generate sufficient returns to justify the investment needed for its development.

Orphan drug designation neither shortens the development time or regulatory review time of a drug nor gives the drug any advantage in the regulatory review or approval process. While we may seek orphan drug designation for applicable indications for our current and any future product candidates, we may never receive such designations. Even if we do receive such designations, there is no guarantee that we will benefit from those designations.

### Risks Related to Commercialization of Our Product Candidates

***If we are unable to successfully commercialize any product candidate for which we receive regulatory approval, or experience significant delays in doing so, our business will be materially harmed.***

If we are successful in obtaining marketing approval from applicable regulatory authorities for cibotercept, KER-065, elritercept or any other product candidate, our ability to generate revenues from any such products will depend on our success in:

- launching commercial sales of such products, whether alone or in collaboration with others;
- receiving approved labels with claims that are necessary or desirable for successful marketing, and that do not contain safety or other limitations that would impede our ability to market such products;
- creating market demand for such products through marketing, sales and promotion activities;
- hiring, training, and deploying a sales force or contracting with third parties to commercialize such products in the United States;
- creating strategic collaborations with, or offering licenses to, third parties to promote and sell such products in foreign markets where we receive marketing approval;
- manufacturing such products in sufficient quantities and at acceptable quality and cost to meet commercial demand at launch and thereafter;
- establishing and maintaining agreements with wholesalers, distributors, and group purchasing organizations on commercially reasonable terms;
- maintaining patent and trade secret protection and regulatory exclusivity for such products;
- achieving market acceptance of such products by patients, the medical community, and third-party payors;
- achieving coverage and adequate reimbursement from third-party payors for such products;
- patients' willingness to pay out-of-pocket in the absence of such coverage and adequate reimbursement from third-party payors;
- effectively competing with other therapies; and
- maintaining a continued acceptable safety profile of such products following launch.

To the extent we are not able to do any of the foregoing, our business, financial condition, results of operations, stock price and prospects will be materially harmed.

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

The biopharmaceutical industry is characterized by intense competition and rapid innovation. Our competitors may be able to develop other compounds or drugs that are able to achieve similar or better results. Our potential competitors include major multinational pharmaceutical companies, established biotechnology companies, specialty pharmaceutical companies and universities and other research institutions. Many of our competitors have substantially greater financial, technical and other

resources, such as larger research and development staff and experienced marketing and manufacturing organizations and well-established sales forces. Smaller or early-stage companies may also prove to be significant competitors, particularly as they develop novel approaches to treating disease indications that our product candidates are also focused on treating. Established pharmaceutical companies may also invest heavily to accelerate discovery and development of novel therapeutics or to in-license novel therapeutics that could make the product candidates that we develop obsolete. Mergers and acquisitions in the biotechnology and pharmaceutical industries may result in even more resources being concentrated in our competitors. Competition may increase further as a result of advances in the commercial applicability of technologies and greater availability of capital for investment in these industries. Our competitors, either alone or with collaborative partners, may succeed in developing, acquiring or licensing on an exclusive basis drug or biologic products that are more effective, safer, more easily commercialized or less costly than our product candidates or may develop proprietary technologies or secure patent protection that we may need for the development of our technologies and products. We believe the key competitive factors that will affect the development and commercial success of our product candidates are efficacy, safety, tolerability, reliability, convenience of use, price and reimbursement.

We compete in the segments of the biotechnology, pharmaceutical and other related industries that develop and market therapies in our target indications. There are many other companies, including large biotechnology and pharmaceutical companies, that have commercialized and/or are developing therapies for the same therapeutic areas that our product candidates target. For example, in March 2024, Merck & Co. Inc., or Merck, received FDA approval of its product, sotatercept (WINREVAIR), for the treatment of adults with PAH. In August 2024, Merck announced that the European Commission approved sotatercept for the treatment of adults with PAH. All of the other currently-approved therapies for PAH are vasodilators, which are medications that dilate blood vessels. Gossamer Bio, Inc. is developing seralutinib for the treatment of PAH.

Currently, patients with DMD are treated with corticosteroids to manage the inflammatory component of the disease. EMFLAZA (deflazacort) is an FDA-approved corticosteroid marketed by PTC Therapeutics, Inc. In addition, there are four FDA-approved exon skipping drugs: EXONDYS 51 (eteplirsen), VYONDYS 53 (golodirsen), and AMONDYS 45 (casimersen), which are phosphorodiamidate morpholino oligomers, or PMOs, approved for the treatment of patients with DMD who are amenable to exon 51, exon 53 and exon 45 skipping, respectively, and are marketed by Sarepta Therapeutics, Inc., or Sarepta, and VILTEPSO (vitolarsen), a PMO approved for the treatment of patients with DMD who are amenable to exon 53 skipping, which is marketed by Nippon Shinyaku Co. Ltd. Additionally, in June 2023, Sarepta announced that the FDA accelerated approval of its product, ELEVIDYS, an adeno-associated virus based gene therapy for the treatment of ambulatory pediatric patients aged 4 through 5 years with DMD with a confirmed mutation in the DMD gene. In June 2024, the FDA granted ELEVIDYS full approval for the treatment of ambulatory individuals aged four years and older, and accelerated approval for the treatment of non-ambulatory individuals aged four years and older.

In March 2024, Italfarmaco S.p.A. announced that the FDA approved Duvyzat (givinostat), a histone deacetylase inhibitor for the treatment of DMD in patients aged six years and older.

In addition, several companies are developing gene therapies to treat DMD, including Pfizer Inc., Audentes Therapeutics, Inc. and Solid Biosciences Inc. Gene editing treatments that are in preclinical development are also being pursued by Vertex Pharmaceuticals, Inc. and Sarepta. Additionally, Santhera Pharmaceuticals, in collaboration with ReveraGen Biopharma, Inc, is developing a steroid therapy for DMD, and Italfarmaco is developing a histone deacetylase (HDAC) inhibitor for DMD.

FibroGen Inc. and Astellas Pharma Inc. are developing product candidates for the treatment of anemia, and Merck, Bristol-Myers Squibb Company and Disc Medicine are developing product candidates targeting diseases associated with MDS and myelofibrosis, including chronic anemia. Additionally, in April 2020, Merck and Bristol-Myers Squibb Company received FDA approval of its product, Reblozyl, for the treatment of anemia failing an erythropoiesis stimulating agent and requiring two or more red blood cell units over eight weeks in adult patients with very low- to intermediate-risk MDS with ring sideroblasts or with myelodysplastic/myeloproliferative neoplasm with ring sideroblasts and thrombocytosis. In June 2020, Merck further announced that the European Commission approved Reblozyl for the treatment of transfusion-dependent anemia in adult patients with MDS or beta thalassemia and in September 2020, Merck announced that Health Canada approved Reblozyl for the treatment of adult patients with red blood cell transfusion-dependent anemia associated with beta thalassemia. In August 2023, Bristol-Myers Squibb Company announced that the FDA approved Reblozyl for the treatment of anemia without previous erythropoiesis stimulating agent use (ESA-naïve) in adult patients with very low- to intermediate-risk MDS who may require regular red blood cell transfusions. In April 2024, Bristol-Myers Squibb Company further announced that the European Commission expanded approval of Reblozyl to include treatment of adult patients with and without ring sideroblasts with transfusion-dependent anemia due to lower-risk MDS. In June 2024, Geron Corporation announced that the FDA approved imetelstat (RYTELO) for the treatment of adult patients with low- to intermediate-1 risk MDS with transfusion-dependent anemia requiring four or more red blood cell units over eight weeks who have not responded to or have lost response to or are ineligible for erythropoiesis-stimulating agents.

In March 2022, CTI BioPharma Corp. (which was acquired by Swedish Orphan Biovitrum AB in June 2023) received FDA accelerated approval of its product, pacritinib (Vonjo), for the treatment of adults with intermediate or high-risk primary or secondary (post-polycythemia vera or post-essential thrombocythemia) myelofibrosis with a platelet count below $50 \times 10^9$/L. In September 2023, GSK plc announced that the FDA approved its product, Ojjaara, for the treatment of intermediate or high-

risk myelofibrosis, including primary myelofibrosis or secondary myelofibrosis (post-polycythaemia vera and post-essential thrombocythaemia), in adults with anemia. Additionally, MorphoSys AG (which was acquired by Novartis AG in July 2024) is also developing a product candidate as a treatment for myelofibrosis, and Incyte Corporation is developing an ALK2 inhibitor product candidate for the treatment of myelofibrosis. Geron Corporation is also developing imetelstat as a treatment for myelofibrosis.

Other companies that are developing product candidates that are designed to target the TGF-ß signaling pathways include Scholar Rock Holding Corporation, Biogen Inc. and Regeneron Pharmaceuticals, Inc.

We anticipate that we will continue to face intense and increasing competition as new treatments enter the market and advanced technologies become available. There can be no assurance that our competitors are not currently developing, or will not in the future develop, products that are equally or more effective or are more economically attractive than any of our current or future product candidates. Competing products may gain faster or greater market acceptance than our products, if any, and medical advances or rapid technological development by competitors may result in our product candidates becoming non-competitive or obsolete before we are able to recover our research and development and commercialization expenses. If we or our product candidates do not compete effectively, it may have a material adverse effect on our business, financial condition and results of operations.

***We do not have a sales or marketing infrastructure and have no experience in the sale or marketing of biopharmaceutical products. To achieve commercial success for any approved product, we must develop or acquire a sales and marketing organization, outsource these functions to third parties or enter into strategic collaborations.***

We may decide to establish our own sales and marketing capabilities and promote our product candidates if and when regulatory approval has been obtained in the United States or in other jurisdictions. There are risks involved if we decide to establish our own sales and marketing capabilities or enter into arrangements with third parties to perform these services. Even if we establish sales and marketing capabilities, we may fail to launch our products, if approved, effectively or to market our products effectively since we have no experience in the sales and marketing of biopharmaceutical products. In addition, recruiting and training a sales force is expensive and time-consuming and could delay any product launch. In the event that any such launch is delayed or does not occur for any reason, we would have prematurely or unnecessarily incurred these commercialization expenses, and our investment would be lost if we cannot retain or reposition our sales and marketing personnel. Factors that may inhibit our efforts to commercialize our products, if approved, on our own include:

- our inability to recruit, train and retain adequate numbers of effective sales and marketing personnel;
- the inability of sales personnel to obtain access to or educate adequate numbers of physicians on the benefits of our products, if approved;
- the lack of complementary products to be offered by sales personnel, which may put us at a competitive disadvantage relative to companies with more extensive product lines;
- unforeseen costs and expenses associated with creating an independent sales and marketing organization; and
- costs of marketing and promotion above those anticipated by us.

If we enter into arrangements with third parties to perform sales and marketing services, our product revenues or the profitability of these product revenues to us could be lower than if we were to market and sell any products that we develop ourselves. Such collaborative arrangements with partners may place the commercialization of our products, if approved, outside of our control and would make us subject to a number of risks including that we may not be able to control the amount or timing of resources that our collaborative partner devotes to our products, if any, or that our collaborator's willingness or ability to complete its obligations, and our obligations under our arrangements may be adversely affected by business combinations or significant changes in our collaborator's business strategy. In addition, we may not be successful in entering into arrangements with third parties to sell and market our products, if approved, or may be unable to do so on terms that are favorable to us. Acceptable third parties may fail to devote the necessary resources and attention to sell and market our products, if any, effectively.

If we do not establish sales and marketing capabilities successfully, either on our own or in collaboration with third parties, we may not be successful in commercializing our products, if any, which in turn would have a material adverse effect on our business, financial condition and results of operations.

***Even if a product candidate we develop receives marketing approval, it may fail to achieve the degree of market acceptance by physicians, patients, third-party payors and others in the medical community necessary for commercial success. The revenues that we generate from their sales may be limited, and we may never become profitable.***

We have never commercialized a product candidate for any indication. Even if our product candidates are approved by the appropriate regulatory authorities for marketing and sale, they may not gain acceptance among physicians, patients, third-party payors and others in the medical community. If any product candidates for which we obtain regulatory approval does not gain an adequate level of market acceptance, we could be prevented from or significantly delayed in achieving profitability. Market acceptance of our product candidates by the medical community, patients and third-party payors will depend on a number of factors, some of which are beyond our control. For example, physicians are often reluctant to switch

their patients and patients may be reluctant to switch from existing therapies even when new and potentially more effective or safer treatments enter the market.

Efforts to educate the medical community and third-party payors on the benefits of our product candidates may require significant resources and may not be successful. If any of our product candidates are approved but do not achieve an adequate level of market acceptance, we could be prevented from or significantly delayed in achieving profitability. The degree of market acceptance of any product for which we receive marketing approval will depend on a number of factors, including:

- the clinical indications for which our product candidates are approved;
- physicians, hospitals and patients considering our product candidates as a safe and effective treatment;
- the potential and perceived advantages of our product candidates over alternative treatments;
- the prevalence and severity of any side effects;
- product labeling or product insert requirements of the FDA or comparable foreign regulatory authorities;
- limitations or warnings contained in the labeling approved by the FDA or comparable foreign regulatory authorities;
- the timing of market introduction of our product candidates in relation to other potentially competitive products;
- the cost of our product candidates in relation to alternative treatments;
- the amount of upfront costs or training required for physicians to administer our product candidates;
- the availability of coverage and adequate reimbursement from third-party payors and government authorities;
- the willingness of patients to pay out-of-pocket in the absence of comprehensive coverage and reimbursement by third-party payors and government authorities;
- the relative convenience and ease of administration, including as compared to alternative treatments and competitive therapies;
- the effectiveness of our sales and marketing efforts and distribution support; and
- the presence or perceived risk of potential product liability claims.

***Enacted and future healthcare legislation may increase the difficulty and cost for us to progress our clinical programs and obtain marketing approval of and commercialize our product candidates and may affect the prices we may set.***

In the United States and other jurisdictions, there have been, and we expect there will continue to be, a number of legislative and regulatory changes and proposed changes to the healthcare system that could affect our future results of operations. In particular, there have been and continue to be a number of initiatives at the U.S. federal and state levels that seek to reduce healthcare costs and improve the quality of healthcare. For example, in March 2010, the ACA was enacted, which substantially changed the way healthcare is financed by both governmental and private insurers.

Since its enactment, there have been judicial, Congressional and executive branch challenges and amendments to certain aspects of the ACA. For example, on August 16, 2022, the Inflation Reduction Act of 2022, or the IRA, was signed into law, which among other things, extends enhanced subsidies for individuals purchasing health insurance coverage in ACA marketplaces through plan year 2025. The IRA also eliminates the “donut hole” under the Medicare Part D program beginning in 2025 by significantly lowering the beneficiary maximum out-of-pocket cost and through a newly established manufacturer discount program. It is unclear how any additional healthcare reform measures of the second Trump administration will impact the ACA and 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, led to aggregate reductions of Medicare payments to providers of 2% per fiscal year. These reductions went into effect in April 2013 and, due to subsequent legislative amendments to the statute, including the Infrastructure Investment and Jobs Act and the Consolidated Appropriations Act of 2023, will remain in effect until 2032, unless additional action is taken by Congress. Additionally, on March 11, 2021, the American Rescue Plan Act of 2021 was signed into law, which eliminated the statutory Medicaid drug rebate cap, previously set at 100% of a drug’s average manufacturer price, for single source and innovator multiple source drugs, effective January 1, 2024. These new laws or any other similar laws introduced in the future may result in additional reductions in Medicare and other health care funding, which could negatively affect our customers and accordingly, our financial operations.

Moreover, payment methodologies may be subject to changes in healthcare legislation and regulatory initiatives. For example, CMS may develop new payment and delivery models, such as bundled payment models. In addition, recently there has been heightened governmental scrutiny over the manner in which manufacturers set prices for their marketed products, which has resulted in several U.S. presidential executive orders, Congressional inquiries and proposed and enacted federal legislation designed to, among other things, bring more transparency to drug pricing, reduce the cost of prescription drugs under Medicare and review the relationship between pricing and manufacturer patient programs. For example, the IRA, among other things, (1) directs the U.S. Department of Health and Human Services, or HHS, to negotiate the price of certain high-expenditure single-source drugs that have been on the market for at least 7 years and biologics that have been on the market for at least 7 years covered under Medicare (the “Medicare Drug Price Negotiation Program”) and (2) imposes rebates under Medicare Part B and Medicare Part D to penalize price increases that outpace inflation. The IRA permits HHS to implement many of these provisions through guidance, as opposed to regulation, for the initial years. HHS has and will

continue to issue and update guidance as these programs are implemented. These provisions take effect progressively starting in fiscal year 2023. On August 15, 2024, HHS announced the agreed-upon reimbursement price of the first ten drugs that were subject to price negotiations, although the Medicare Drug Price Negotiation Program is currently subject to legal challenges. On January 17, 2025, HHS selected fifteen additional products covered under Part D for price negotiation in 2025. Each year thereafter more Part B and Part D products will become subject to the Medicare Drug Price Negotiation Program. Further, on December 7, 2023, an initiative to control the price of prescription drugs through the use of march-in rights under the Bayh-Dole Act of 1980, or the Bayh-Dole Act was announced. On December 8, 2023, the National Institute of Standards and Technology published for comment a Draft Interagency Guidance Framework for Considering the Exercise of March-In Rights which for the first time includes the price of a product as one factor an agency can use when deciding to exercise march-in rights. While march-in rights have not previously been exercised, it is uncertain if that will continue under the new framework. We expect that additional U.S. federal healthcare reform measures will be adopted in the future, any of which could limit the amounts that the U.S. federal government will pay for healthcare products and services, which could result in reduced demand for our product candidates or additional pricing pressures.

Individual states in the United States have also increasingly passed legislation and implemented regulations designed to control pharmaceutical and biological product pricing, including price or patient reimbursement constraints, discounts, restrictions on certain product access and marketing cost disclosure and transparency measures, and, in some cases, designed to encourage importation from other countries and bulk purchasing. Legally mandated price controls on payment amounts by third-party payors or other restrictions could harm our business, results of operations, financial condition and prospects. In addition, regional healthcare authorities and individual hospitals are increasingly using bidding procedures to determine what pharmaceutical products and which suppliers will be included in their prescription drug and other healthcare programs. This could reduce the ultimate demand for our product candidates or put pressure on our product pricing.

In markets outside of the United States, reimbursement and healthcare payment systems vary significantly by country, and many countries have instituted price ceilings on specific products and therapies. For example, the EU provides options for EU 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. An EU Member State may approve a specific price for the medicinal product, it may refuse to reimburse a product at the price set by the manufacturer 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. Many EU Member States also periodically review their reimbursement procedures for medicinal products, which could have an adverse impact on reimbursement status. We expect that legislators, policymakers and healthcare insurance funds in the EU Member States will continue to propose and implement cost-containing measures, such as lower maximum prices, lower or lack of reimbursement coverage and incentives to use cheaper, usually generic, products as an alternative to branded products, and/or branded products available through parallel import to keep healthcare costs down.

Moreover, in order to obtain reimbursement for our products in some European countries, including some EU Member States, we may be required to compile additional data comparing the cost-effectiveness of our products to other available therapies. The Health Technology Assessment, or HTA, of medicinal products is becoming an increasingly common part of the pricing and reimbursement procedures in some EU Member States, including those representing the larger markets. The HTA process is the procedure to assess therapeutic, economic and societal impact of a given medicinal product in the national healthcare systems of the individual country. The outcome of an HTA will often influence the pricing and reimbursement status granted to these medicinal products by the competent authorities of individual EU Member States. The extent to which pricing and reimbursement decisions are influenced by the HTA of the specific medicinal product currently varies between EU Member States. In December 2021, Regulation No 2021/2282 on HTA, amending Directive 2011/24/EU, was adopted in the EU. This Regulation, which entered into force in January 2022 and began to apply on January 12, 2025 through a phased implementation, is intended to boost cooperation among EU Member States in assessing health technologies, including new medicinal products, and providing the basis for cooperation at EU level for joint clinical assessments in these areas. The regulation will permit EU Member States to use common HTA tools, methodologies, and procedures across the EU to identify promising technologies early, and continuing voluntary cooperation in other areas. Individual EU Member States will continue to be responsible for assessing non-clinical (e.g., economic, social, ethical) aspects of health technologies, and making decisions on pricing and reimbursement. If we are unable to maintain favorable pricing and reimbursement status in EU Member States for product candidates that we may successfully develop and for which we may obtain regulatory approval, any anticipated revenue from and growth prospects for those products in the EU could be negatively affected.

We cannot predict the likelihood, nature or extent of government regulation that may arise from future legislation or administrative action in the United States or any other jurisdiction. The implementation of cost containment measures or other healthcare reforms may negatively impact our operations. If we or any third parties we may engage are slow or unable to adapt to changes in existing requirements or the adoption of new requirements or policies, or if we or such third parties are not able to maintain regulatory compliance, our product candidates may lose any regulatory approval that may have been obtained and we may not achieve or sustain profitability.

***Disruptions at the FDA, the SEC and other government agencies or comparable regulatory authorities caused by funding shortages or global health concerns could hinder their ability to hire and retain key leadership and other personnel, otherwise prevent new products and services from being developed, approved or commercialized in a***

***timely manner or at all, 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 or comparable foreign regulatory authorities to review and approve new products can be affected by a variety of factors, including government budget and funding levels, ability to hire and retain key personnel and accept the payment of user fees, statutory, regulatory and policy changes, and other events that may otherwise affect the FDA's or comparable foreign regulatory authorities' ability to perform routine functions. Average review times at the FDA have fluctuated in recent years as a result. In addition, government funding of the Securities and Exchange Commission, or the SEC, and other government agencies or comparable foreign regulatory authorities 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, other agencies or comparable foreign regulatory authorities may also slow the time necessary for new drugs to be reviewed and/or approved, which would adversely affect our business. For example, in 2023, the U.S. government was on the verge of a shutdown and has previously shut down several times, and certain regulatory agencies, such as the FDA and the SEC, had to furlough critical employees and stop critical activities during such previous shutdowns. If a prolonged government shutdown occurs, or if global health concerns 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 or comparable foreign regulatory authorities to timely review and process our regulatory submissions, which could have a material adverse effect on our business. Further, future government shutdowns or delays could impact our ability to access the public markets and obtain necessary capital in order to properly capitalize and continue our operations.

***Our business operations and current and future relationships with investigators, healthcare professionals, consultants, third-party payors, patient organizations and customers may be subject to applicable healthcare regulatory laws, which could expose us to penalties.***

Our business operations and current and future arrangements with investigators, healthcare professionals, consultants, third-party payors, patient organizations and customers, may expose us to broadly applicable fraud and abuse and other healthcare laws and regulations. These laws may constrain the business or financial arrangements and relationships through which we conduct our operations, including how we research, market, sell and distribute our product candidates, if approved. Such laws include:

- the U.S. federal Anti-Kickback Statute, which prohibits, among other things, persons or entities from knowingly and willfully soliciting, offering, receiving or providing any remuneration (including any kickback, bribe, or certain rebate), directly or indirectly, overtly or covertly, in cash or in kind, to induce or reward, or in return for, either the referral of an individual for, or the purchase, lease, order or recommendation of, any good, facility, item or service, for which payment may be made, in whole or in part, under U.S. federal and state healthcare programs such as Medicare and Medicaid. 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 U.S. federal civil and criminal false claims laws, including the civil False Claims Act, which can be enforced by private individuals on behalf of the government through civil whistleblower or qui tam actions, and civil monetary penalties laws prohibit, among other things, individuals or entities from knowingly presenting, or causing to be presented, to the U.S. federal government, claims for payment or approval that are false or fraudulent, knowingly making, using or causing to be made or used, a false record or statement material to a false or fraudulent claim, or from knowingly making a false statement to avoid, decrease or conceal an obligation to pay money to the U.S. federal government. In addition, the government may assert that a claim including items and services resulting from a violation of the U.S. federal Anti-Kickback Statute constitutes a false or fraudulent claim for purposes of the civil False Claims Act;
- the U.S. federal Health Insurance Portability and Accountability Act of 1996, or HIPAA, which created additional federal civil and criminal liability for, among other things, knowingly and willfully executing, or attempting to execute, a scheme to defraud any healthcare benefit program, or knowingly and willfully falsifying, concealing or covering up a material fact or making any materially false statement, in connection with the delivery of, or payment for, healthcare benefits, items or services. Similar to the U.S. federal Anti-Kickback Statute, a person or entity does not need to have actual knowledge of the statute or specific intent to violate it in order to have committed a violation;
- HIPAA, as amended by the Health Information Technology for Economic and Clinical Health Act of 2009, or HITECH, and their implementing regulations, which impose certain obligations, including mandatory contractual terms, with respect to safeguarding the privacy, security and transmission of individually identifiable health information without appropriate authorization by covered entities subject to the rule, such as health plans, healthcare clearinghouses and certain healthcare providers and their business associates, independent contractors of a covered entity that perform certain services involving the use or disclosure of individually identifiable health information, as well as their covered subcontractors;
- the Federal Food, Drug, and Cosmetic Act, which prohibits, among other things, the adulteration or misbranding of drugs, biologics and medical devices;
- the U.S. Public Health Service Act, which prohibits, among other things, the introduction into interstate commerce of a biological product unless a biologics license is in effect for that product;

- the U.S. Physician Payments Sunshine Act and its implementing regulations, which require certain manufacturers of drugs, devices, biologics and medical supplies that are reimbursable under Medicare, Medicaid, or the Children's Health Insurance Program, with specific exceptions, to report annually to CMS information related to certain payments and other transfers of value made in the prior year to physicians (defined to include doctors, dentists, optometrists, podiatrists, and chiropractors), other healthcare professionals (such as physician assistants and nurse practitioners), and teaching hospitals, as well as ownership and investment interests held by such physicians and their immediate family members; and
- analogous U.S. state and foreign laws and regulations, including: anti-kickback and false claims laws, which may apply to our business practices, including but not limited to, research, distribution, sales and marketing arrangements and claims involving healthcare items or services reimbursed by any third-party payor, including private insurers; laws that require pharmaceutical companies to comply with the pharmaceutical industry's voluntary compliance guidelines and the relevant compliance guidance promulgated by the U.S. federal government or foreign regulatory authorities, or otherwise restrict payments that may be made to healthcare providers and other potential referral sources; laws and regulations that require drug manufacturers to file reports relating to drug pricing and marketing information, which requires tracking gifts and other remuneration and items of value provided to healthcare professionals and entities; laws that require the registration of pharmaceutical sales representatives; and laws governing the privacy and security of health information in certain circumstances, many of which differ from each other in significant ways and often are not preempted by HIPAA, thus complicating compliance efforts.

In addition, our activities are also subject to certain federal, state consumer and foreign protection and unfair competition laws, which broadly regulate marketplace activities and activities that potentially harm consumers.

Ensuring that our internal operations and future business arrangements with third parties comply with applicable healthcare laws and regulations will involve substantial costs. It is possible that governmental authorities will conclude that our business practices do not comply with current or future statutes, regulations, agency guidance or case law involving applicable fraud and abuse or other healthcare laws and regulations. If our operations are found to be in violation of any of the laws described above or any other governmental laws and regulations that may apply to us, we may be subject to significant penalties, including civil, criminal and administrative penalties, damages, fines, exclusion from government-funded healthcare programs, such as Medicare and Medicaid or similar programs in other countries or jurisdictions, integrity oversight and reporting obligations to resolve allegations of non-compliance, disgorgement, imprisonment, contractual damages, reputational harm, diminished profits and the curtailment or restructuring of our operations. If any of the physicians or other providers or entities with whom we expect to do business are found to not be in compliance with applicable laws, they may be subject to significant criminal, civil or administrative sanctions, including exclusions from government funded healthcare programs and imprisonment, which could affect our ability to operate our business. Further, defending against any such actions can be costly, time-consuming and may require significant 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 the market opportunities for our product candidates are smaller than we believe they are, even assuming approval of a product candidate, our business may suffer.***

Our projections of both the number of people who are affected by disease within our potential target indications, as well as the subset of these people who have the potential to benefit from treatment with our product candidates, are based on our beliefs and estimates. These estimates have been derived from a variety of sources, including the scientific literature, healthcare utilization databases and market research, and may prove to be incorrect. Further, new studies may change the estimated incidence or prevalence of these diseases. The number of patients may turn out to be lower than expected. Likewise, the potentially addressable patient population for each of our product candidates may be limited or may not be amenable to treatment with our product candidates, and new patients may become increasingly difficult to identify or gain access to, which would adversely affect our business, financial condition and results of operations.

***Any product candidates we develop may become subject to unfavorable third-party coverage and reimbursement practices, as well as pricing regulations.***

The availability and extent of coverage and adequate reimbursement by third-party payors, including government health administration authorities, private health coverage insurers, managed care organizations and other third-party payors is essential for most patients to be able to afford expensive treatments. Sales of any of our product candidates that receive marketing approval will depend substantially, both in the United States and internationally, on the extent to which the costs of our product candidates will be covered and reimbursed by third-party payors. If 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 an adequate return on our investment. Coverage and reimbursement may impact the demand for, or the price of, any product candidate for which we obtain marketing approval. If coverage and reimbursement are not available or reimbursement is available only to limited levels, we may not successfully commercialize any product candidate for which we obtain marketing approval.

There is significant uncertainty related to third-party payor coverage and reimbursement of newly approved products. In the United States, for example, principal decisions about reimbursement for new products are typically made by the CMS. CMS

decides whether and to what extent a new product will be covered and reimbursed under Medicare, and private third-party payors often follow CMS's decisions regarding coverage and reimbursement to a substantial degree. However, one third-party payor's determination to provide coverage for a product candidate does not assure that other payors will also provide coverage for the product candidate. As a result, the coverage determination process is often time-consuming and costly. This process will require us to provide scientific and clinical support for the use of our products, if approved, to each third-party payor separately, with no assurance that coverage and adequate reimbursement will be applied consistently or obtained in the first instance.

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. Further, such payors are increasingly challenging the price, examining the medical necessity and reviewing the cost effectiveness of medical product candidates. There may be especially significant delays in obtaining coverage and reimbursement for newly approved drugs. Third-party payors may limit coverage to specific product candidates on an approved list, known as a formulary, which might not include all FDA-approved drugs for a particular indication. We may need to conduct expensive pharmaco-economic studies to demonstrate the medical necessity and cost effectiveness of our products, if any. Nonetheless, our product candidates may not be considered medically necessary or cost effective. We cannot be sure that coverage and reimbursement will be available for any product that we commercialize and, if reimbursement is available, what the level of reimbursement will be.

Furthermore, obtaining coverage and adequate reimbursement for products administered under the supervision of a physician may be particularly difficult because of the higher prices often associated with such drugs. Additionally, separate reimbursement for the product itself or the treatment or procedure in which the product is used may not be available, which may impact physician utilization. In addition, companion diagnostic tests require coverage and reimbursement separate and apart from the coverage and reimbursement for their companion pharmaceutical or biological products. Similar challenges to obtaining coverage and reimbursement, applicable to pharmaceutical or biological products, will apply to companion diagnostics.

Outside the United States, international operations are generally subject to extensive governmental price controls and other market regulations, and we believe the increasing emphasis on cost containment initiatives in Europe, Canada and other countries has and will continue to put pressure on the pricing and usage of therapeutics such as our product candidates. In many countries, particularly the countries of the EU, medical product prices are subject to varying price control mechanisms as part of national health systems. In these countries, pricing negotiations with governmental authorities can take considerable time after a product receives marketing approval. To obtain reimbursement or pricing approval in some countries, we may be required to conduct a clinical trial that compares the cost-effectiveness of our product candidate to other available therapies. In general, product prices under such systems are substantially lower than in the United States. Other countries allow companies to fix their own prices for products, but monitor and control company profits. Additional foreign price controls or other changes in pricing regulation could restrict the amount that we are able to charge for our product candidates. Accordingly, in markets outside the United States, the reimbursement for our products, if approved, may be reduced compared with the United States and may be insufficient to generate commercially reasonable revenue and profits.

If we are unable to establish or sustain coverage and adequate reimbursement for any future product candidates from third-party payors, the adoption of those products and sales revenue will be adversely affected, which, in turn, could adversely affect the ability to market or sell those product candidates, if approved. 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 we receive regulatory approval, less favorable coverage policies and reimbursement rates may be implemented in the future.

### Risks Related to Our Intellectual Property

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

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

The patenting process is expensive and time-consuming, and we may not be able to file, prosecute and maintain all necessary or desirable patent applications at a reasonable cost or in a timely manner. In addition, we may not pursue, obtain or maintain patent protection in all relevant markets. It is also possible that we will fail to identify patentable aspects of our research and development output before it is too late to obtain patent protection. Moreover, in some circumstances, we may

not have the right to control the preparation, filing and prosecution of patent applications, or to maintain the patents, covering technology that we license from or license to third parties and are reliant on our licensors or licensees. Therefore, these patents and applications may not be prosecuted and enforced in a manner consistent with the best interests of our business.

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

Since patent applications in the United States and most other countries are confidential for a period of time after filing, we cannot be certain that we were the first to file any patent application related to our product candidates. Furthermore, for United States applications in which all claims are entitled to a priority date before March 16, 2013, an interference proceeding can be provoked by a third party or instituted by the United States Patent and Trademark Office, or USPTO, to determine who was the first to invent any of the subject matter covered by the patent claims of our applications.

We cannot be certain that we are the first to invent the inventions covered by pending patent applications and, if we are not, we may be subject to priority disputes. We may be required to disclaim part or all of the term of certain patents or all of the term of certain patent applications. There may be prior art of which we are not aware that may affect the validity or enforceability of a patent claim, and we may be subject to a third-party preissuance submission of prior art to the USPTO. There also may be prior art of which we are aware, but which we do not believe affects the validity or enforceability of a claim, which may, nonetheless, ultimately be found to affect the validity or enforceability of a claim. No assurance can be given that if challenged, our patents would be declared by a court to be valid or enforceable or that even if found valid and enforceable, a competitor's technology or product would be found by a court to infringe our patents. We may analyze patents or patent applications of our competitors that we believe are relevant to our activities, and consider that we are free to operate in relation to our product candidates, but our competitors may achieve issued claims, including in patents we consider to be unrelated, which block our efforts or may potentially result in our product candidates or our activities infringing such claims. The possibility exists that others will develop products which have the same effect as our products, if any, on an independent basis which do not infringe our patents or other intellectual property rights, or will design around the claims of patents that we have had issued that cover our products, if approved.

Recent or future patent reform legislation could increase the uncertainties and costs surrounding the prosecution of our patent applications and the enforcement or defense of our issued patents. Under the enacted Leahy-Smith America Invents Act, or America Invents Act, enacted in 2013, the United States moved from a "first to invent" to a "first-to-file" system. Under a "first-to-file" system, assuming the other requirements for patentability are met, the first inventor to file a patent application generally will be entitled to a patent on the invention regardless of whether another inventor had made the invention earlier. The America Invents Act includes a number of other significant changes to U.S. patent law, including provisions that affect the way patent applications are prosecuted, redefine prior art and establish a new post-grant review system. The effects of these changes are currently unclear as the USPTO only recently developed new regulations and procedures in connection with the America Invents Act and many of the substantive changes to patent law, including the "first-to-file" provisions, only became effective in March 2013. In addition, the courts have yet to address many of these provisions and the applicability of the act and new regulations on specific patents discussed herein have not been determined and would need to be reviewed. However, the America Invents Act and its implementation could increase the uncertainties and costs surrounding the prosecution of our patent applications and the enforcement or defense of our issued patents, all of which could have a material adverse effect on our business and financial condition.

The degree of future protection for our proprietary rights is uncertain because legal means afford only limited protection and may not adequately protect our rights or permit us to gain or keep our competitive advantage. For example:

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

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

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

We are dependent on patents, know-how and proprietary technology, both our own and licensed from others. Any termination of these licenses could result in the loss of significant rights and could harm our ability to commercialize our product candidates. See the section titled "Business—Collaborations and License Agreement" set forth in Part I, Item 1 of this Annual Report on Form 10-K for additional information regarding our license agreements.

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

- the scope of rights granted under the license agreement and other interpretation-related issues; whether and the extent to which our technology and processes infringe on intellectual property of the licensor that is not subject to the licensing agreement;
- our right to sublicense patent and other rights to third parties under collaborative development relationships;
- our diligence obligations with respect to the use of the licensed technology in relation to our development and commercialization of our product candidates, and what activities satisfy those diligence obligations; and
- the inventorship or ownership of inventions and know-how resulting from the joint creation or use of intellectual property by our licensors and us and our partners.

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

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

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

We are a party to a license agreement pursuant to which we in-license key patent and patent applications for our product candidates. These existing licenses impose various diligence, milestone payment, royalty, insurance and other obligations on us. If we fail to comply with these obligations, our licensor may have the right to terminate the license, in which event we would not be able to develop or market the products covered by such licensed intellectual property. Termination of these agreements or reduction or elimination of our rights under these agreements, or restrictions on our ability to freely assign or sublicense our rights under such agreements when it is in the interest of our business to do so, may impede, delay or prohibit the further development or commercialization of one or more product candidates that rely on such agreements.

We may have limited control over the maintenance and prosecution of these in-licensed patents and patent applications, activities or any other intellectual property that may be related to our in-licensed intellectual property. For example, we cannot be certain that such activities by our licensor have been or will be conducted in compliance with applicable laws and regulations or will result in valid and enforceable patents and other intellectual property rights.

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

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

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

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

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

Our commercial success depends in part on our ability to develop, manufacture, market and sell our product candidates and use our proprietary technologies without infringing the proprietary rights of third parties. There is a substantial amount of litigation involving patents and other intellectual property rights in the biotechnology and pharmaceutical industries, as well as administrative proceedings for challenging patents, including interference, derivation, inter partes review, post grant review, and reexamination proceedings before the USPTO or oppositions and other comparable proceedings in foreign jurisdictions. We may be exposed to, or threatened with, future litigation by third parties having patent or other intellectual property rights alleging that our product candidates and/or proprietary technologies infringe their intellectual property rights. Numerous U.S. and foreign issued patents and pending patent applications, which are owned by third parties, exist in the fields in which we are developing our product candidates. There may be third-party patents or patent applications with claims to materials, formulations, methods of manufacture or methods for treatment related to our product candidates and programs. As the biotechnology and pharmaceutical industries expand and more patents are issued, the risk increases that our product candidates may give rise to claims of infringement of the patent rights of others. Moreover, it is not always clear to industry participants, including us, which patents cover various types of drugs, products or their methods of use or manufacture. Thus, because of the large number of patents issued and patent applications filed in our fields, there may be a risk that third parties may allege they have patent rights encompassing our product candidates, technologies or methods. We are aware of issued patents, in the United States and abroad, relating to methods of treating patients with PAH and methods of treating Duchenne muscular dystrophy. If any such patent were to be asserted against us, we believe that we have defenses against any such action, including that these patents would not be infringed by our product candidates and/or that these patents are not valid. However, if these patents were asserted against us and our defenses to such an action were unsuccessful, unless we obtain a license to these patents, which may not be available on commercially reasonable terms, or at all, we could be liable for damages and precluded from commercializing cibotercept or KER-065, as applicable, in certain indications, which could have a material adverse effect on our business, financial condition, cash flows or results of operations.

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

- infringement and other intellectual property claims which, regardless of merit, may be expensive and time-consuming to litigate and may divert our management's attention from our core business;
- substantial damages for infringement, which we may have to pay if a court decides that the product candidate or technology at issue infringes on or violates the third party's rights, and, if the court finds that the infringement was willful, we could be ordered to pay treble damages and the patent owner's attorneys' fees;
- a court prohibiting us from developing, manufacturing, marketing or selling our product candidates, or from using our proprietary technologies, unless the third party licenses its product rights to us, which it is not required to do;
- if a license is available from a third party, we may have to pay substantial royalties, upfront fees and other amounts, and/or grant cross-licenses to intellectual property rights for our products, if any; and
- redesigning our product candidates or processes so they do not infringe, which may not be possible or may require substantial monetary expenditures and time.

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

Third parties may assert that we are employing their proprietary technology without authorization. Generally, conducting clinical trials and other development activities in the United States is protected under the Safe Harbor exemption as set forth in 35 U.S.C. § 271. If and when cibotercept, KER-065, elritercept, or another one of our product candidates is approved by the FDA, that certain third party may then seek to enforce its patent by filing a patent infringement lawsuit against us. While we do not believe that any claims of such patent that could otherwise materially adversely affect commercialization of our product candidates, if approved, are valid and enforceable, we may be incorrect in this belief, or we may not be able to prove it in a litigation. In this regard, patents issued in the United States by law enjoy a presumption of validity that can be rebutted only with evidence that is "clear and convincing," a heightened standard of proof. There may be third-party patents of which we are currently unaware with claims to materials, formulations, methods of manufacture or methods for treatment related to the use or manufacture of our product candidates. Because patent applications can take many years to issue, there may be currently pending patent applications which may later result in issued patents that our product candidates may infringe. In addition, third parties may obtain patents in the future and claim that use of our technologies infringes upon these patents. If any third-party patents were held by a court of competent jurisdiction to cover the manufacturing process of our product candidates, constructs or molecules used in or formed during the manufacturing process, or any final product itself, the holders of any such patents may be able to block our ability to commercialize the product candidate unless we obtained a license under the applicable patents, or until such patents expire or they are finally determined to be held invalid or unenforceable. Similarly, if any third-party patent were held by a court of competent jurisdiction to cover aspects of our formulations, processes for manufacture or methods of use, the holders of any such patent may be able to block our ability to develop and commercialize the product candidate unless we obtained a license or until such patent expires or is finally determined to be held invalid or unenforceable. In either case, such a license may not be available on commercially reasonable terms or at all. If we are unable to obtain a necessary license to a third-party patent on commercially reasonable terms, or at all, our ability to commercialize our product candidates may be impaired or delayed, which could in turn significantly harm our business. Even if we obtain a license, it may be non-exclusive, thereby giving our competitors access to the same technologies licensed to us. In addition, if the breadth or strength of protection provided by our patents and patent applications is threatened, it could dissuade companies from collaborating with us to license, develop or commercialize current or future product candidates.

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

Lastly, we may need to indemnify our customers and distributors against claims relating to the infringement of intellectual property rights of third parties related to our product candidates, including cibotercept, KER-065 and elritercept. Third parties may assert infringement claims against our customers or distributors. These claims may require us to initiate or defend protracted and costly litigation on behalf of our customers or distributors, regardless of the merits of these claims. If any of these claims succeed, we may be forced to pay damages on behalf of our customers, suppliers or distributors, or may be

required to obtain licenses for the product candidates or services they use. If we cannot obtain all necessary licenses on commercially reasonable terms, our customers may be forced to stop using our products, if approved, or services.

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

As is common in the biotechnology and pharmaceutical industries, we employ individuals who were previously employed at universities or other biopharmaceutical or pharmaceutical companies, including our competitors or potential competitors. Although no claims against us are currently pending, and although we try to ensure that our employees and consultants do not use the proprietary information or know-how of others in their work for us, we may be subject to claims that we or our employees, consultants or independent contractors have inadvertently or otherwise used or disclosed intellectual property, including trade secrets or other proprietary information, of a former employer or other third parties. Litigation may be necessary to defend against these claims. If we fail in defending any such claims, in addition to paying monetary damages, we may lose valuable intellectual property rights or personnel. Even if we are successful in defending against such claims, litigation or other legal proceedings relating to intellectual property claims may cause us to incur significant expenses, and could distract our technical and management personnel from their normal responsibilities. In addition, there could be public announcements of the results of hearings, motions or other interim proceedings or developments, and, if securities analysts or investors perceive these results to be negative, it could have a substantial adverse effect on the price of our common stock. This type of litigation or proceeding could substantially increase our operating losses and reduce our resources available for development activities. We may not have sufficient financial or other resources to adequately conduct such litigation or proceedings. Some of our competitors may be able to sustain the costs of such litigation or proceedings more effectively than we can because of their substantially greater financial resources. Uncertainties resulting from the initiation and continuation of patent litigation or other intellectual property related proceedings could adversely affect our ability to compete in the marketplace.

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

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

Our product candidates may also require specific formulations to work effectively and efficiently and these rights may be held by others. We may develop products containing our compounds and pre-existing pharmaceutical compounds. We may be required by the FDA or comparable foreign regulatory authorities to provide a companion diagnostic test or tests with our product candidates. These diagnostic test or tests may be covered by intellectual property rights held by others. We may be unable to acquire or in-license any compositions, methods of use, processes or other third-party intellectual property rights from third parties that we identify as necessary or important to our business operations. We may fail to obtain any of these licenses at a reasonable cost or on reasonable terms, if at all, which would harm our business. We may need to cease use of the compositions or methods covered by such third-party intellectual property rights, and may need to seek to develop alternative approaches that do not infringe on such intellectual property rights which may entail additional costs and development delays, even if we were able to develop such alternatives, which may not be feasible. Even if we are able to obtain a license, it may be non-exclusive, thereby giving our competitors access to the same technologies licensed to us. In that event, we may be required to expend significant time and resources to develop or license replacement technology.

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

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

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

Competitors may infringe our patents or the patents of our licensors. To counter infringement or unauthorized use, we may be required to file infringement claims, which can be expensive and time-consuming. In addition, in an infringement proceeding, a court may decide that one or more of our patents is not valid or is unenforceable, or may refuse to stop the other party from using the technology at issue on the grounds that our patents do not cover the technology in question. An adverse result in

any litigation or defense proceedings could put one or more of our patents at risk of being invalidated, held unenforceable, or interpreted narrowly and could put our patent applications at risk of not issuing. Defense of these claims, regardless of their merit, would involve substantial litigation expense and would be a substantial diversion of employee resources from our business.

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

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

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

Furthermore, because of the substantial amount of discovery required in connection with intellectual property litigation, there is a risk that some of our confidential information could be compromised by disclosure during this type of litigation. In addition, there could be public announcements of the results of hearings, motions or other interim proceedings or developments. If securities analysts or investors perceive these results to be negative, it could have a substantial adverse effect on the price of our common stock.

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

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

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

If we or one of our licensing partners initiate legal proceedings against a third party to enforce a patent covering one of our product candidates, the defendant could counterclaim that the patent covering our product candidate, as applicable, is invalid and/or unenforceable. In patent litigation in the United States, defendant counterclaims alleging invalidity and/or unenforceability are commonplace, and there are numerous grounds upon which a third-party can assert invalidity or unenforceability of a patent. Third parties may also raise similar claims before administrative bodies in the United States or abroad, even outside the context of litigation. Such mechanisms include re-examination, post grant review, and equivalent proceedings in foreign jurisdictions (e.g., opposition proceedings). Such proceedings could result in revocation or amendment

to our patents in such a way that they no longer cover our product candidates. The outcome following legal assertions of invalidity and unenforceability is unpredictable. With respect to the validity question, for example, we cannot be certain that there is no invalidating prior art, of which we, our patent counsel and the patent examiner were unaware during prosecution. If a defendant were to prevail on a legal assertion of invalidity and/or unenforceability, or if we are otherwise unable to adequately protect our rights, we would lose at least part, and perhaps all, of the patent protection on our product candidates. Such a loss of patent protection could have a material adverse impact on our business and our ability to commercialize or license our technology and product candidates.

Moreover, the patents included in our patent portfolio may expire before, or soon after, our first product achieves marketing approval in the United States or foreign jurisdictions. For example, the patents related to novel ALK2 inhibitors in the patent family that we license from The General Hospital Corporation are expected to expire in April 2038, without taking into account any possible patent term adjustments or extensions. Upon the expiration of our current or future owned or licensed patents, we may lose the right to exclude others from practicing these inventions. The expiration of these patents could also have a similar material adverse effect on our business, results of operations, financial condition and prospects. We own pending patent applications covering our proprietary technologies or our product candidates that if issued as patents are expected to expire from 2037 through 2046, without taking into account any possible patent term adjustments or extensions. However, we cannot be assured that the USPTO or relevant foreign patent offices will grant any of these patent applications.

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

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. Changes in either the patent laws or interpretation of the patent laws in the United States or in ex-U.S. jurisdictions could increase the uncertainties and costs surrounding the prosecution of patent applications and the enforcement or defense of issued patents. In addition, the United States has recently enacted and is currently implementing wide-ranging patent reform legislation. Recent U.S. Supreme Court rulings have narrowed the scope of patent protection available in certain circumstances and weakened the rights of patent owners in certain situations. In addition to increasing uncertainty with regard to our ability to obtain patents in the future, this combination of events has created uncertainty with respect to the value of patents, once obtained. Depending on decisions by the U.S. Congress, the federal courts, and the USPTO, the laws and regulations governing patents could change in unpredictable ways that would weaken our ability to obtain new patents or to enforce our existing patents and patents that we might obtain in the future. For example, in the case *Amgen Inc. v. Sanofi*, the Federal Circuit held that a well-characterized antigen is insufficient to satisfy the written description requirement of certain claims directed to a genus of antibodies that are solely defined by function; and in the case of Assoc. for *Molecular Pathology v. Myriad Genetics, Inc*., the U.S. Supreme Court held that certain claims to DNA molecules are not patentable. We cannot predict how these decisions or any future decisions by the courts, the U.S. Congress or the USPTO may impact the value of our patents. Similarly, any adverse changes in the patent laws of other jurisdictions could have a material adverse effect on our business and financial condition.

***Some of our in-licensed intellectual property that is discovered through government-funded programs may be subject to federal regulation such as "march-in" rights, certain reporting requirements and a preference for U.S. industry. Compliance with such regulations may limit our exclusive rights, subject us to expenditure of resources with respect to reporting requirements and limit our ability to contract with foreign manufacturers.***

It is possible that patent filings we may choose to in-license in the future may be subject to the Bayh-Dole Act. In particular, under the Bayh-Dole Act, the federal government retains a "nonexclusive, nontransferable, irrevocable, paid-up license" for its own benefit to inventions produced with its financial assistance. The Bayh-Dole Act also provides federal agencies with "march-in rights." March-in rights allow the government, in specified circumstances, to require the contractor or successors in title to the patent to grant a "nonexclusive, partially exclusive, or exclusive license" to a "responsible applicant or applicants." If the patent owner refuses to do so, the government may grant the license itself. Intellectual property discovered under government-funded programs are also subject to certain reporting requirements, compliance with which may require us or our licensors to expend substantial resources. Such intellectual property is also subject to a preference for U.S. industry, which may limit our ability to contract with foreign product manufacturers for products covered by such intellectual property. Moreover, we sometimes collaborate with academic institutions to accelerate our preclinical research or development. While it is our policy to avoid engaging our university partners in projects in which there is a risk that federal funds may be commingled, we cannot be sure that any co-developed intellectual property will be free from government rights pursuant to the Bayh-Dole Act. Further, we may choose to license intellectual property in the future that may be subject to government rights pursuant to the Bayh-Dole Act. If, in the future, we co-own or license in technology which is critical to our business that is developed in whole or in part with federal funds subject to the Bayh-Dole Act, our ability to enforce or otherwise exploit patents covering such technology may be adversely affected.

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

We have limited intellectual property rights outside the United States. Filing, prosecuting and defending patents on product candidates in all countries throughout the world would be prohibitively expensive, and our intellectual property rights in some countries outside the United States can be less extensive than those in the United States. In addition, the laws of some

foreign countries do not protect intellectual property rights to the same extent as do federal and state laws in the United States. Consequently, we may not be able to prevent third parties from practicing our inventions in all countries outside the United States, or from selling or importing products made using our inventions in and into the United States or other jurisdictions. Many countries have compulsory licensing laws under which a patent owner may be compelled to grant licenses to third parties. In addition, many countries limit the enforceability of patents against government agencies or government contractors. In these countries, the patent owner may have limited remedies, which could materially diminish the value of such patent. If we or any of our licensing partners are forced to grant a license to third parties with respect to any patents relevant to our business, our competitive position may be impaired, and our business, financial condition, results of operations and prospects may be adversely affected. Also, competitors may use our technologies in jurisdictions where we have not obtained patent protection to develop their own products and, further, may export otherwise infringing products to territories where we have patent protection but where enforcement is not as strong as that in the United States. These products may compete with our products, if approved, in jurisdictions where we do not have any issued patents and our patent claims or other intellectual property rights may not be effective or sufficient to prevent them from competing.

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

***We may incur substantial costs as a result of litigation or other proceedings relating to patents, and we may be unable to protect our rights to our products, if approved, and technology.***

If we or our licensing partners choose to go to court to stop a third party from using the inventions claimed in our owned or in-licensed patents, that third party may ask the court to rule that the patents are invalid and/or should not be enforced against that third party. These lawsuits are expensive and would consume time and other resources even if we or they, as the case may be, were successful in stopping the infringement of these patents. In addition, there is a risk that the court will decide that these patents are not valid and that we or they, as the case may be, do not have the right to stop others from using the inventions.

There is also the risk that, even if the validity of these patents is upheld, the court will refuse to stop the third party on the ground that such third party's activities do not infringe our owned or in-licensed patents. In addition, the U.S. Supreme Court has recently changed some legal principles that affect patent applications, granted patents and assessment of the eligibility or validity of these patents. As a consequence, issued patents may be found to contain invalid claims according to the newly revised eligibility and validity standards. Some of our owned or in-licensed patents may be subject to challenge and subsequent invalidation or significant narrowing of claim scope in proceedings before the USPTO, or during litigation, under the revised criteria which could also make it more difficult to obtain patents.

We, or our licensing partners, may not be able to detect infringement against our owned or in-licensed patents, as the case may be, which may be especially difficult for manufacturing processes or formulation patents. Even if we or our licensing partners detect infringement by a third party of our owned or in-licensed patents, we or our licensing partners, as the case may be, may choose not to pursue litigation against or settlement with the third party. If we, or our licensing partners, later sue such third party for patent infringement, the third party may have certain legal defenses available to it, which otherwise would not be available except for the delay between when the infringement was first detected and when the suit was brought. Such legal defenses may make it impossible for us or our licensing partners to enforce our owned or in-licensed patents, as the case may be, against such third party.

If another party questions the patentability of any of our claims in our owned or in-licensed U.S. patents, the third-party can request that the USPTO review the patent claims such as in an *inter partes* review, *ex parte* re-exam or post-grant review proceedings. These proceedings are expensive and may result in a loss of scope of some claims or a loss of the entire patent. In addition to potential USPTO review proceedings, we may become a party to patent opposition proceedings in foreign patent offices, where either our owned or in-licensed foreign patents are challenged.

In the future, we may be involved in similar proceedings challenging the patent rights of others, and the outcome of such proceedings is highly uncertain. An adverse determination in any such proceeding could reduce the scope of, or invalidate, our patent rights, allow third parties to commercialize our technology or products and compete directly with us, without payment to us, or result in our inability to manufacture or commercialize products without infringing third-party patent rights. The costs of these opposition or similar proceedings could be substantial, and may result in a loss of scope of some claims or

a loss of the entire patent. An unfavorable result at the USPTO or other patent office may result in the loss of our right to exclude others from practicing one or more of our inventions in the relevant country or jurisdiction, which could have a material adverse effect on our business.

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

Patents have a limited lifespan. In the United States, if all maintenance fees are timely paid, the natural expiration of a patent is generally 20 years from its earliest U.S. non-provisional filing date. Various extensions such as patent term adjustments and/or extensions, may be available, but the life of a patent, and the protection it affords, is limited. Even if patents covering our product candidates are obtained, once the patent life has expired, we may be open to competition from competitive products, including biosimilars. Given the amount of time required for the development, testing and regulatory review of new product candidates, patents protecting such candidates might expire before or shortly after such candidates are commercialized. As a result, our owned and licensed patent portfolio may not provide us with sufficient rights to exclude others from commercializing products similar or identical to ours.

***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 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. Further, for our licensed patents, we may not have the right to control prosecution, including filing with the USPTO, of a petition for patent term extension under the Hatch-Waxman Act. Thus, if one of our licensed patents is eligible for patent term extension under the Hatch-Waxman Act, we may not be able to control whether a petition to obtain a patent term extension is filed, or obtained, from the USPTO.

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

Our trademarks or trade names may be challenged, infringed, circumvented or declared generic or determined to be infringing on other marks. We may not be able to protect our rights to these trademarks and trade names or may be forced to stop using these names, which we need for name recognition by potential partners or customers in our markets of interest. At times, competitors may adopt trade names or trademarks similar to ours, thereby impeding our ability to build brand identity and possibly leading to market confusion. In addition, there could be potential trade name or trademark infringement claims brought by owners of other registered trade names or trademarks that incorporate variations of our unregistered trade names or trademarks. If we are unable to establish name recognition based on our trademarks and trade names, we may not be able to compete effectively and our business may be adversely affected.

## Risks Related to Our Reliance on Third Parties

***We rely, and expect to continue to rely, on third parties, including independent clinical investigators, contracted laboratories and CROs, to conduct our preclinical studies and clinical trials. If these third parties do not successfully carry out their contractual duties 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 relied upon and plan to continue to rely upon third parties, including independent clinical investigators, contracted laboratories and third-party CROs, to conduct our preclinical studies and clinical trials in accordance with applicable regulatory requirements and to monitor and manage data for our ongoing preclinical and clinical programs. We rely on these parties for execution of our preclinical studies and clinical trials, and control only certain aspects of their activities. Nevertheless, we are responsible for ensuring that each of our studies and trials is conducted in accordance with the applicable protocol, legal and regulatory requirements and scientific standards, and our reliance on these third parties does not relieve us of our regulatory responsibilities. We and our third-party contractors and CROs are required to comply with good laboratory practices, or GLPs, as applicable, and GCP requirements, which are regulations and guidelines enforced by the FDA and comparable foreign regulatory authorities for conducting, recording and reporting the results of clinical trials to assure that data and reported results are credible, reproducible and accurate and that the rights, integrity, and confidentiality of trial participants are protected. Regulatory authorities enforce these GLPs and GCPs through periodic inspections of laboratories conducting GLP studies, trial sponsors, principal investigators and trial sites. If we, our investigators or any of our CROs or contracted laboratories fail to comply with applicable GLPs and GCPs, the clinical data generated in our clinical

trials may be deemed unreliable and the FDA or comparable foreign regulatory authorities may require us to perform additional preclinical studies or clinical trials before approving our marketing applications. We cannot assure you that upon inspection by a given regulatory authority, such regulatory authority will determine that any of our preclinical studies or clinical trials comply with applicable GLP or GCP regulations. In addition, our clinical trials must be conducted with product, including biologic product, produced in compliance with applicable cGMP regulations. Our failure to comply with these regulations may require us to repeat preclinical studies or clinical trials, which would delay the regulatory approval process.

Further, these laboratories, investigators and CROs are not our employees and we will not be able to control, other than by contract, the amount of resources, including time, which they devote to our product candidates and clinical trials. If independent laboratories, investigators or CROs fail to devote sufficient resources to the development of our product candidates, or if their performance is substandard, it may delay or compromise the prospects for approval and commercialization of any product candidates that we develop. In addition, the use of third-party service providers requires us to disclose our proprietary information to these parties, which could increase the risk that this information will be misappropriated.

Our CROs have the right to terminate their agreements with us in the event of an uncured material breach. In addition, some of our CROs have an ability to terminate their respective agreements with us if it can be reasonably demonstrated that the safety of the subjects participating in our clinical trials warrants such termination, if we make a general assignment for the benefit of our creditors or if we are liquidated.

Public health crises and government measures taken in response also impact our CROs, and may affect our ability to initiate and complete our preclinical studies and clinical trials.

There is a limited number of third-party service providers that specialize or have the expertise required to achieve our business objectives. If any of our relationships with these third-party laboratories, CROs or clinical investigators terminate, we may not be able to enter into arrangements with alternative laboratories, CROs or investigators or to do so in a timely manner or on commercially reasonable terms. If laboratories, CROs or clinical investigators 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 preclinical or clinical protocols, regulatory requirements or for other reasons, our preclinical or clinical trials 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, our results of operations and the commercial prospects for our product candidates would be harmed, our costs could increase and our ability to generate revenues could be delayed.

Switching or adding additional laboratories or CROs (or investigators) involves additional cost and requires management time and focus. In addition, there is a natural transition period when a new laboratory or CRO commences work. As a result, delays occur, which can materially impact our ability to meet our desired clinical development timelines. Though we carefully manage our relationships with our contracted laboratories and CROs, there can be no assurance that we will not encounter similar challenges or delays in the future or that these delays or challenges will not have a material adverse impact on our business, financial condition and results of operations.

In addition, clinical investigators may serve as scientific advisors or consultants to us from time to time and may receive cash or equity compensation in connection with such services. If these relationships and any related compensation result in perceived or actual conflicts of interest, or the FDA or comparable foreign regulatory authorities conclude that the financial relationship may have affected the interpretation of the preclinical study or clinical trial, the integrity of the data generated at the applicable preclinical study or clinical trial site may be questioned and the utility of the preclinical study or clinical trial itself may be jeopardized, which could result in the delay or rejection by the FDA or comparable foreign regulatory authorities. Any such delay or rejection could prevent us from commercializing our clinical-stage product candidate or any future product candidates.

***We rely on third parties to supply and manufacture our product candidates, and we expect to continue to rely on third parties to manufacture our products, if approved. The development of such product candidates and the commercialization of any products, if approved, could be stopped, delayed or made less profitable if any such third party fails to provide us with sufficient quantities of product candidates or products or fails to do so at acceptable quality levels or prices or fails to maintain or achieve satisfactory regulatory compliance.***

We do not currently have the infrastructure or capability internally to manufacture our product candidates for use in the conduct of our preclinical studies and clinical trials or for commercial supply, if our products are approved. We rely on, and expect to continue to rely on, contract manufacturing organizations, or CMOs. Any replacement of our CMOs could require significant effort and expertise because there may be a limited number of qualified CMOs. This could be particularly problematic where we rely on a single-source supplier, as is currently the case for the manufacture of each of cibotercept, KER-065 and elritercept.

Reliance on third-party providers may expose us to more risk than if we were to manufacture our product candidates ourselves. We are dependent on our CMOs for the production of our product candidates in accordance with relevant regulations, such as cGMP, which includes, among other things, quality control, quality assurance and the maintenance of

records and documentation. Moreover, many of the third parties with whom we contract may also have relationships with other commercial entities, including our competitors, for whom they may also be conducting product development activities that could harm our competitive position.

If we were to experience an unexpected loss of supply of or if any supplier were unable to meet our demand for any of our product candidates, we could experience delays in our research or planned clinical trials or commercialization. We could be unable to find alternative suppliers of acceptable quality, in the appropriate volumes and at an acceptable cost. Moreover, our suppliers are often subject to strict manufacturing requirements and rigorous testing requirements, which could limit or delay production. Any changes in regulatory requirements, policy and guidelines, including the imposition of additional regulatory oversight around manufacturing and testing requirements generally or with respect to our technology in particular, could also limit or delay production. The long transition periods necessary to switch manufacturers and suppliers, if necessary, could significantly delay our clinical trials and the commercialization of our products, if approved, which could materially adversely affect our business, financial condition and results of operation.

In complying with the applicable manufacturing regulations of the FDA and comparable foreign regulatory authorities, we and our third-party suppliers must spend significant time, money and effort in the areas of design and development, testing, production, record-keeping and quality control to assure that the products meet applicable specifications and other regulatory requirements. The facilities used by our contract manufacturers to manufacture our product candidates are subject to review by the FDA or comparable foreign regulatory authorities pursuant to inspections that will be conducted after we submit our NDA or BLA to the FDA, or similar applications to comparable foreign regulatory authorities. We do not control the manufacturing process of, and are completely dependent on, our contract manufacturing partners for compliance with cGMP requirements for manufacture of drug and biologic products. If our contract manufacturers cannot successfully manufacture material that conforms to our specifications and the strict regulatory requirements of the FDA or comparable foreign regulatory authorities, we will not be able to secure or maintain regulatory approval for our product candidates manufactured at these manufacturing facilities. In addition, we have limited control over the ability of our contract manufacturers to maintain adequate quality control, quality assurance and qualified personnel. Despite our efforts to audit and verify regulatory compliance, one or more of our third-party manufacturing partners may be found on regulatory inspection by the FDA or other comparable foreign regulatory authorities to be noncompliant with cGMP regulations. If the FDA or a comparable foreign regulatory authority does not approve these facilities for the manufacture of our product candidates or if any regulatory authority withdraws its approval in the future, we and they may need to find alternative manufacturing facilities, which would negatively impact the ability to develop, obtain regulatory approval for or market our product candidates, if approved. The failure of our manufacturers to comply with regulatory requirements could also result in an enforcement action against us, including the seizure of products and shutting down of production. If any of our third-party suppliers fails to comply with cGMP or other applicable manufacturing regulations, our ability to develop and commercialize the products could suffer significant interruptions. We face risks inherent in relying on a single CMO, as any disruption, such as a fire, natural hazards or vandalism at the CMO could significantly interrupt our manufacturing capability. All of our CMOs currently do not have alternative production plans in place or disaster-recovery facilities available. In case of a disruption, we will have to establish alternative manufacturing sources. This would require substantial capital on our part, which we may not be able to obtain on commercially acceptable terms or at all. Additionally, we would likely experience months of manufacturing delays as the CMO builds or locates replacement facilities and seeks and obtains necessary regulatory approvals. If this occurs, we will be unable to satisfy manufacturing needs on a timely basis, if at all.

***We are dependent on our existing third-party collaborations with Takeda and Hansoh to commercialize elritercept, and if Takeda and Hansoh are not successful in commercializing elritercept in their respective licensed territories, we will lose a significant source of potential revenue.***

Under the terms of the Takeda Agreement, Takeda will pay us milestone payments upon the achievement of specified development, commercial and sales milestones. In addition, if a licensed product is approved for marketing within the Takeda Territory, which includes all countries globally other than the territories of mainland China, Hong Kong and Macau, we will be entitled to receive royalty payments based on tiered increments of annual net sales in the Takeda Territory, with such percentage ranging from the low double-digits to high teens, subject to specified potential royalty reductions. However, under the terms of the Takeda Agreement, Takeda may terminate the agreement in its entirety or on a country-by-country basis for convenience and without cause on written notice of a certain period. In addition, Takeda generally has control over the further clinical development of elritercept and any other licensed compounds in the Takeda Territory. Takeda's decisions with respect to such development will affect the timing and availability of potential future payments under the Takeda Agreement, if any. If the Takeda Agreement is terminated early, or if Takeda's development activities are terminated early or suspended for an extended period of time, or are otherwise unsuccessful, our business and business prospects would be materially and adversely affected.

Additionally, under the terms of the license agreement with Hansoh, Hansoh will pay us milestone payments upon the achievement of specified development and commercial milestones. In addition, if elritercept, or a licensed product containing elritercept, is approved for marketing within the territories of mainland China, Hong Kong and Macau, which we refer to collectively as the Hansoh Territory, we will be entitled to receive royalty payments based on a tiered percentage of annual net sales in each region within the Hansoh Territory, with such percentage ranging from the low double digit to high teens, subject to specified potential royalty reductions. We are relying on Hansoh to commercialize elritercept in the Hansoh Territory, and if Hansoh is not able to commercialize elritercept in those countries, or determines not to pursue development

or commercialization of elritercept in those countries, we will not receive any milestone or royalty payments under the agreement.

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

A part of our strategy is to strategically evaluate and, as deemed appropriate, enter into additional strategic collaborations in the future when strategically attractive, including potentially with major biotechnology or pharmaceutical companies. We have limited capabilities for product development and do not yet have any capability for commercialization. Accordingly, we may enter into collaborations with other companies to provide us with important technologies and funding for our programs and technology. Other than our respective collaborations with Takeda and Hansoh for elritercept, we have no active collaborations for any of our product candidates. Our collaborations with Takeda and Hansoh and any future collaboration arrangements may not ultimately be successful, which could have a negative impact on our business, results of operations, financial condition and growth prospects. We do not maintain significant rights or control of future development and commercialization activities under our collaboration with Takeda. This could lead to potential disputes in the future over the terms of the collaboration and the respective rights of the parties, and these risks and uncertainties could be present with respect to our potential future collaborations as well.

If we fail to enter into or maintain collaborations on reasonable terms or at all, our ability to develop our existing or future research programs and product candidates could be delayed, the commercial potential of our product could change and our costs of development and commercialization could increase. Furthermore, we may find that our programs require the use of intellectual property rights held by third parties, and the growth of our business may depend in part on our ability to acquire or in-license these intellectual property rights.

Any future collaborations we enter into may pose a number of risks, including, but not limited to, the following:

- collaborators have significant discretion in determining the efforts and resources that they will apply;
- collaborators may not perform their obligations as expected;
- collaborators may not pursue development and commercialization of any product candidates that achieve regulatory approval or may elect not to continue or renew development or commercialization programs or license arrangements based on clinical trial results, changes in the collaborators' strategic focus or available funding, or external factors, such as a strategic transaction that may divert resources or create competing priorities;
- collaborators may delay clinical trials, provide insufficient funding for a clinical trial program, stop a clinical trial or abandon a product candidate, repeat or conduct new clinical trials or require a new formulation of a product candidate for clinical testing;
- collaborators could independently develop, or develop with third parties, products that compete directly or indirectly with our products, if approved, and product candidates if the collaborators believe that the competitive products are more likely to be successfully developed or can be commercialized under terms that are more economically attractive than ours;
- product candidates discovered in collaboration with us may be viewed by our collaborators as competitive with their own product candidates or products, which may cause collaborators to cease to devote resources to the commercialization of our product candidates;
- collaborators may fail to comply with applicable regulatory requirements regarding the development, manufacture, distribution or marketing of a product candidate or product;
- collaborators with marketing and distribution rights to one or more of our product candidates that achieve regulatory approval may not commit sufficient resources to the marketing and distribution of such product or products;
- disagreements with collaborators, including disagreements over proprietary rights, contract interpretation or the preferred course of development, might cause delays or terminations of the research, development or commercialization of product candidates, might lead to additional responsibilities for us with respect to product candidates, or might result in litigation or arbitration, any of which would be time-consuming and expensive;
- collaborators may not properly maintain or defend our intellectual property rights or may use our proprietary information in such a way as to invite litigation that could jeopardize or invalidate our intellectual property or proprietary information or expose us to potential litigation;
- collaborators may infringe the intellectual property rights of third parties, which may expose us to litigation and potential liability;
- if a collaborator of ours is involved in a business combination, the collaborator might de-emphasize or terminate the development or commercialization of any product candidate licensed to it by us; and
- collaborations may be terminated by the collaborator, and, if terminated, we could be required to raise additional capital to pursue further development or commercialization of the applicable product candidates.

If our collaborations do not result in the successful discovery, development and commercialization of product candidates or if one of our collaborators terminates its agreement with us, we may not receive any future research funding or milestone or royalty payments under such collaboration. All of the risks relating to product development, regulatory approval and commercialization described in this Annual Report on Form 10-K also apply to the activities of our therapeutic collaborators.

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

We face significant competition in seeking appropriate collaborative partners. Our ability to reach a definitive agreement for a collaboration will depend, among other things, upon an 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. These factors may include the design or results of preclinical studies or clinical trials, the likelihood of regulatory approval, 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 any uncertainty with respect to our ownership of technology (which can exist if there is a challenge to such ownership regardless of 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.

We may not be able to negotiate collaborations on a timely basis, on acceptable terms, or at all. If we are unable to do so, we may have to curtail the development of the product candidate for which we are seeking to collaborate, reduce or delay its development program or one or more of our other development programs, delay its potential commercialization, 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 product candidates or bring them to market and generate product revenue.

***If we engage in future acquisitions or strategic collaborations, this may increase our capital requirements, dilute our stockholders, cause us to incur debt or assume contingent liabilities and subject us to other risks.***

From time to time, we may evaluate various acquisition opportunities and strategic collaborations, including licensing or acquiring complementary products, intellectual property rights, technologies or businesses. Any potential acquisition or strategic collaboration may entail numerous risks, including:

- increased operating expenses and cash requirements;
- the assumption of additional indebtedness or contingent liabilities;
- the issuance of our equity securities;
- assimilation of operations, intellectual property and products of an acquired company, including difficulties associated with integrating new personnel;
- the diversion of our management's attention from our existing programs and initiatives in pursuing such a strategic merger or acquisition;
- retention of key employees, the loss of key personnel and uncertainties in our ability to maintain key business relationships;
- risks and uncertainties associated with the other party to such a transaction, including the prospects of that party and their existing products or product candidates and marketing approvals; and
- our inability to generate revenue from acquired technology and/or products sufficient to meet our objectives in undertaking the acquisition or even to offset the associated acquisition and maintenance costs.

In addition, if we undertake acquisitions or pursue collaborations in the future, we may issue dilutive securities, assume or incur debt obligations, incur large one-time expenses and acquire intangible assets that could result in significant future amortization expense. Moreover, we may not be able to locate suitable acquisition opportunities, and this inability could impair our ability to grow or obtain access to technology or products that may be important to the development of our business.

## Risks Related to Our Employee Matters, Managing Our Growth and Other Risks Relating to Our Operations

***We are highly dependent on our key personnel, including our Chief Executive Officer, Chief Operating Officer and Chief Medical Officer. If we are not successful in attracting, motivating and retaining highly qualified personnel, we may not be able to successfully implement our business strategy.***

Our ability to compete in the highly competitive biotechnology and pharmaceutical industries depends upon our ability to attract, motivate and retain highly qualified managerial, scientific and medical personnel. We are highly dependent on our management and particularly on the services of our scientific personnel including Jasbir Seehra, Ph.D., our Chief Executive Officer, Christopher Rovaldi, our Chief Operating Officer, and Yung H. Chyung, our Chief Medical Officer. We believe that their drug discovery and development experience and overall biopharmaceutical company management experience would be difficult to replace. Any of our executive officers could leave our employment at any time, as all of our employees are "at-will" employees. The loss of the services of our key personnel and any of our other executive officers, key employees, and scientific and medical advisors, and our inability to find suitable replacements, could result in delays in our research and development objectives and harm our business.

Recruiting and retaining qualified employees, consultants and advisors for our business, including scientific and technical personnel, also will be critical to our success. Competition for skilled personnel is intense and the turnover rate can be high.

We may not be able to attract and retain personnel on acceptable terms given the competition among numerous pharmaceutical and biotechnology companies and academic institutions for skilled individuals. In addition, failure to succeed in preclinical studies, clinical trials or applications for marketing approval may make it more challenging to recruit and retain qualified personnel. The inability to recruit, or the loss of services of certain executives, key employees, consultants or advisors, may impede the progress of our research, development and commercialization objectives and have a material adverse effect on our business, financial condition, results of operations and prospects.

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

As of December 31, 2024, we had 169 full-time employees, including 135 employees engaged in research and development and 34 employees engaged in management or general and administrative activities. As our clinical development and commercialization plans and strategies develop, we expect we will need additional managerial, operational, sales, marketing, financial, legal and other personnel. Future growth would impose significant added responsibilities on members of management, including:

- identifying, recruiting, integrating, maintaining and motivating additional employees;
- managing our development efforts effectively, including the clinical and FDA review process for cibotercept, KER-065, elritercept and any future product candidates, while complying with our contractual obligations to contractors and other third parties; and
- improving our operational, financial and management controls, reporting systems and procedures.

Our future financial performance and our ability to commercialize cibotercept, KER-065, elritercept and any other product candidates we develop will depend, in part, on our ability to effectively manage any future growth, and our management may also have to divert a disproportionate amount of its attention away from day-to-day activities in order to devote a substantial amount of time to managing these growth activities.

We currently rely, and for the foreseeable future will continue to rely, in substantial part on certain independent organizations, advisors and consultants to provide certain services. The services include substantially all aspects of clinical trial management and manufacturing. We cannot assure you that the services of independent organizations, advisors and consultants will continue to be available to us on a timely basis when needed, or that we can find qualified replacements. In addition, if we are unable to effectively manage our outsourced activities or if the quality or accuracy of the services provided by consultants is compromised for any reason, our clinical trials may be extended, delayed or terminated, and we may not be able to obtain marketing approval of cibotercept, KER-065, elritercept and our other product candidates or otherwise advance our business. We cannot assure you that we will be able to manage our existing consultants or find other competent outside contractors and consultants on economically reasonable terms, or at all.

If we are not able to effectively expand our organization by hiring qualified new employees and expanding our groups of consultants and contractors, we may not be able to successfully implement the tasks necessary to further develop and commercialize cibotercept, KER-065, elritercept and our other product candidates and, accordingly, may not achieve our research, development and commercialization goals.

***If our internal computer systems, or those used by our contract research organizations, or other contractors or consultants with whom we work, fail, suffer security incidents, or are or were otherwise compromised, we could experience adverse consequences, including but not limited to regulatory investigations or actions; litigation; fines and penalties; disruptions of our business operations; reputational harm; loss of revenue or profits; loss of customers or sales; and other adverse consequences.***

In the ordinary course of our business, we and the third parties with whom we work, collect, receive, store, process, generate, use, transfer, disclose, make accessible, protect, secure, dispose of, transmit and share, or collectively, process, proprietary, confidential and sensitive data, including personal data (such as health-related data), intellectual property and trade secrets, or collectively, sensitive information.

Cyber-attacks, malicious internet-based activity, online and offline fraud, and other similar activities threaten the confidentiality, integrity, and availability of our sensitive information and information technology systems, and those of the third parties with whom we work. Such threats are prevalent and continue to rise, are increasingly difficult to detect, and come from a variety of sources, including traditional computer “hackers,” threat actors, “hacktivists,” organized criminal threat actors, personnel (such as through theft or misuse), sophisticated nation states, and nation-state-supported actors. Some actors now engage and are expected to continue to engage in cyber-attacks, including without limitation nation-state actors for geopolitical reasons and in conjunction with military conflicts and defense activities. During times of war and other major conflicts, we and the third parties with whom we work, are vulnerable to a heightened risk of these attacks, including retaliatory cyber-attacks, that could materially disrupt our systems and operations, supply chain, and ability to produce, sell and distribute our goods and services. We and the third parties with whom we work are subject to a variety of evolving threats, including but not limited to social-engineering attacks (including through deep fakes, which are increasingly more difficult to identify as fake, and phishing attacks), malicious code (such as viruses and worms), malware (including as a result of advanced persistent threat intrusions), denial-of-service attacks, credential stuffing attacks, credential harvesting, personnel misconduct or error, ransomware attacks, supply-chain attacks, software bugs, server malfunctions, software or

hardware failures, loss of data or other information technology assets, adware, telecommunications failures, attacks enhanced or facilitated by AI, and other similar threats. It may be difficult and/or costly to detect, investigate, mitigate, contain and remediate a security incident. Our efforts to do so may not be successful. Actions taken by us or the third parties with whom we work to detect, investigate, mitigate, contain and remediate a security incident could result in outages, data losses and disruptions of our business. Threat actors may also gain access to other networks and systems after a compromise of our networks and systems. In particular, severe ransomware attacks are becoming increasingly prevalent and can lead to significant interruptions in our operations, ability to provide products and services, loss of sensitive data and income, reputational harm, and diversion of funds. Extortion payments may alleviate the negative impact of a ransomware attack, but we may be unwilling or unable to make such payments due to, for example, applicable laws or regulations prohibiting such payments.

We are increasingly dependent upon information technology systems, infrastructure and data to operate our business, particularly due to our hybrid work policies. Hybrid work has become more common and has increased risks to our information technology systems and data, as more of our employees utilize network connections, computers and devices outside our premises or network, including working at home, while in transit and in public locations. Future or past business transactions (such as acquisitions or integrations) could expose us to additional cybersecurity risks and vulnerabilities, as our systems could be negatively affected by vulnerabilities present in acquired or integrated entities' systems and technologies. Furthermore, we may discover security issues that were not found during due diligence of such acquired or integrated entities, and it may be difficult to integrate companies into our information technology environment and security program.

We use third-parties to operate critical business systems to process sensitive information in a variety of contexts, including, without limitation, cloud-based infrastructure, encryption and authentication technology, employee email and other functions. We also work with third-party service providers to provide other products, services, parts or otherwise to operate our business. Our ability to monitor these third parties' information security practices is limited, and these third parties may not have adequate information security measures in place. If our third-party service providers experience a security incident or other interruption, we could experience adverse consequences. While we may be entitled to damages if our third-party service providers fail to satisfy their privacy or security-related obligations to us, any award may be insufficient to cover our damages, or we may be unable to recover such award. In addition, supply-chain attacks have increased in frequency and severity, and we cannot guarantee that third parties' infrastructure in our supply chain or our third-party partners' supply chains have not been compromised.

While we have implemented security measures designed to protect against security incidents, there can be no assurance that these measures will be effective. We take steps to detect and remediate vulnerabilities in our information systems, but we may not be able to detect and remediate all vulnerabilities on a timely basis because the threats and techniques used to exploit the vulnerability change frequently and are often sophisticated in nature. Therefore, such vulnerabilities could be exploited and result in a security incident, but may not be detected until after the security incident has occurred. Unremediated high risk or critical vulnerabilities pose material risks to our business. Further, we may experience delays in developing and deploying remedial measures designed to address any such identified vulnerabilities.

Any of the previously identified or similar threats could cause a security incident or other interruption that could result in unauthorized, unlawful or accidental acquisition, modification, destruction, loss, alteration, encryption, disclosure of or access to our sensitive information or our information technology systems, or those of the third parties with whom we work. A security incident or other interruption could disrupt our ability (and that of third parties with whom we work) to operate our business. We may expend significant resources or modify our business activities (including our clinical trial activities) to try to protect against security incidents. Certain data privacy and security obligations have required us to implement and maintain specific security measures or industry-standard or reasonable security measures to protect our information technology systems and sensitive information.

The costs to respond to a security incident and/or to mitigate any security vulnerabilities that may be identified could be significant, our efforts to address these problems may not be successful, and these problems could result in unexpected interruptions, delays, cessation of service, negative publicity, and other harm to our business and our competitive position. Any security incident affecting us, our current and future CROs, collaborators, contractors, consultants or other partners or our industry, whether real or perceived, could harm our reputation, erode confidence in the effectiveness of our security measures and lead to regulatory scrutiny. Likewise, we use third parties for the manufacture of our product candidates and to conduct clinical trials, and similar events relating to their computer systems could also have a material adverse effect on our business. To the extent that any disruption or security incident were to result in a loss of, or damage to, our data or applications, or inappropriate disclosure of confidential or proprietary information, we could face governmental reporting obligations, fines, incur liability and the further development and commercialization of our product candidates could be delayed.

If we (or a third party with whom we work) experience a security incident or are perceived to have experienced a security incident, we may experience adverse consequences. Additionally, our sensitive information could be leaked, disclosed, or revealed as a result of or in connection with our employee's, personnel's, or vendor's use of generative AI technologies, resulting in adverse consequences. In each case, these consequences may include: government enforcement actions (for example, investigations, fines, penalties, audits, and inspections); additional reporting requirements and/or oversight;

restrictions on processing sensitive information (including personal data); litigation (including class action claims); indemnification obligations; negative publicity; reputational harm; monetary fund diversions; diversion of management attention; interruptions in our operations (including availability of data); financial loss; and other similar harms. Security incidents and attendant consequences may prevent or cause individuals to stop conducting business with us or negatively impact our ability to grow and operate our business. For example, the loss of preclinical or clinical data could result in delays in our regulatory approval efforts and significantly increase our costs to recover or reproduce the data. Applicable data privacy and security obligations may require us, or we may voluntarily choose, to notify relevant stakeholders, including affected individuals, customers, regulators, and investors, of security incidents, or to take other actions, such as providing credit monitoring and identity theft protection services. Most jurisdictions have enacted laws requiring companies to notify individuals, regulatory authorities, and others of security incidents involving certain types of data. In addition, our agreements with collaborators may require us to notify them in the event of a security incident. Such mandatory disclosures and related actions can be costly, and the disclosure or the failure to comply with such applicable requirements could lead to adverse consequences such as negative publicity, may cause our collaborators to lose confidence in the effectiveness of our security measures and require us to expend significant capital and other resources to respond to and/or alleviate problems caused by the actual or perceived security incident.

In addition, any actual or perceived security incident could result in legal claims or proceedings, regulatory investigations or actions, and other types of liability under laws that protect the privacy and security of personal information, including federal, state and foreign data protection and privacy regulations, violations of which could result in significant penalties and fines in the EU, UK and United States notably. In addition, although we seek to detect and investigate all data security incidents, security incidents and other incidents of unauthorized access to our information technology systems and data can be difficult to detect and any delay in identifying such breaches or incidents may lead to increased harm and legal exposure of the type described above.

Our contracts may not contain limitations of liability, and even where they do, there can be no assurance that limitations of liability in our contracts are sufficient to protect us from liabilities, damages, or claims related to our data privacy and security obligations. We cannot be sure that our insurance coverage will be adequate or sufficient to protect us from or to mitigate liabilities arising out of our privacy and security practices, that such coverage will continue to be available on commercially reasonable terms or at all, or that such coverage will pay future claims. The successful assertion of one or more large claims against us that exceeds our available insurance coverage, or results in changes to our insurance policies (including premium increases or the imposition of large deductible or co-insurance requirements), could have an adverse effect on our business.

***We and the third parties with whom we work are subject to stringent and evolving U.S. and foreign laws, regulations and rules, contractual obligations, industry standards, policies and other obligations related to data privacy and security. Our (or the third parties with whom we work) actual or perceived failure to comply with such obligations could lead to government enforcement actions, including administrative, civil or criminal fines or penalties, private litigation (including class claims) and mass arbitration demands; fines and penalties; disruptions of our business operations; reputational harm; loss of revenue or profits; other liabilities and adverse publicity and could negatively affect our operating results and business. Compliance or the failure to comply with such laws and regulations could increase the costs of our products, could limit their use or adoption, and could otherwise negatively affect our operating results and business.***

In the ordinary course of business, we collect, receive, store, process, generate, use, transfer, disclose, make accessible, protect, secure, dispose of, transmit, and share (collectively, process) personal data and other sensitive information, including personal data, proprietary and confidential business data, trade secrets, intellectual property and data we collect about trial participants in connection with clinical trials. Our data processing activities subject us to numerous data privacy and security obligations, such as various laws, regulations, guidance, industry standards, external and internal privacy and security policies, contractual requirements and other obligations relating to data privacy and security.

In the United States, numerous federal and state laws and regulations, including federal and state health information privacy laws, state data breach notification laws, and federal and state consumer protection laws (including Section 5 of the Federal Trade Commission Act) and other similar laws (e.g., wiretapping laws), that govern the collection, use, disclosure and protection of health information and other personal information could apply to our operations or the operations of our collaborators. In addition, we obtain health information from third parties, including research institutions from which we obtain clinical trial data, that are subject to privacy and security requirements under HIPAA, as amended by HITECH, which imposes specific requirements relating to the privacy, security, and transmission of individually identifiable protected health information. Depending on the facts and circumstances, we could be subject to civil, criminal and administrative penalties and fines if we violate HIPAA.

In addition, certain state and foreign laws govern the privacy and security of health information in certain circumstances, some of which are more stringent than U.S. federal law and many of which differ from each other in significant ways and may not have the same effect, thus complicating compliance efforts.

In the past few years, numerous U.S. states—including California, Virginia, Colorado, Connecticut, and Utah—have enacted comprehensive privacy laws that impose certain obligations on covered businesses, including providing specific disclosures

in privacy notices and affording residents with certain rights concerning their personal data. As applicable, such rights include the right to access, correct, or delete certain personal data, and to opt-out of certain data processing activities, such as targeted advertising, profiling, and automated decision-making. The exercise of these rights may impact our business and ability to provide our products and services. Certain states also impose stricter requirements for processing certain personal data, including sensitive information, such as conducting data privacy impact assessments. These state laws allow for statutory fines for noncompliance. For example, the California Consumer Privacy Act of 2018, as amended by the California Privacy Rights Act of 2020, or the CPRA, collectively referred to as the CCPA, applies to personal data of consumers, business representatives, and employees who are California residents, and requires businesses to provide specific disclosures in privacy notices and honor requests of such individuals to exercise certain privacy rights. The CCPA provides for fines and allows private litigants affected by certain data breaches to recover significant statutory damages.

Similar laws are being considered in several other states, as well as at the federal and local levels, and we expect more states to pass similar laws in the future. These developments further complicate compliance efforts, and increase legal risk and compliance costs for us and the third parties with whom we work.

Other laws and regulations also apply to our business model. We are subject to new laws governing the privacy of consumer health data. For example, Washington's My Health My Data Act, or MHMD, broadly defines consumer health data, places restrictions on processing consumer health data (including imposing stringent requirements for consents), provides consumers certain rights with respect to their health data, and creates a private right of action to allow individuals to sue for violations of the law. Other states are considering and may adopt similar laws. Additionally, under various privacy laws and other obligations, we may be required to obtain certain consents to process personal data. For example, some of our data processing practices may be challenged under wiretapping laws, if we obtain consumer information from third parties through various methods, including chatbot and session replay providers, or via third-party marketing pixels. These practices may be subject to increased challenges by class action plaintiffs. Our inability or failure to obtain consent for these practices could result in adverse consequences, including class action litigation and mass arbitration demands.

Outside the United States, an increasing number of laws, regulations, and industry standards govern data privacy and security. For example, the EU's General Data Protection Regulation, or EU GDPR, the United Kingdom's GDPR (collectively referred to as the GDPR), Brazil's General Data Protection Law (Lei Geral de Proteção de Dados Pessoais) (Law No. 13,709/2018), Turkey's Personal Data Protection Law, South Korea's Personal Information Protection Act, Taiwan's Personal Data Protection Act, Peru's Personal Data Protection Law, South Africa's Protection of Personal Information Act, and China's Personal Information Protection Law impose strict requirements for processing personal data. For example, under GDPR, companies may face temporary or definitive bans on data processing and other corrective actions; fines of up to €20 million under the EU GDPR, 17.5 million pounds sterling under the UK GDPR, or in each case,4% of annual global revenue, whichever is greater; or private litigation related to processing of personal data brought by classes of data subjects or consumer protection organizations authorized at law to represent their interests.

In the ordinary course of business, we transfer personal data from Europe and other jurisdictions to the United States or other countries. Europe and other jurisdictions have enacted laws requiring data to be localized or limiting the transfer of personal data to other countries. In particular, the European Economic Area, or the EEA, and the UK have significantly restricted the transfer of personal data to countries whose privacy laws it believes are inadequate. Other jurisdictions may adopt or have already adopted similarly stringent data localization and cross-border data transfer laws. Although there are currently various mechanisms that may be used to transfer personal data from the EEA and UK to the United States in compliance with law, such as the EU-U.S. Data Privacy Framework and the UK Extension to the EU-U.S. Data Privacy Framework, under which we have self-certified to allow for transfers from the EEA and/or UK to the United States, these mechanisms are subject to legal challenges, and there is no assurance that we can satisfy or rely on these measures to lawfully transfer personal data to the United States. If there is no lawful manner for us to transfer personal data from the EEA, the UK or other jurisdictions to the United States, or if the requirements for a legally-compliant transfer are too onerous, we could face significant adverse consequences, including the interruption or degradation of our operations, the need to relocate part of or all of our business or data processing activities to other jurisdictions (such as Europe) at significant expense, increased exposure to regulatory actions, substantial fines and penalties, the inability to transfer data and work with partners, vendors and other third parties, and injunctions against our processing or transferring of personal data necessary to operate our business. Additionally, companies that transfer personal data out of the EEA and UK to other jurisdictions, particularly to the United States, are subject to increased scrutiny from regulators, individual litigants, and activist groups. Some European regulators have ordered certain companies to suspend or permanently cease certain transfers out of Europe for allegedly violating the GDPR's cross-border data transfer limitations. Regulators in the United States, such as the Department of Justice, are also increasingly scrutinizing certain personal data transfers and have proposed and may enact certain data localization requirements, for example, the Biden Administration's executive order Preventing Access to Americans' Bulk Sensitive Personal Data and United States Government-Related Data by Countries of Concern.

Laws such as these give rise to an increasingly complex set of compliance obligations on us. These data protection rules continue to evolve and may result in ever-increasing regulatory and public scrutiny and escalating levels of enforcement and sanctions and increased costs of compliance. We strive to comply with these rules and obligations to the extent possible. Such compliance is a rigorous and time-consuming process.

We are also bound by contractual obligations related to data privacy and security, and our efforts to comply with such obligations may not be successful. We publish privacy policies, marketing materials, whitepapers and other statements, such as statements related to compliance with certain certifications or self-regulatory principles, concerning data privacy and security. Although we endeavor to comply with our policies and other documentation, we may at times fail to do so or may be perceived to have failed to do so. Regulators in the United States are increasingly scrutinizing these statements, and if these policies, materials, statements or documentation are found to be deficient, lacking in transparency, deceptive, unfair, misleading or misrepresentative of our practices, we may be subject to investigation, enforcement actions by regulators or other adverse consequences.

Obligations related to data privacy and security (and individuals' data privacy expectations) are quickly changing, becoming increasingly stringent and creating uncertainty. Additionally, these obligations are subject to differing applications and interpretations, which may be inconsistent or conflict among jurisdictions. Preparing for and complying with these obligations requires us to devote significant resources. These obligations may necessitate changes to our services, information technologies, systems, and practices and to those of any third parties that process personal data on our behalf. In addition, these obligations may require us to change our business model. We may at times fail (or be perceived to have failed) in our efforts to comply with our data privacy and security obligations. Moreover, despite our efforts, our personnel or third parties with whom we work on may fail to comply with such obligations, which could negatively impact our business operations. If we or the third parties with whom we work fail, or are perceived to have failed, to address or comply with applicable data privacy and security obligations, we could face significant consequences, including but not limited to: government enforcement actions (e.g., investigations, fines, penalties, audits and inspections); litigation (including class action claims) and mass arbitration demands; additional reporting requirements and/or oversight; bans or restrictions on processing personal data; orders to destroy or not use personal data; and imprisonment of company officials. In particular, plaintiffs have become increasingly more active in bringing privacy-related claims against companies, including class claims and mass arbitration demands. Some of these claims allow for the recovery of statutory damages on a per violation basis, and, if viable, carry the potential for monumental statutory damages, depending on the volume of data and the number of violations. Any of these events could have a material adverse effect on our reputation, business, or financial condition, including but not limited to: interruptions or stoppages in our business operations (including clinical trials); inability to process personal data or to operate in certain jurisdictions; limited ability to develop or commercialize our products; expenditure of time and resources to defend any claim or inquiry; adverse publicity; or substantial changes to our business model or operations.

Compliance with U.S. and foreign data protection laws and regulations could require us to take on more onerous obligations in our contracts, increase our costs of legal compliance, restrict our ability to collect, use and disclose data, or in some cases, impact our or our partners' or suppliers' ability to operate in certain jurisdictions. Failure to comply with these laws and regulations could result in government investigations and/or enforcement actions (which could include civil, criminal and administrative penalties), private litigation and/or adverse publicity and could negatively affect our operating results and business. Moreover, clinical trial subjects, employees and other individuals about whom we or our potential collaborators obtain personal information, as well as the providers who share this information with us, may limit our ability to collect, use and disclose the information. Claims that we have violated individuals' privacy rights, failed to comply with data protection laws, or breached our contractual obligations, even if we are not found liable, could be expensive and time-consuming to defend and could result in adverse publicity that could harm our business.

***Our employees, independent contractors, vendors, 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, independent contractors, vendors, 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 comparable foreign regulatory authorities, including those laws requiring the reporting of true, complete and accurate information to such authorities; healthcare fraud and abuse laws and regulations in the United States and abroad; or laws that require the reporting of financial information or data accurately. In particular, sales, marketing and business arrangements in the healthcare industry are subject to extensive laws and regulations intended to prevent fraud, misconduct, kickbacks, self-dealing and other abusive practices. These laws and regulations may restrict or prohibit a wide range of pricing, discounting, marketing and promotion, sales commission, customer incentive programs and other business arrangements. Activities subject to these laws also involve the improper use of information obtained in the course of clinical trials or creating fraudulent data in our preclinical studies or clinical trials, which could result in regulatory sanctions and cause serious harm to our reputation. 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 significant civil, criminal and administrative penalties, damages, monetary fines, imprisonment, possible exclusion from participation in Medicare, Medicaid and other federal or comparable foreign healthcare programs, additional reporting requirements and oversight if we become subject to a corporate integrity agreement or similar agreement to resolve

allegations of non-compliance with these laws, 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, financial condition and results of operations.

***Public health crises could adversely impact our business, including the timing or results of our preclinical studies and clinical trials.***

As a result of any public health crises, we may experience disruptions that could severely impact our business, preclinical studies and clinical trials, including:

- delays in receiving approval from local regulatory authorities to initiate our planned clinical trials;
- delays or difficulties in enrolling patients in our clinical trials;
- delays or difficulties in clinical site initiation, including difficulties in recruiting clinical site investigators and clinical site staff;
- delays in clinical sites receiving the supplies and materials needed to conduct our clinical trials, including interruption in global shipping that may affect the transport of clinical trial materials;
- changes in local regulations as part of a response to public health crises, which may require us to change the ways in which our clinical trials are conducted, which may result in unexpected costs, or to discontinue the clinical trials altogether;
- diversion of healthcare resources away from the conduct of clinical trials, including the diversion of hospitals serving as our clinical trial sites and hospital staff supporting the conduct of our clinical trials;
- interruption of key clinical trial activities, such as clinical trial site monitoring, due to limitations on travel imposed or recommended by federal or state governments, employers and others, or interruption of clinical trial subject visits and study procedures, the occurrence of which could affect the integrity of clinical trial data;
- risk that participants enrolled in our clinical trials will acquire any contagious diseases while the clinical trial is ongoing, which could impact the results of the clinical trial, including by increasing the number of observed adverse events;
- interruptions in preclinical studies due to restricted or limited operations at our research and development laboratory facility or delays in receiving the supplies and materials needed to conduct our preclinical studies;
- delays in necessary interactions with local regulators, ethics committees and other important agencies and contractors due to limitations in employee resources or forced furlough of government employees;
- limitations in employee resources that would otherwise be focused on the conduct of our clinical trials, including because of sickness of employees or their families or the desire of employees to avoid contact with large groups of people;
- refusal of the FDA or comparable foreign regulatory authorities to accept data from clinical trials in these affected geographies; and
- interruption or delays to our sourced discovery and clinical activities.

To the extent a public health crises adversely affects our business, financial condition and results of operations, it may also have the effect of heightening many of the other risks described in this “Risk Factors” section.

***A variety of risks are associated with operating our business internationally which could materially adversely affect our business.***

We conduct certain research and development and clinical operations in Australia, New Zealand, Europe, the United Kingdom and other foreign countries and may also conduct certain future clinical trials outside of the United States. Additionally, while we have not taken any steps to enter into any non-U.S. markets, we may do so in the future. Accordingly, we are subject to risks related to operating in foreign countries, including:

- different standards of care in various countries that could complicate the evaluation of our product candidates;
- different United States and foreign drug import and export rules;
- reduced protection for intellectual property rights in certain countries;
- unexpected changes in tariffs, trade barriers and regulatory requirements;
- economic weakness, including inflation, or political instability in particular foreign economies and markets;
- compliance with tax, employment, immigration, and labor laws for employees living or traveling abroad;
- compliance with the FCPA and other anti-corruption and anti-bribery laws;
- foreign taxes, including withholding of payroll taxes;
- foreign currency fluctuations, which could result in increased operating expenses and reduced revenue, and other obligations incident to doing business in another country;
- workforce uncertainty in countries where labor unrest is more common than in the United States;
- production shortages resulting from any events affecting raw material supply or manufacturing capabilities abroad;
- different payor reimbursement regimes, governmental payors or patient self-pay systems and price controls;
- potential liability resulting from development work conducted by foreign partners;
- business interruptions resulting from natural disasters, outbreaks of contagious diseases and other public health crises, or geopolitical actions, including war and terrorism, or systems failure including cybersecurity breaches; and
- compliance with evolving and expansive foreign regulatory requirements, including data privacy laws (such as the GDPR).

Additionally, in connection with the ongoing war between Russia and Ukraine, the U.S. government and EU countries have imposed enhanced export controls on certain products and sanctions on certain industry sectors and parties in Russia. The U.S. government has also indicated it will consider imposing additional sanctions and other similar measures in the near future. Although we do not currently conduct any clinical trials in Russia or Ukraine, further escalation of geopolitical tensions could have a broader impact that expands into other markets where we do business or conduct certain research and development operations, which could adversely affect our business, our supply chain for our product candidates, our collaborators or our ability to carry out our clinical trials.

***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.***

We are presently conducting clinical development in Australia, New Zealand, Europe, the United Kingdom and other foreign countries and may choose to conduct additional international clinical trials in the future. The U.S. Foreign Corrupt Practices Act, or FCPA, prohibits companies and their employees and third-party intermediaries from paying, offering, promising or authorizing others to pay or offer 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. The FCPA presents particular challenges in the pharmaceutical industry, because, in many countries, hospitals are owned and operated by the government, and doctors and other hospital employees are considered foreign officials. We can be held liable for the corrupt or other illegal activities of our employees, representatives, contractors, business partners and agents, even if we do not explicitly authorize or have actual knowledge of such activities. Noncompliance with the FCPA and anti-corruption laws could subject us to whistleblower complaints, investigations, sanctions, settlements, prosecution, other enforcement actions, disgorgement of profits, significant fines, damages, other civil and criminal penalties or injunctions, suspension and/or debarment from contracting with certain persons, the loss of export privileges, reputational harm, adverse media coverage and other collateral consequences. If any subpoenas or investigations are launched, or governmental or other sanctions are imposed, or if we do not prevail in any possible civil or criminal litigation, our business, results of operations and financial condition could be materially harmed.

In addition, our products, if approved, may be subject to export controls, trade sanctions laws and regulations. Governmental regulation of the import or export of our products, or our failure to obtain any required import or export authorization for our products, when applicable, could harm our international sales and adversely affect our revenue. Compliance with applicable regulatory requirements regarding the export of our products may create delays in the introduction of our products in international markets or, in some cases, prevent the export of our products to some countries altogether. Furthermore, U.S. export control laws and economic sanctions prohibit the shipment of certain products and services to countries, governments, and persons targeted by U.S. sanctions. If we fail to comply with export and import regulations and such economic sanctions, penalties could be imposed, including fines and/or denial of certain export privileges. Moreover, any new export or import restrictions, new legislation or shifting approaches in the enforcement or scope of existing regulations, or in the countries, persons, or products targeted by such regulations, could result in decreased use of our products by, or in our decreased ability to export our products to, existing or potential customers with international operations. Any decreased use of our products or limitation on our ability to export or sell our products would likely adversely affect our business.

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

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

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

***Changes in tax laws or regulations that are applied adversely to us may have a material adverse effect on our business, cash flow, financial condition or results of operations.***

Legislation enacted in 2017, informally titled the Tax Cuts and Jobs Act of 2017, or the Tax Act, enacted many significant changes to the U.S. tax laws. Future guidance from the Internal Revenue Service and other tax authorities with respect to the Tax Act may affect us, and certain aspects of the Tax Act could be repealed or modified in future legislation. In addition, in response to the COVID-19 pandemic, the Coronavirus Aid, Relief, and Economic Security, or CARES, Act was signed into law in March 2020. The CARES Act modifies certain of the changes made by the Tax Act. Changes in corporate tax rates, the realization of net deferred tax assets relating to our U.S. operations, and the deductibility of expenses under the Tax Act, as amended by the CARES Act, or future tax reform legislation could have a material impact on the value of our deferred tax assets, could result in significant one-time charges in the current or future taxable years, and could increase our future U.S. tax expense. The foregoing items, as well as any other future changes in tax laws, could have a material adverse effect on our business, cash flow, financial condition or results of operations. For example, the IRA includes provisions that will impact the U.S. federal income taxation of corporations, including imposing a minimum tax on the book income of certain large corporations and an excise tax on certain corporate stock repurchases that would be imposed on the corporation repurchasing such stock. In addition, it is uncertain if and to what extent various states will conform to the Tax Act, as amended by the CARES Act, or newly enacted federal tax legislation.

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

As of December 31, 2024, we had $160.3 million of U.S. federal, $180.9 million of state and no foreign NOL carryforwards. Under the Tax Act, as modified by the CARES Act, federal NOLs incurred in taxable years beginning after December 31, 2017 can be carried forward indefinitely, but the deductibility of federal NOLs in taxable years beginning after December 31, 2020, is limited.

Our NOL carryforwards are subject to review and possible adjustment by the U.S. and state tax authorities. In addition, under Sections 382 and 383 of the Code and corresponding provisions of state law, if a corporation undergoes an "ownership change," which is generally defined as a greater than 50% change (by value) in its equity ownership over a three-year period, the corporation's ability to use its pre-change NOL carryforwards and research and development, or R&D, credits to offset its post-change income may be limited. This could limit the amount of NOLs or R&D credit carryforwards that we can utilize annually to offset future taxable income or tax liabilities. Subsequent ownership changes and changes to the U.S. tax rules in respect of the utilization of NOLs and R&D credits carried forward may further affect the limitation in future years. In addition, at the state level, there may be periods during which the use of NOLs is suspended or otherwise limited, which could accelerate or permanently increase state taxes owed.

Through September 30, 2024, we completed a study to assess whether an ownership change has occurred or whether there have been multiple ownership changes since our formation. The results of this study indicated that we experienced ownership changes as defined by Section 382 of the Code in 2016 and 2020. These ownership changes have subjected and will continue to subject our NOL carryforwards to an annual limitation, which will significantly restrict our ability to use them to offset our taxable income in periods following an ownership change. Based on the results of the study, management has determined that these limitations may have a material impact on our ability to utilize our NOLs and R&D credit carryforwards to offset future tax liabilities.

## Risks Related to Our Common Stock

***An active, liquid and orderly trading market may not develop for our common stock and as a result it may be difficult for you to sell your shares of our common stock.***

Prior to our IPO in April 2020, there was no public market for shares of our common stock. Although our common stock is currently listed on the Nasdaq Global Market, we cannot assure you that an active trading market for our shares will develop or be sustained. In the absence of an active trading market for our common stock, investors may not be able to sell their shares of common stock without depressing the market price for the common stock, or may not be able to sell the shares at all. An inactive trading market may also impair our ability to raise capital to continue to fund operations by selling shares and may impair our ability to enter into collaborations or acquire other companies or technologies using our shares as consideration.

***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.***

We expect our operating results to be subject to quarterly fluctuations. Our net loss and other operating results will be affected by numerous factors, including:

- variations in the level of expense related to the ongoing development of our product candidates and preclinical and clinical development programs;
- results of preclinical studies and ongoing and future clinical trials, or the addition or termination of clinical trials or funding support by us, or current or future collaborators or licensing partners;
- our execution of any collaboration, licensing or similar arrangements, and the timing of payments we may make or receive under existing or future arrangements or the termination or modification of any such existing or future arrangements;
- any intellectual property infringement lawsuit or opposition, interference or cancellation proceeding in which we may become involved;
- additions and departures of key personnel;
- strategic decisions by us, such as acquisitions, divestitures, spin-offs, joint ventures, strategic investments or changes in business strategy;
- if any of our product candidates receives regulatory approval, the terms of such approval and market acceptance and demand for such product candidates;
- regulatory developments affecting our product candidates; and
- general economic conditions, including as a result of bank failures, as well as economic conditions specifically affecting the biopharmaceutical industry.

If our quarterly operating results fall below the expectations of investors or securities analysts, the price of our common stock could decline substantially. Furthermore, any quarterly fluctuations in our operating results may, in turn, cause the price of our common stock to fluctuate substantially. We believe that quarterly comparisons of our financial results are not necessarily meaningful and should not be relied upon as an indication of our future performance.

***The market price of our common stock has been and is likely to continue to be volatile and fluctuate substantially.***

The market price of our common stock has been and is likely to continue to be highly volatile and may fluctuate substantially as a result of a variety of factors, some of which are related in complex ways. The market price for our common stock may fluctuate significantly in response to numerous factors, many of which are beyond our control, including the factors listed below and other factors described in this “Risk Factors” section:

- results of preclinical studies and clinical trials of cibotercept, KER-065, elritercept and any other product candidate we may develop or those of our competitors;
- actual or anticipated changes in estimates as to financial results, development timelines or recommendations by securities analysts;
- commencement or termination of collaboration, licensing or similar arrangements for our development programs;
- announcements by our competitors of significant acquisitions, strategic partnerships, joint ventures, collaborations or capital commitments;
- failure or discontinuation of any of our development programs;
- results of clinical trials of product candidates 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 the development of cibotercept, KER-065, elritercept and any other product candidate we may develop;
- variations in our financial results or those of companies that are perceived to be similar to us;
- announcements or expectations of additional financing efforts by us;
- sales of our common stock by us, our insiders or other stockholders;
- recommendations and changes in estimates or recommendations by securities analysts, if any, that cover our stock;
- changes in the structure of healthcare payment systems;
- market conditions in the pharmaceutical and biotechnology sectors;
- general economic, political, and market conditions and overall fluctuations in the financial markets in the United States and abroad, such as potential future disruptions in access to bank deposits or lending commitments due to bank failures; and
- investors’ general perception of us and our business.

The stock market in general, and the markets for pharmaceutical, biopharmaceutical and biotechnology stocks in particular, have experienced extreme price and volume fluctuations that have been often unrelated or disproportionate to the operating performance of the issuer. In addition, the trading prices for common stock of other pharmaceutical, biopharmaceutical and biotechnology companies have been highly volatile as a result of public health crises, geopolitical tensions and a resulting

global slowdown of economic activity. The extent to which these factors may impact our business, preclinical studies and clinical trials will depend on future developments, which are highly uncertain and cannot be predicted with confidence.

These and other market and industry factors may cause the market price and demand for our common stock to fluctuate substantially, regardless of our actual operating performance, which may negatively affect the liquidity of our common stock.

***We could be subject to securities class action litigation.***

In the past, securities class action litigation has often been brought against public companies following declines in the market prices of their securities. This risk is especially relevant for biopharmaceutical companies, which have experienced significant stock price volatility in recent years. If we face such litigation, it could result in substantial costs and a diversion of management's attention and our resources, which could harm our business, operating results, financial condition and cash flows.

***Future sales and issuances of our common stock or rights to purchase common stock, including pursuant to our equity incentive plans, could result in additional dilution of the percentage ownership of our stockholders and could cause our stock price to fall.***

Additional capital will be needed in the future to continue our planned operations. To the extent we raise additional capital by issuing equity securities, our stockholders may experience substantial dilution. We may sell common stock, convertible securities or other equity securities in one or more transactions at prices and in a manner, we determine from time to time. If we sell common stock, convertible securities or other equity securities in more than one transaction, investors may be materially diluted by subsequent sales. These sales may also result in material dilution to our existing stockholders, and new investors could gain rights superior to our existing stockholders.

Pursuant to our 2020 Equity Incentive Plan, or 2020 Plan, our management is authorized to grant stock options and other equity-based awards to our employees, directors and consultants. The number of shares of our common stock reserved for issuance under our 2020 Plan will automatically increase on January 1 of each year, for a period of ten years, from January 1, 2021 continuing through January 1, 2030, by 4.0% of the total number of shares of our common stock outstanding on December 31 of the preceding calendar year, or a lesser number of shares as may be determined by our board of directors. If our board of directors elects to increase the number of shares available for future grant by the maximum amount each year, our stockholders may experience additional dilution, which could cause our stock price to fall.

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

You should not rely on an investment in our common stock to provide dividend income. We currently anticipate that we will retain future earnings for the development, operation and expansion of our business and do not anticipate declaring or paying any cash dividends for the foreseeable future. Any return to stockholders will therefore be limited to the appreciation of their stock, which may never occur, as the only way to realize any return on their investment.

***Our executive officers, directors, and stockholders and their affiliates who beneficially own more than 5% of our common stock have the ability to exercise significant influence 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, 2024, our executive officers, directors and stockholders and their affiliates who beneficially own more than 5% of our common stock beneficially held a significant percentage of our outstanding common stock. As a result, these stockholders, if they act together, will be able to exercise significant influence over our management and affairs and the outcome of matters submitted to our stockholders for approval, including the election of directors and any sale, merger, consolidation, or sale of all or substantially all of our assets. 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 our company;
- impeding a merger, consolidation, takeover or other business combination involving our company; or
- discouraging a potential acquirer from making a tender offer or otherwise attempting to obtain control of our company.

***Conflicts of interest may arise because some members of our board of directors are representatives of our principal stockholders.***

Certain of our principal stockholders or their affiliates are venture capital funds or other investment vehicles that could invest in entities that directly or indirectly compete with us. As a result of these relationships, conflicts may arise between the interests of the principal stockholders or their affiliates and the interests of other stockholders, and members of our board of directors that are representatives of such principal stockholders may not be disinterested in such conflicts. Neither the principal stockholders nor the representatives of the principal stockholders on our board of directors, by the terms of our amended and restated certificate of incorporation, are required to offer us any transaction opportunity of which they become aware and could take any such opportunity for themselves or offer it their other affiliates, unless such opportunity is expressly offered to them solely in their capacity as members of our board of directors.

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

If our existing stockholders sell, or indicate an intention to sell, substantial amounts of our common stock in the public market, the market price of our common stock could decline. We are unable to predict the effect that such sales, particularly by our directors, executive officers and significant stockholders, may have on the prevailing market price of our common stock.

In December 2022, we filed a prospectus supplement to a registration statement on Form S-3ASR, including a base prospectus and sales agreement prospectus, or the Prior Shelf Registration Statement, for the issuance and sale of up to an additional $250.0 million of shares of our common stock. On May 3, 2024, we filed a new registration statement on Form S-3ASR, or the New Shelf Registration Statement, to replace the Prior Shelf Registration Statement that was set to expire, which became automatically effective upon filing. In June 2024, we filed a prospectus supplement to the New Shelf Registration Statement for the issuance and sale of up to $350.0 million of shares of our common stock in sales deemed to be an "at-the-market offering," as defined by the Securities Act. For so long as we qualify as a "well-known seasoned issuer" as defined in Rule 405 of the Securities Act, we may also issue an unspecified amount of shares of our common stock, preferred stock, debt securities and warrants pursuant to the New Shelf Registration Statement. We anticipate that the filing of this Annual Report on Form 10-K will render us unable to use our currently effective New Shelf Registration Statement as we expect that, on the date of filing of this report, we will no longer meet the criteria of a well-known seasoned issuer.

In addition, we have filed registration statements on Form S-8 registering the issuance of shares of common stock subject to options or other equity awards issued or reserved for future issuance under our equity incentive plans. Shares registered under these registration statements on Form S-8 are available for sale in the public market subject to vesting arrangements and exercise of options and the restrictions of Rule 144 under the Securities Act in the case of our affiliates. In addition, certain holders of shares of our common stock have rights, subject to some conditions, to require us to file registration statements covering their shares or to include their shares in registration statements that we may file for ourselves or other stockholders. If we were to register the resale of these shares, they could be freely sold in the public market. If these additional shares are sold, or if it is perceived that they will be sold, in the public market, the trading price of our common stock could decline.

***If securities or industry analysts publish inaccurate or unfavorable research about our business, our stock price and trading volume could decline.***

The trading market for our common stock will rely, in part, on the research and reports that industry or financial analysts publish about us or our business. We do not have any control over these analysts. If one or more of the analysts covering our business downgrade their evaluations of our stock or publish inaccurate or unfavorable research about our business, the price of our stock would likely decline. If one or more of these analysts cease to cover our stock or fail to publish reports on us regularly, we could lose visibility in the market for our stock, which, in turn, could cause our stock price and trading volume to decline.

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

As a public company, we will incur significant legal, accounting and other expenses that we did not incur as a private company. The Sarbanes-Oxley Act of 2002, as amended, or the Sarbanes-Oxley Act, the Dodd-Frank Wall Street Reform and Consumer Protection Act, the listing requirements of the Nasdaq Stock Market and other applicable securities rules and regulations impose various requirements on public companies, including establishment and maintenance of effective disclosure and financial controls and corporate governance practices. Our management and other personnel will need to devote a substantial amount of time to these compliance initiatives. Moreover, we expect these rules and regulations to substantially increase our legal and financial compliance costs and to make some activities more time-consuming and costly. For example, we expect that these rules and regulations may make it more difficult and more expensive for us to obtain director and officer liability insurance and we may be required to incur substantial costs to maintain sufficient coverage. We are evaluating these rules and regulations, and cannot predict or estimate the amount or timing of additional costs we may incur or the timing of such costs. The impact of these requirements could also make it more difficult for us to attract and retain qualified persons to serve on our board of directors, our board committees or as executive officers. The increased costs may require us to reduce costs in other areas of our business or increase the prices of our services. Moreover, these rules and regulations are often subject to varying interpretations, in many cases due to their lack of specificity, and, as a result, their application in practice may evolve over time as new guidance is provided by regulatory and governing bodies. This could result in continuing uncertainty regarding compliance matters and higher costs necessitated by ongoing revisions to disclosure and governance practices.

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

We are required, pursuant to Section 404 of the Sarbanes-Oxley Act, to assess the effectiveness of our internal control over financial reporting annually and disclosure controls and procedures quarterly. In particular, we must perform system and process evaluation and testing of our internal control over financial reporting to allow management to report on the effectiveness of our internal control over financial reporting, as required by Section 404 of the Sarbanes-Oxley Act. Our

independent registered public accounting firm is also required, pursuant to Section 404 of the Sarbanes-Oxley Act, to report on the effectiveness of our internal control over financial reporting, beginning with our fiscal year ended December 31, 2023. This assessment includes disclosure of any material weaknesses identified by our management in our internal control over financial reporting. The rules governing the standards that must be met for management to assess our internal control over financial reporting are complex and require significant documentation, testing and possible remediation. To comply with the requirements of being a reporting company under the Securities Exchange Act of 1934, as amended, or the Exchange Act, we will need to implement additional financial and management controls, reporting systems and procedures and hire additional accounting and finance staff.

We cannot assure you that there will not be material weaknesses or significant deficiencies in our internal control over financial reporting in the future. Any failure to maintain internal control over financial reporting could severely inhibit our ability to accurately report our financial condition, results of operations or cash flows. If we are unable to conclude that our internal control over financial reporting is effective, or if our independent registered public accounting firm determines we have a material weakness or significant deficiency in our internal control over financial reporting, investors may lose confidence in the accuracy and completeness of our financial reports, the market price of our common stock could decline, and we could be subject to sanctions or investigations by the Nasdaq Stock Market, the SEC or other regulatory authorities. Failure to remedy any material weakness in our internal control over financial reporting, or to implement or maintain other effective control systems required of public companies, could also restrict our future access to the capital markets.

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

We are subject to the periodic reporting requirements of the Exchange Act. We designed our disclosure controls and procedures to reasonably assure that information we must disclose in reports we file or submit under the Exchange Act is accumulated and communicated to management, and recorded, processed, summarized and reported within the time periods specified in the rules and forms of the SEC. We believe that any disclosure controls and procedures or internal controls and procedures, no matter how well-conceived and operated, can provide only reasonable, not absolute, assurance that the objectives of the control system are met. These inherent limitations include the realities that judgments in decision-making can be faulty, and that breakdowns can occur because of simple error or mistake. For example, our directors or executive officers could inadvertently fail to disclose a new relationship or arrangement causing us to fail to make a required related party transaction disclosure. 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.

***Provisions in our corporate 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.***

Provisions in our amended and restated certificate of incorporation and our amended and restated bylaws may discourage, delay or prevent a merger, acquisition or other change in control of us that stockholders may consider favorable, including transactions in which you might otherwise receive a premium for your shares. These provisions also could limit the price that investors might be willing to pay in the future for shares of our common stock, thereby depressing the market price of our common stock. In addition, because our board of directors is responsible for appointing the members of our management team, these provisions may frustrate or prevent any attempts by our stockholders to replace or remove our current management by making it more difficult for stockholders to replace members of our board of directors. Among other things, these provisions:

- establish a classified board of directors such that not all members of the board are elected at one time;
- allow the authorized number of our directors to be changed only by resolution of our board of directors;
- limit the manner in which stockholders can remove directors from the board;
- establish advance notice requirements for stockholder proposals that can be acted on at stockholder meetings and nominations to our board of directors;
- require that stockholder actions must be effected at a duly called stockholder meeting and prohibit actions by our stockholders by written consent;
- prohibit our stockholders from calling a special meeting of our stockholders;
- authorize our board of directors to issue preferred stock without stockholder approval, which could be used to institute a stockholder rights plan, or so-called “poison pill,” that would work to dilute the stock ownership of a potential hostile acquirer, effectively preventing acquisitions that have not been approved by our board of directors; and
- require the approval of the holders of at least 66 2/3% of the votes that all our stockholders would be entitled to cast to amend or repeal certain provisions of our charter or bylaws.

Moreover, because we are incorporated in Delaware, we are governed by the provisions of Section 203 of the Delaware General Corporation Law, which prohibits a person who owns 15% or more of our outstanding voting stock from merging or combining with us for a period of three years after the date of the transaction in which the person acquired 15% or more of our outstanding voting stock, unless the merger or combination is approved in a prescribed manner. These provisions could discourage potential acquisition proposals and could delay or prevent a change in control transaction. They could also have

the effect of discouraging others from making tender offers for our common stock, including transactions that may be in your best interests. These provisions may also prevent changes in our management or limit the price that investors are willing to pay for our stock.

***Our amended and restated certificate of incorporation designates the Court of Chancery of the State of Delaware as the exclusive forum for substantially all disputes between us and our stockholders, which could limit our stockholders' ability to obtain a favorable judicial forum for disputes with us or our directors, officers or employees.***

Our amended and restated certificate of incorporation provides that the Court of Chancery of the State of Delaware (or, if and only if the Court of Chancery of the State of Delaware lacks subject matter jurisdiction, any state court located within the State of Delaware or, if and only if all such state courts lack subject matter jurisdiction, the federal district court for the District of Delaware) will be the exclusive forum for the following types of actions or proceedings under Delaware statutory or common law:

- any derivative action or proceeding brought on our behalf;
- any action or proceeding asserting a claim of breach of a fiduciary duty owed by any of our current or former directors, officers or other employees to us or our stockholders;
- any action or proceeding asserting a claim against us or any of our current or former directors, officers or other employees, arising out of or pursuant to any provision of the Delaware General Corporation Law, our certificate of incorporation or our bylaws;
- any action or proceeding to interpret, apply, enforce or determine the validity of our certificate of incorporation or our bylaws; and
- any action asserting a claim against us or any of our directors, officers or other employees governed by the internal affairs doctrine.

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

In addition, our amended and restated certificate of incorporation provides that the federal district courts of the United States will be the exclusive forum for resolving any complaint asserting a cause of action arising under the Securities Act, unless we consent in writing to the selection of an alternative forum.

These exclusive-forum provisions may limit a stockholder's ability to bring a claim in a judicial forum that it finds favorable for disputes with us or our directors, officers or other employees, which may discourage these types of lawsuits. Furthermore, the enforceability of similar choice of forum provisions in other companies' certificates of incorporation has been challenged in legal proceedings, and it is possible that a court could find these types of provisions to be inapplicable or unenforceable. For example, the Court of Chancery of the State of Delaware recently determined that a provision stating that U.S. federal district courts are the exclusive forum for resolving any complaint asserting a cause of action arising under the Securities Act is not enforceable. However, on March 18, 2020, this decision was ultimately overturned by the Delaware Supreme Court. If a court were to find the exclusive-forum provision contained in our amended and restated certificate of incorporation to be inapplicable or unenforceable in an action, we may incur additional costs associated with resolving such action in other jurisdictions, which could harm our business.

## ITEM 1B. UNRESOLVED STAFF COMMENTS

None.

## ITEM 1C. CYBERSECURITY

### Cybersecurity Risk Management and Strategy

We have implemented and maintain various information security processes designed to identify, assess and manage material risks from cybersecurity threats to our critical computer networks, third party hosted services, communications systems, hardware and software, and our critical data, including intellectual property, confidential information that is proprietary, strategic or competitive in nature, and data and information related to our product candidates, preclinical studies and clinical trials, which we refer to collectively as Information Systems and Data.

Our information technology and security, or IT, management team, and legal, and risk management teams, together with our third-party service providers, help identify, assess and manage our cybersecurity threats and risks. In doing so, they identify and assess risks from cybersecurity threats by monitoring and evaluating our threat environment and the Company's risk profile using a multi-faceted approach including use of manual and automated tools, internal and external IT audits, and IT security, governance, risk and compliance reviews, reviewing reports and using services that identify cybersecurity threats, conducting threat and vulnerability assessments, evaluating reported threats as well as the industry's risk profile, and third-party-conducted red/blue team testing and tabletop incident response exercises.

We implement and maintain various technical, physical, and organizational measures, processes, standards and policies designed to manage and mitigate material risks from cybersecurity threats to our Information Systems and Data, including,

for example: maintaining an incident response plan and policy, incident detection and response, maintaining a vulnerability management policy, maintaining disaster recovery and business continuity plans, conducting risk assessments, implementing security standards and certifications, maintaining network security controls, access controls, and physical security measures, asset management, systems monitoring, conducting proactive privacy and cybersecurity reviews of systems and applications, performing penetration testing using external third-party tools and techniques to test security controls, conducting employee training, monitoring emerging laws and regulations related to data protection and information security and implement appropriate changes and encrypting Information Systems and Data. In addition, we maintain cybersecurity insurance.

Our assessment and management of material risks from cybersecurity threats are integrated into the Company's overall risk management processes. For example, our IT team works with management to prioritize our risk management processes and mitigate cybersecurity threats that are more likely to lead to a material impact to our business. Additionally, our risk committee evaluates material risks from cybersecurity threats against our overall business objectives and reports to the audit committee of the board of directors, which evaluates our overall enterprise risk.

We use third-party service providers to assist us from time to time to identify, assess, and manage material risks from cybersecurity threats, including for example professional services firms, including legal counsel, threat intelligence service providers, cybersecurity consultants and software providers, managed cybersecurity service providers and penetration testing firms.

Our risk management program also assesses third party risks, and we perform third-party risk management to identify and mitigate risks from third parties such as vendors, suppliers, and other business partners associated with our use of third-party service providers. Cybersecurity risks are evaluated when determining the selection and oversight of applicable third-party service providers when handling or processing our Information Systems and Data. Depending on the nature of the services provided, the sensitivity of the Information Systems and Data at issue, and the identity of the provider, our vendor management process may involve different levels of assessment designed to help identify cybersecurity risks associated with a provider and impose contractual obligations related to cybersecurity on the provider, including completion of security questionnaires, review of the vendor's written security program, review of security assessments and reports, audits, and security assessment calls with the vendor's security personnel.

For a description of the risks from cybersecurity threats that may materially affect the Company and how they may do so, see our risk factors under Part 1. Item 1A. "Risk Factors" in this Annual Report on Form 10-K, including under the heading "*If our internal computer systems, or those used by our contract research organizations, or other contractors or consultants with whom we work, fail, suffer security incidents, or are or were otherwise compromised, we could experience adverse consequences, including but not limited to regulatory investigations or actions; litigation; fines and penalties; disruptions of our business operations; reputational harm; loss of revenue or profits; loss of customers or sales; and other adverse consequences.*"

**Cybersecurity Governance**

Our board of directors addresses the Company's cybersecurity risk management as part of its general oversight function. Our audit committee is responsible for overseeing our cybersecurity risk management processes, including oversight and mitigation of risks from cybersecurity threats. Members of our audit committee receive updates on a regular basis from senior management, including leaders from our IT and legal teams regarding matters of cybersecurity. This includes existing and new cybersecurity risks, status on how management is addressing and/or mitigating those risks, cybersecurity and data privacy incidents (if any) and status on key information security initiatives.

Our cybersecurity risk assessment and management processes are implemented and maintained by leaders from our IT, finance and legal teams, including our Executive Director who serves as the Head of IT and Cybersecurity, who has twenty years of experience in various roles involving information technology and cybersecurity. These individuals are informed about, and monitor the prevention, mitigation, detection and remediation of cybersecurity incidents through their management of, and participation in, the cybersecurity risk management and strategy processes described above, including the operation of our incident response plan, and report to our audit committee on any appropriate items.

Our Head of IT is responsible for hiring appropriate personnel, helping to integrate cybersecurity risk considerations into the Company's overall risk management strategy, and communicating key priorities to relevant personnel. Our Chief Financial Officer is responsible for approving budgets, helping prepare for cybersecurity incidents, approving cybersecurity processes, and reviewing security assessments and other security-related reports.

Our cybersecurity incident response plan is designed to escalate certain cybersecurity incidents to members of management depending on the circumstances, including our Chief Financial Officer, Chief Operating Officer, General Counsel and Head of Human Resources. Incidents are evaluated to determine materiality as well as operational and business impact, and reviewed for privacy impact. Our Head of IT works with the Company's incident response team to help the Company mitigate and remediate cybersecurity incidents of which they are notified. In addition, our incident response plan includes reporting to our audit committee for certain cybersecurity incidents.

## ITEM 2. PROPERTIES

In September 2021, we entered into an indenture of lease for approximately 35,662 square feet of office and laboratory space located at 1050 Waltham Street, Suite 302, Lexington, Massachusetts 02421, which terminates in February 2031. As of January 23, 2023, we moved our principal office to this property. Prior to that date, our principal office was located at 99 Hayden Avenue, Suite 120, Building E, Lexington, Massachusetts 02421, which provided approximately 15,622 square feet of office and laboratory space. The lease for the prior principal office expired on March 31, 2023.

In July 2024, we entered into a sublease for approximately 20,000 square feet of office and laboratory space located at 1050 Waltham Street, Suite 302, Lexington, Massachusetts 02421, expanding our existing headquarters. The sublease expires in September 2029.

We believe that these facilities will be adequate for our near-term needs. If required, we believe that suitable additional or substitute space will be available in the future on commercially reasonable terms to accommodate any such expansion of our operations.

## ITEM 3. LEGAL PROCEEDINGS

From time to time, we may become subject to arbitration, litigation or claims arising in the ordinary course of business. We are not currently a party to any material arbitration or legal proceedings. The results of any future claims or proceedings cannot be predicted with certainty, and regardless of the outcome, litigation can have an adverse impact on us because of defense and litigation 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

### Market Information

Our common stock commenced trading on the Nasdaq Global Market on April 8, 2020 and trades under the symbol "KROS." Prior to April 8, 2020, there was no public market for our common stock.

### Holders

As of February 20, 2025, there were 16 stockholders of record of our common stock, one of which is Cede & Co., a nominee for Depository Trust Company, or DTC. All of the shares of common stock held by brokerage firms, banks and other financial institutions as nominees for beneficial owners are deposited into participant accounts at DTC and are considered to be held of record by Cede & Co. as one stockholder.

### Dividends

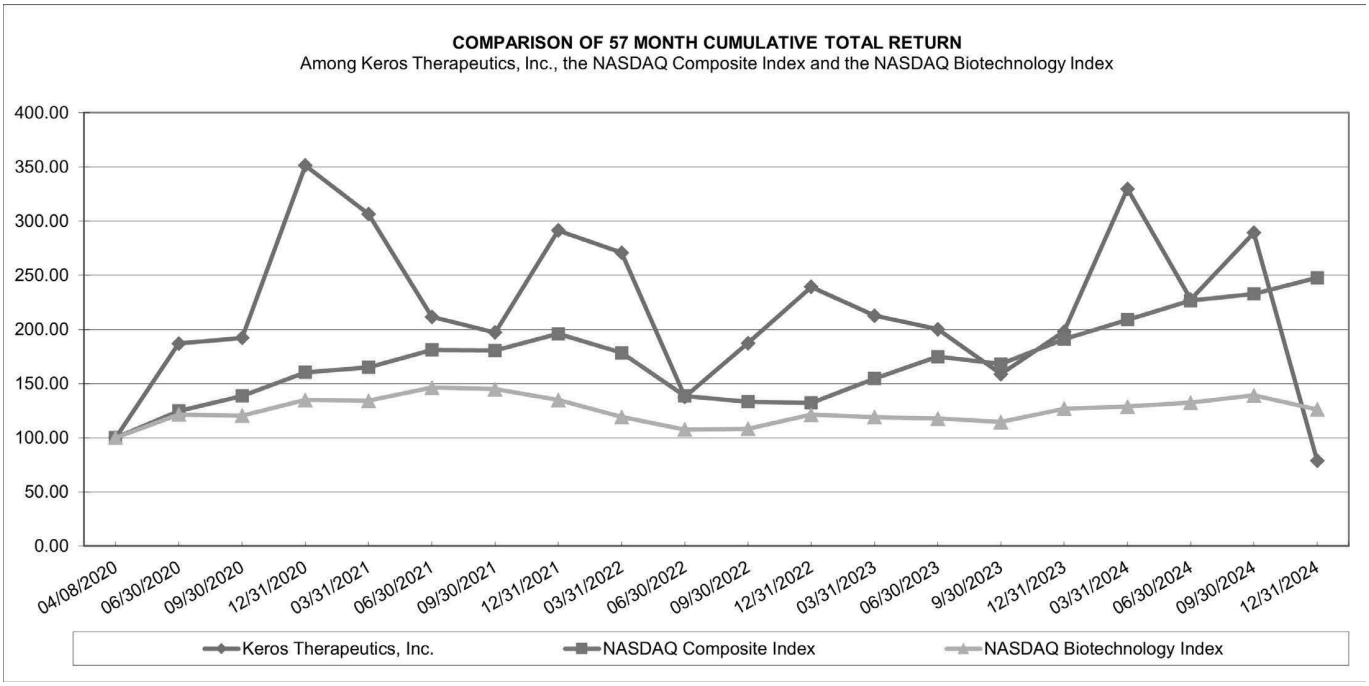
We have never declared or paid any dividends on our capital stock. We currently intend to retain all available funds and any future earnings for the operation and expansion of our business and, therefore, we do not anticipate declaring or paying cash dividends in the foreseeable future. The payment of dividends will be at the discretion of our board of directors and will depend on our results of operations, capital requirements, financial condition, prospects, contractual arrangements, any limitations on payment of dividends present in any future debt agreements and other factors that our board of directors may deem relevant.

### Stock Performance Graph

*This performance graph below shall not be deemed "soliciting material" or to be "filed" with the SEC for purposes of Section 18 of the Exchange Act, or otherwise subject to the liabilities under that Section, and shall not be deemed to be incorporated by reference into this Annual Report on Form 10-K or any other filing of Keros Therapeutics, Inc. under the Exchange Act or the Securities Act, whether made before or after the date hereof and irrespective of any general incorporation language in any such filing, except to the extent that we specifically incorporate this information by reference therein.*

The graph set forth below compares the cumulative total stockholder return on our common stock between April 8, 2020 (the date our common stock commenced trading on the Nasdaq Global Market) and December 31, 2024, with the cumulative total return of (a) the Nasdaq Composite Index and (b) the Nasdaq Biotechnology Index, over the same period. This graph assumes the investment of $100 on April 8, 2020 in our common stock, the Nasdaq Composite Index, and the Nasdaq Biotechnology Index and assumes the reinvestment of dividends, if any. The graph assumes our closing sales price on April 8, 2020 of $20.08 per share as the initial value of our common stock and not the initial offering price to the public of $16.00 per share.

The comparisons shown in the graph below are based upon historical data. We caution that the stock price performance shown in the graph below is not necessarily indicative of, nor is it intended to forecast, the potential future performance of our common stock.




### Recent Sales of Unregistered Securities

None.

### Use of Proceeds

None.

### Purchase of Equity Securities by the Issuer and Affiliated Purchasers

None.

### ITEM 6. [Reserved]

## ITEM 7. MANAGEMENT'S DISCUSSION AND ANALYSIS OF FINANCIAL CONDITION AND RESULTS OF OPERATIONS

*The following discussion and analysis of our financial condition and results of operations should be read in conjunction with our consolidated financial statements and related notes appearing elsewhere in this Annual Report on Form 10-K. Some of the information contained in this discussion and analysis or set forth elsewhere in this Annual Report on Form 10-K, including information with respect to our plans and strategy for our business, includes forward-looking statements that involve risks and uncertainties. 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, these forward-looking statements.*

### Overview

We are a clinical-stage biopharmaceutical company focused on developing and commercializing novel therapeutics to treat a wide range of patients with disorders that are linked to dysfunctional signaling of the transforming growth factor-beta, or TGF-ß, family of proteins. We are a leader in understanding the role of the TGF-ß family of proteins, which are master regulators of the growth, repair and maintenance of a number of tissues, including blood, bone, skeletal muscle, adipose and heart tissue. By leveraging this understanding, we have discovered and are developing protein therapeutics that have the potential to provide meaningful and potentially disease-modifying benefit to patients. One of our product candidates, cibotercept (KER-012), is being developed for the treatment of pulmonary arterial hypertension, or PAH, and for the treatment of cardiovascular disorders. Our second product candidate, KER-065, is being developed for the treatment of neuromuscular diseases. Our most advanced product candidate, elritercept (KER-050), is being developed for the treatment of low blood cell counts, or cytopenias, including anemia and thrombocytopenia, in patients with myelodysplastic syndromes, or MDS, and in patients with myelofibrosis.

Since our inception in 2015, we have devoted the majority of our efforts into business planning, research and development of our product candidates, including by conducting clinical trials and preclinical studies, raising capital and recruiting management and technical staff to support these operations. To date, we have not generated any revenue from product sales

as none of our product candidates have been approved for commercialization. We have historically financed our operations primarily through the sale of convertible preferred stock and common stock and cash received from licensing agreements.

*ATM Sales Agreement*

In December 2022, we filed a prospectus supplement to our registration statement on Form S-3ASR with the Securities and Exchange Commission, or the SEC, for the issuance and sale, if any, of up to$250.0 million of shares of our common stock pursuant to a sales agreement with Leerink Partners LLC, or Leerink, as sales agent, which we refer to as the ATM Sales Agreement, under which we may offer and sell, from time to time, shares of our common stock, or the ATM Shares, through Leerink, which we refer to as the ATM Offering. In May 2024, we filed a new registration statement on Form S-3ASR, which we refer to as the New Shelf Registration Statement, to replace the prior shelf registration statement that was set to expire, including a base prospectus, which became effective immediately upon filing, under which we could issue an unspecified amount of shares of our common stock, preferred stock, debt securities and warrants. In June 2024, we filed a prospectus supplement to the New Shelf Registration Statement for the issuance and sale, if any, of up to an additional $350.0 million of shares of our common stock under the ATM Sales Agreement.

Under the ATM Sales Agreement, Leerink may sell the ATM Shares by methods deemed to be an “at the market offering” as defined in Rule 415(a)(4) promulgated under the Securities Exchange Act of 1934, as amended. We may sell the ATM Shares in amounts and at times to be determined by us from time to time subject to the terms and conditions of the ATM Sales Agreement, but we have no obligation to sell any of the ATM Shares in the ATM Offering. As of December 31, 2024, we have sold a total of 4,290,096 shares of our common stock pursuant to the ATM Offering for aggregate net proceeds of approximately $228.6 million after deducting sales agent commissions and estimated offering expenses. As of December 31, 2024, we may offer and sell ATM shares at an aggregate offering price of up to the remaining $117.7 million available under the ATM Offering.

*January 2024 Public Offering of Common Stock*

On January 8, 2024, we closed an underwritten public offering in which we issued and sold 4,025,000 shares of common stock, which included 525,000 shares of common stock issued and sold pursuant to the full exercise of the underwriters’ option to purchase additional shares, at a public offering price of $40.00 per share. The aggregate net proceeds to us from the public offering were approximately $151.1 million, after deducting underwriting discounts and commissions and estimated offering expenses.

We have incurred recurring operating losses since inception in 2015. Our ability to generate product revenue sufficient to achieve profitability will depend on the successful development and commercialization of one or more of our product candidates. Our net loss was $187.4 million, $153.0 million, and $104.7 million for the years ended December 31, 2024, 2023, and 2022, respectively. As of December 31, 2024, we had an accumulated deficit of $568.8 million. We expect to continue to generate operating losses and negative operating cash flows for the foreseeable future in connection with our ongoing activities.

We will not generate any revenue from product sales unless and until we successfully complete clinical development and obtain regulatory approval for one or more of our product candidates. If we obtain regulatory approval for any of our product candidates, we expect to incur significant expenses related to developing our internal commercialization capability to support product sales, marketing and distribution.

As a result, we will need substantial additional funding to support our operating activities as we advance our product candidates through clinical development, seek regulatory approval and prepare for and, if any of our product candidates are approved, proceed to commercialization. Until such time as we can generate significant revenue from product sales, if ever, we expect to finance our operating activities through a combination of equity offerings, debt financings, and license and development agreements in connection with any future collaborations. Adequate funding may not be available to us on acceptable terms, or at all.

If we are unable to obtain funding, we will be forced to delay, reduce or eliminate some or all of our research and development programs, product portfolio expansion or commercialization efforts, which could adversely affect our business prospects, or we may be unable to continue operations. Although we continue to pursue these plans, there is no assurance that we will be successful in obtaining sufficient funding on terms acceptable to us to fund continuing operations, if at all.

As of December 31, 2024, we had cash and cash equivalents of $559.9 million. Based on our current operating assumptions, we expect that our existing cash and cash equivalents as of December 31, 2024, together with the $200 million upfront payment pursuant to the license agreement with Takeda Pharmaceuticals U.S.A., Inc., or Takeda, which we received in February 2025, will enable us to fund our operating expenses and capital expenditure requirements into 2029. See “— Liquidity and Capital Resources.”

**Known Trends, Events and Uncertainties**

While recent trends towards rising inflation have eased, prices continue to rise, which may also materially affect our business and corresponding financial position and cash flows. Inflationary factors, such as increases in the cost of materials and

supplies relating to our preclinical studies, clinical trials, interest rates and overhead costs may adversely affect our operating results. Rising interest rates also present a recent challenge impacting the U.S. economy and could make it more difficult for us to obtain traditional financing on acceptable terms, if at all, in the future. Additionally, the general consensus among economists suggests that we should expect a higher recession risk to continue over the next year, which, together with the foregoing, could result in further economic uncertainty and volatility in the capital markets in the near term, and could negatively affect our operations. Furthermore, such economic conditions have produced downward pressure on share prices. Although we do not believe that inflation or higher interest rates have had a material impact on our financial position or results of operations to date, we may experience increases in the near future (especially if inflation rates rise more quickly) on our operating costs, including our labor costs and research and development costs, due to supply chain constraints, consequences associated with public health crises and global geopolitical tensions, such as the ongoing war between Russia and Ukraine and the war in Israel, worsening global macroeconomic conditions, including as a result of bank failures, and employee availability and wage increases, which may result in additional stress on our working capital resources.

**Licensing Agreements**

***2016 Exclusive Patent License Agreement with The General Hospital Corporation***

In April 2016, we entered into an exclusive patent license agreement with The General Hospital Corporation, or MGH, which was subsequently amended in May 2017 and February 2018. Under the license agreement with MGH, or the MGH Agreement, we obtained an exclusive, worldwide license, with the right to sublicense, under certain patents and technical information of MGH, to make, have made, use, have used, sell, have sold, lease, have leased, import, have imported or otherwise transfer licensed products and processes for use in the treatment, diagnosis, palliation and prevention of diseases and disorders in humans and animals. We are required to use commercially reasonable efforts to develop and commercialize licensed products and processes, and must achieve certain required diligence milestones.

Under the terms of the MGH Agreement, we made an initial license payment of $0.1 million in 2016 and reimbursed MGH approximately $0.3 million of prior patent prosecution expenses related to the licensed patents in 2017. We also issued MGH an aggregate of 358,674 shares of our common stock. Additionally, we are required to pay a nominal annual maintenance fee prior to the first commercial sale of our first product or process, a mid-five digit annual maintenance fee after the first commercial sale of our first product or process that is creditable against royalties, certain clinical and regulatory milestone payments for the first three products or indications to achieve such milestones, which milestone payments are $8.6 million in the aggregate, and certain commercial milestone payments for the first three products or indications to achieve such milestones, which milestone payments are $18.0 million in the aggregate. We made payments of $50,000 and $300,000 in 2020 and 2021, respectively, for the achievement of the clinical and regulatory milestones of (i) filing of an IND in the first country and (ii) the completion of a Phase 1 clinical trial, respectively. We are also obligated to pay tiered royalties on net sales of licensed products ranging in the low-single digits to mid-single digits. The royalty rates are subject to up to a maximum 50% reduction for lack of a valid claim, in the event that it is necessary for us to obtain a license to any third-party intellectual property related to the licensed products, and generic competition. The obligation to pay royalties under the MGH Agreement expires on a licensed product-by-licensed product and country-by-country basis upon the later of expiry of the last valid claim of the licensed patents that cover such licensed product in such country and ten years from the first commercial sale of such product in such country. We are also obligated to pay a percentage of non-royalty-related payments received by us from sublicensees ranging in the sub-teen double digits and a change of control fee equal to a low-single digit percentage of the payments received as part of any completed transaction up to a low-seven digit amount.

***2021 License Agreement with Hansoh (Shanghai) Healthtech Co., Ltd.***

On December 12, 2021, we entered into a license agreement with Hansoh (Shanghai) Healthtech Co., Ltd., or Hansoh. Under the terms of the license agreement with Hansoh, or the Hansoh Agreement, we granted to Hansoh the exclusive right to develop, manufacture and commercialize elritercept and licensed products containing elritercept within the territories of mainland China, Hong Kong and Macau, which we refer to collectively as the Hansoh Territory.

In connection with the Hansoh Agreement, Hansoh will purchase clinical trial supply of elritercept from us, and the parties will also negotiate in good faith to enter into an agreement for commercial supply prior to any anticipated commercialization in the Hansoh Territory. In addition, Hansoh will use commercially reasonable efforts to develop, obtain regulatory approval for, and commercialize licensed products in any region in the Hansoh Territory.

Pursuant to the terms of the Hansoh Agreement, we received a net $18.0 million upfront payment in January 2022. In addition to the upfront payment and development milestones achieved to date, we are entitled to receive up to an aggregate of (i) $23.5 million upon the achievement of specified development milestones and (ii)$144.0 million upon the achievement of specified net sales thresholds for all licensed products in the Hansoh Territory. If a licensed product is approved for marketing in the Hansoh Territory, we will be entitled to receive royalty payments based on a tiered percentage of annual net sales in each region within the Hansoh Territory, with such percentage ranging from the low double digit to high teens, subject to specified potential royalty reductions. We recognized $3.0 million as revenue and $0.3 million in withholding tax upon the achievement of a development milestone related to the Hansoh Agreement on our consolidated statement of operations for the year ended December 31, 2024, and a receivable, net of withholding tax, on our consolidated balance sheet as of December 31, 2024.

Hansoh's obligation to pay royalties for a given licensed product in a given region in the Hansoh Territory will begin on the date of the first commercial sale for such licensed product in such region and continue until the latest of (i) ten years from the date of the first commercial sale for such licensed product in such region, (ii) the expiration of the last valid claim of certain licensed patents or joint patents, and (iii) expiration of regulatory exclusivity in such region. During the royalty term, neither party will directly or indirectly commercialize a competing product in the Hansoh Territory.

Effective in June 2023, in connection with the Hansoh Agreement, we entered into a manufacturing technology transfer agreement, or the Tech Transfer Agreement, with Hansoh. The Tech Transfer Agreement governs the transfer to Hansoh of all documents and information required to complete the manufacturing technology transfer. Under the Tech Transfer Agreement, Hansoh is obligated to make certain payments to us, at the rates set forth in the Tech Transfer Agreement, as manufacturing technology transfer services are provided over the term of the Tech Transfer Agreement. We recognized $96.1 thousand and $150.8 thousand of service and other revenue for the years ended December 31, 2024 and 2023, respectively.

Effective in February 2024, in connection with the Hansoh Agreement, we entered into a clinical product supply agreement with Hansoh, or the Supply Agreement. We recognized $421.1 thousand of other revenue for the year ended December 31, 2024.

***2024 License Agreement with Takeda Pharmaceuticals U.S.A., Inc.***

In December 2024, we entered into a license agreement with Takeda, which became effective on January 16, 2025. Under the terms of the license agreement with Takeda, or the Takeda Agreement, we granted to Takeda the exclusive right to develop, manufacture and commercialize elritercept and certain derivative compounds globally, excluding the territories of mainland China, Hong Kong and Macau, which we refer to collectively as the Takeda Territory.

Pursuant to the terms of the Takeda Agreement, we received a $200.0 million upfront payment in February 2025. In addition to the upfront payment, we are entitled to receive up to an aggregate of (i) $370.0 million upon the achievement of specified development and commercial milestones and (ii) $740.0 million upon the achievement of specified sales milestones. If a licensed product is approved for marketing in the Takeda Territory, we will be entitled to receive royalty payments based on tiered increments of annual net sales in the Takeda Territory, with such percentage ranging from the low double-digits to high teens, subject to specified potential royalty reductions.

Takeda's obligation to pay royalties for a given licensed product in a given country in the Takeda Territory will begin on the date of the first commercial sale for such licensed product in such country and continue until the latest of (i) 10 years from the date of the first commercial sale for such licensed product in such region, (ii) the expiration of the last valid claim of certain licensed patents, and (iii) expiration of regulatory exclusivity in such region.

## Components of Our Results of Operations

### *Revenue*

To date, we have not generated any revenue, and do not expect to generate any revenue in the foreseeable future, from product sales. We have generated revenue solely from research collaborations or licensing of intellectual property. We may in the future generate revenue from other strategic collaborations.

### *Operating Expenses*

*Research and Development Expenses*

Research and development expenses consist primarily of costs incurred for our research activities, including our discovery efforts and the preclinical and clinical development of our current and potential future product candidates, and include:

- salaries, benefits and other related costs, including stock-based compensation expense, for personnel engaged in research and development functions;
- expenses incurred under agreements with third parties, including contract research organizations, or CROs, that conduct research, preclinical and clinical activities on our behalf, as well as contract manufacturing organizations, or CMOs, that manufacture drug product for use in our preclinical studies and clinical trials;
- license fees incurred in connection with license agreements;
- research and development supplies and services expenses;
- facility-related expenses, which include direct depreciation costs and allocated expenses for rent and maintenance of facilities and other operating costs;
- cost of outside consultants, including their fees and related travel expenses, engaged in research and development functions;
- expenses related to regulatory affairs; and
- fees related to our scientific advisory board.

We expense research and development costs as incurred. Costs for external development activities are recognized based on an evaluation of the progress to completion of specific tasks using information provided to us by our vendors. 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 consolidated financial statements as prepaid or accrued research and development expenses. Nonrefundable advance payments for goods or services to be received in the future for use in research and development activities are recorded as prepaid expenses and expensed as the related goods are delivered or the services are performed.

Research and development activities are central to our business model. We expect that our research and development expenses will continue to increase for the foreseeable future as we continue ongoing and initiate new clinical trials for our product candidates and continue to discover and develop additional product candidates. We expect research and development expenses to fluctuate from quarter to quarter depending on the timing of clinical trial activities, clinical manufacturing and other development activities. If any of our product candidates enter into later stages of clinical development, they will 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. There are numerous factors associated with the successful commercialization of any product candidates we may develop in the future, including future trial design and various regulatory requirements, many of which cannot be determined with accuracy at this time based on our stage of development. Additionally, future commercial and regulatory factors beyond our control will impact our clinical development program and plans.

*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 professional fees for legal, patent, accounting, information technology, auditing, tax and consulting services, and travel expenses and facility-related expenses, which include direct depreciation costs and allocated expenses for rent and maintenance of facilities and other operating costs.

We expect that our general and administrative expenses will increase in the future as we increase our headcount to support our continued research and development and potential commercialization of our product candidates. We have incurred and expect to continue to incur increased expenses associated with being a public company, including costs of accounting, audit, legal, regulatory and tax compliance services, director and officer insurance costs, and investor and public relations costs.

***Other Income (Expense), Net***

*Research and Development Incentive Income*

Research and development incentive income includes payments received under the Research and Development Tax Incentive, or the R&D Incentive, from the Australian government. The R&D Incentive is one of the key elements of the Australian government's support for Australia's innovation system and was developed to assist businesses recover some of the costs of undertaking research and development in Australia. Since July 1, 2021, the R&D Incentive has provided eligible companies that engage in research and development activities with either a refundable or non-refundable tax offset depending on a company's aggregated revenue as follows:

- Refundable tax offset of up to 18.5% above a company's underlying tax rate where aggregated revenue is less than AUD$20.0 million per annum, or
- Non-refundable tax offset of up to 16.5% above a company's underlying tax rate where aggregated revenue is equal to or greater than AUD$20.0 million per annum.

We have assessed our R&D activities and expenditures to determine which activities and expenditures in Australia are likely to be eligible under the R&D Incentive. We estimate the refundable or non-refundable tax offset available to us based on available information at the time.

*Dividend Income*

Dividend income consists of income earned on our money market funds that are recorded as cash equivalents on our consolidated balance sheets.

*Other Income (Expense), Net*

Other income (expense), net primarily consists of unrealized and realized gains and losses on foreign currency.

*Income Tax Provision*

The tax provision recorded for the year ended December 31, 2024 resulted from withholding tax related to taxable income generated from the Hansoh Agreement. We have not recorded any income tax benefits for the losses incurred as it is more likely than not that these benefits will not be realized based on our history of losses and expected future losses.

## Results of Operations

### *Comparison for the years ended December 31, 2024, 2023, and 2022*

The following table summarizes our results of operations for the years ended December 31, 2024, 2023, and 2022 (in thousands):

| | YEAR ENDED DECEMBER 31, | | |
|---|---|---|---|
| | 2024 | 2023 | 2022 |
| REVENUE: | | | |
| Service and other revenue | $ 550 | $ 151 | $ — |
| License revenue | $ 3,000 | $ — | $ — |
| Total revenue | 3,550 | 151 | — |
| OPERATING EXPENSES: | | | |
| Research and development | (173,629) | (135,258) | (87,265) |
| General and administrative | (40,754) | (34,834) | (27,525) |
| Total operating expenses | (214,383) | (170,092) | (114,790) |
| LOSS FROM OPERATIONS | (210,833) | (169,941) | (114,790) |
| OTHER INCOME (EXPENSE), NET: | | | |
| Interest expense, net | — | — | (1) |
| Research and development incentive income | 1,238 | 2,400 | 7,081 |
| Dividend income | 23,496 | 14,755 | 3,644 |
| Other expense, net | (954) | (206) | (613) |
| Total other income (expense), net | 23,780 | 16,949 | 10,111 |
| Loss before income taxes | (187,053) | (152,992) | (104,679) |
| Income tax provision | (300) | — | — |
| Net loss | $ (187,353) | $ (152,992) | $ (104,679) |

*Revenue*

Our revenue for the year ended December 31, 2024 consisted of service and other revenue substantially related to the Tech Transfer Agreement and Supply Agreement and license revenue related to the Hansoh Agreement. Our revenue for the year ended December 31, 2023 consisted of service and other revenue related to the Tech Transfer Agreement. We did not recognize any revenue for the year ended December 31, 2022.

*Research and Development Expenses*

The following table summarizes our research and development expenses for the years ended December 31, 2024, 2023, and 2022 (in thousands):

| | YEAR ENDED DECEMBER 31, | | | $ CHANGE | |
|---|---|---|---|---|---|
| | 2024 | 2023 | 2022 | 2024 vs 2023 | 2023 vs 2022 |
| Cibotercept | $ 29,777 | $ 20,931 | $ 12,433 | $ 8,846 | $ 8,498 |
| KER-065 | 16,090 | 5,962 | 6,010 | 10,128 | (48) |
| Elritercept | 44,319 | 41,249 | 24,492 | 3,070 | 16,757 |
| Preclinical and development fees | 12,008 | 12,420 | 9,221 | (412) | 3,199 |
| Personnel expenses (including stock-based compensation) | 55,946 | 43,408 | 27,683 | 12,538 | 15,725 |
| Professional fees | 5,083 | 3,298 | 3,844 | 1,785 | (546) |
| Facilities and supplies | 7,832 | 6,135 | 2,546 | 1,697 | 3,589 |
| Other expenses | 2,574 | 1,855 | 1,036 | 719 | 819 |
| | $ 173,629 | $ 135,258 | $ 87,265 | $ 38,371 | $ 47,993 |

Research and development expenses were $173.6 million for the year ended December 31, 2024, compared to $135.3 million for the year ended December 31, 2023. The increase of $38.4 million was primarily due to an increase in program-related costs, including (i) an $8.8 million increase of cibotercept-related expenses, which was driven by a $7.1 million increase in clinical spend associated with our Phase 2 clinical trial and a $1.7 million increase in manufacturing costs; (ii) a $10.1 million increase in KER-065-related expenses, primarily driven by a net increase of $5.8 million in manufacturing and preclinical activities and an increase of $4.3 million in clinical spend associated with our ongoing Phase 1 clinical trial; (iii) a net increase of $3.1 million of elritercept-related expenses, primarily driven by a $9.7 million increase in clinical spend associated with our ongoing Phase 2 clinical trials, one in

patients with MDS and one in patients with myelofibrosis, and the advancement of a Phase 3 clinical trial in patients with MDS, partially offset by a decrease of $6.6 million in manufacturing and preclinical activities; (iv) a $12.5 million increase in personnel costs, including an increase of $4.2 million of additional stock-based compensation costs, driven by the increase in headcount to support the advancement of our pipeline; (v) a $1.8 million increase in professional fees; and (v) a $2.4 million increase in facilities and supplies and other expenses due to the continued growth of our organization. These increases were partially offset by a $0.4 million decrease in preclinical pipeline and development activities.

Research and development expenses were $135.3 million for the year ended December 31, 2023, compared to $87.3 million for the year ended December 31, 2022. The increase of $48.0 million was primarily due to an increase in program-related costs, including (i) an $8.5 million increase of cibotercept-related expenses, which was driven by a $6.8 million increase in activities to support the clinical advancement of the program and a $1.7 million increase in manufacturing costs and preclinical activities; (ii) a net increase of $16.8 million of elritercept-related expenses, primarily driven by (a) a $5.5 million increase in clinical and preclinical program activities due to the progression of our two Phase 2 clinical trials of elritercept, one in patients with MDS and one in patients with myelofibrosis, and the initial expenses associated with our planned advancement of elritercept into a Phase 3 clinical trial in patients with MDS and (b) an increase of $11.3 million in manufacturing activities; (iii) a $3.2 million increase in preclinical pipeline and development activities; (iv) a $15.7 million increase in personnel costs, including an increase of $5.9 million of additional stock-based compensation costs, driven by the increase in headcount to support the advancement of our pipeline; and (v) a $4.4 million increase in facilities and supplies and other expenses due to the continued growth of our organization. These increases were partially offset by a $0.5 million decrease in professional fees.

We are no longer separately disclosing KER-047-related expenses in 2024 due to our decision to deprioritize the KER-047 program in 2023, and have updated prior period research and development expense tables to include KER-047-related expenses in preclinical expenses in order to provide a meaningful comparison of the year-over-year expenses. We expect research and development expenses to fluctuate from quarter to quarter depending on the timing of clinical trial activities, clinical manufacturing and other development activities.

*General and Administrative Expenses*

General and administrative expenses were $40.8 million for the year ended December 31, 2024, compared to $34.8 million for the year ended December 31, 2023. The increase of $5.9 million was primarily due to (i) a $3.6 million increase in personnel expenses, which includes an increase of $1.9 million of additional stock-based compensation costs, to support our organizational growth and achievement of our corporate goals; (ii) a net $0.6 million increase in facilities, supplies and other expenses due to growth of our organization; and (iii) a $2.3 million increase in professional fees. These increases were partially offset by a $0.6 million decrease in director and officer insurance premiums.

General and administrative expenses were $34.8 million for the year ended December 31, 2023, compared to $27.5 million for the year ended December 31, 2022. The increase of $7.3 million was primarily due to (i) a $6.0 million increase in personnel expenses, which includes an increase of $4.2 million of additional stock-based compensation costs, to support our organizational growth and achievement of our corporate goals; (ii) a $1.5 million increase in facilities, supplies and other office expenses due to growth of our organization; and (iii) a $0.7 million increase in professional fees. These increases were partially offset by a $0.9 million decrease in director and officer insurance premiums.

*Total Other Income (Expense), Net*

Total other income (expense), net was $23.8 million for the year ended December 31, 2024, compared to $16.9 million for the year ended December 31, 2023. The increase of $6.8 million is primarily related to an increase of $8.7 million of dividend income, partially offset by (i) a decrease of $1.2 million in R&D Incentive income in Australia; and (ii) an increase of $0.7 million in other expense, net.

Total other income (expense), net was $16.9 million for the year ended December 31, 2023, compared to $10.1 million for the year ended December 31, 2022. The increase of $6.8 million is primarily related to an increase of $11.1 million of dividend income, partially offset by a decrease of $4.7 million in R&D Incentive income in Australia.

*Income Tax Provision*

Income tax provision was $0.3 million for the year ended December 31, 2024, compared to zero for the years ended December 31, 2023, and 2022, respectively. The increase of $0.3 million in income tax provision is attributed to withholding taxes related to the taxable income generated in 2024 from the Hansoh Agreement.

## Liquidity and Capital Resources

Since our inception, we have incurred significant operating losses. Our net losses were $187.4 million, $153.0 million, and $104.7 million for the years ended December 31, 2024, 2023, and 2022, respectively. As of December 31, 2024 and December 31, 2023, we had an accumulated deficit of $568.8 million and $381.4 million, respectively. To date, we have devoted the majority of our efforts into business planning, research and development of our product candidates, including conducting clinical trials and preclinical studies, raising capital and recruiting management and technical staff to support these operations. Our primary uses of cash are to fund operating expenses, primarily research and development expenditures. We expect our expenses to increase substantially in connection with our ongoing activities, particularly as we advance the preclinical activities and clinical trials of our product candidates. Furthermore, we expect to incur additional costs associated with operating as a public company, including significant legal, accounting, investor relations, director and officer insurance premiums and other expenses. In addition, if we obtain marketing approval for any of our product candidates, we expect to incur significant commercialization expenses related to establishing sales, marketing, distribution and other commercial infrastructure to commercialize such products.

We currently do not have any products approved for sale. We do not expect to generate any revenue from product sales unless and until we successfully complete development and obtain regulatory approval for one or more of our product candidates, which we expect will take a number of years. Since our inception, we have funded our operations primarily through equity financings and through research collaborations or licensing of intellectual property.

In December 2022, we filed a prospectus supplement to a registration statement on Form S-3ASR, including a base prospectus and sales agreement prospectus, or the Prior Shelf Registration Statement, for the issuance and sale of up to $250.0 million of shares of our common stock. On May 3, 2024, we filed a new registration statement on Form S-3ASR, or the New Shelf Registration Statement, to replace the Prior Shelf Registration Statement that was set to expire, which became automatically effective upon filing, and which permits us to offer, from time to time, an unspecified amount of common stock, preferred stock, debt securities and warrants, including through an “at the market” program with Leerink, as sales agent, or the ATM Program. As of and during the year ended December 31, 2024, we have sold a total of 4,290,096 shares of our common stock pursuant to the ATM Program for aggregate net proceeds of approximately $228.6 million after deducting sales agent commissions and estimated offering expenses. As of December 31, 2024, we were eligible to offer and sell, from time to time, shares of our common stock for an aggregate offering amount of up to the remaining $117.7 million available under the ATM Program. We anticipate that the filing of this Annual Report on Form 10-K will render us unable to use our currently effective New Shelf Registration Statement as we expect that, on the date of filing of this report, we will no longer meet the criteria of a well-known seasoned issuer. Accordingly, we will need to file a post-effective amendment to the New Shelf Registration Statement to convert it to a non-automatic shelf registration statement that we are eligible to use, or to file a new shelf registration statement on Form S-3. Such post-effective amendment or shelf registration statement on Form S-3 is subject to review by the SEC and must be declared effective by the SEC, which could delay our ability to raise debt or equity capital under the registration statement and may adversely affect our ability to access financing and the capital markets in a timely fashion.

As of December 31, 2024, we had cash and cash equivalents of $559.9 million. Based on our current operating assumptions, we believe that our existing cash and cash equivalents, together with the $200.0 million upfront payment pursuant to the license agreement with Takeda, or the Takeda Agreement, which we received in February 2025, will be sufficient to fund our projected liquidity requirements into 2029. We have based this estimate on assumptions that may prove to be wrong, and we could use our capital resources sooner than we currently expect. Due to the numerous risks and uncertainties associated with the development of our product candidates and programs, and because the extent to which we may enter into collaborations with third parties for development of our product candidates is unknown, we are unable to estimate the timing and amounts of increased capital outlays and operating expenses associated with completing the research and development of our product candidates. Our future funding requirements, both near and long-term, will depend on many factors, including:

- the progress, timing and completion of preclinical studies and clinical trials for our current or any future product candidates, as well as the associated costs, including any unforeseen costs we may incur as a result of preclinical study or clinical trial delays due to public health crises or other causes;
- the timing and amount of milestone and royalty payments we are required to make or are eligible to receive under our license agreements with each of The General Hospital Corporation and Hansoh;
- the number of potential new product candidates we identify and decide to develop;
- the need for additional or expanded preclinical studies and clinical trials beyond those that we plan to conduct with respect to our current and future product candidates;
- the costs involved in growing our organization to the size needed to allow for the research, development and potential commercialization of our current or any future product candidates;
- the costs involved in filing patent applications, maintaining and enforcing patents or defending against infringement or other claims raised by third parties;
- the maintenance of our existing license and collaboration agreements and the entry into new license and collaboration agreements;

- the time and costs involved in obtaining regulatory approval for our product candidates and any delays we may encounter as a result of evolving regulatory requirements or adverse results with respect to any of our product candidates;
- the effect of competing technological and market developments;
- the costs of operating as a public company;
- the cost of manufacturing cibotercept, KER-065, elritercept and future product candidates for clinical trials in preparation for marketing approval and in preparation for commercialization;
- the cost of establishing sales, marketing and distribution capabilities for any product candidates for which we may receive regulatory approval in regions where we choose to commercialize our products, if approved, on our own;
- the amount of revenues, if any, we may derive either directly or in the form of royalty payments from future sales of our product candidates, if approved; and
- market acceptance of any approved product candidates.

In addition, public health crises, bank failures, geopolitical tensions and resulting global slowdown of economic activity continue to rapidly evolve and have already resulted in a significant disruption of global financial markets. If the disruption persists and deepens, we could experience an inability to access additional capital when and if needed. If we are unable to obtain funding, we could be forced to delay, reduce or eliminate some or all of our research and development programs and clinical development efforts, which would adversely affect our business prospects, or we may be unable to continue operations. We do not have any committed external source of funds or other support for our development efforts and we cannot be certain that additional funding will be available on acceptable terms, or at all. Until we can generate sufficient product or royalty revenue to finance our cash requirements, which we may never do, we expect to finance our future cash needs through a combination of public or private equity offerings, debt financings, collaborations, strategic alliances, licensing arrangements and other marketing or distribution arrangements. Adequate additional funding may not be available to us on acceptable terms, or at all. Any failure to raise capital as and when needed could have a negative impact on our financial condition and on our ability to pursue our business plans and strategies.

*Cash Flows*

The following table summarizes our cash flows for each of the periods presented (in thousands):

| | YEAR ENDED DECEMBER 31, | | |
|---|---|---|---|
| | 2024 | 2023 | 2022 |
| Net cash used in operating activities | $ (160,869) | $ (124,508) | $ (70,062) |
| Net cash used in investing activities | (1,931) | (2,464) | (1,241) |
| Net cash provided by financing activities | 391,821 | 178,956 | 120,309 |
| Net increase in cash and cash equivalents, and restricted cash | $ 229,021 | $ 51,984 | $ 49,006 |

*Cash Used in Operating Activities*

Net cash used in operating activities was $160.9 million for the year ended December 31, 2024, which was driven by a net loss of $187.4 million and $11.4 million net cash used by operating assets and liabilities, partially offset by non-cash charges including $34.9 million of stock-based compensation expense, $1.8 million in lease expenses and $1.2 million in depreciation. The $11.4 million of cash used by operating assets and liabilities was primarily comprised of (i) a $10.2 million increase in prepaid expenses and other assets due to timing of expense recognition for our research and development costs; (ii) a $2.6 million increase in accounts receivable; and (iii) a $1.3 million change in operating lease liabilities. which was partially offset by a $2.7 million increase in accounts payable and accrued expenses to support the advancement of our programs.

Net cash used in operating activities was $124.5 million for the year ended December 31, 2023, which was driven by a net loss of $153.0 million and $2.7 million net cash used by operating assets and liabilities and non-cash charges, partially offset by non-cash charges including $28.8 million of stock-based compensation expense, $1.6 million in lease expenses and $0.8 million in depreciation. The $2.7 million of cash used in operating assets and liabilities was primarily comprised of (i) a $9.8 million increase in prepaid expenses and other assets due to timing of expense recognition for our research and development costs and (ii) a $0.1 million increase in accounts receivable, which was partially offset by (a) a $6.9 million increase in accounts payable and accrued expenses to support the advancement of our programs and (b) a $0.4 million change in operating lease liabilities.

Net cash used in operating activities was $70.1 million for the year ended December 31, 2022, which was driven by a net loss of $104.7 million, partially offset by a $14.3 million increase in net cash provided by operating assets and liabilities and non-cash charges, $18.7 million of stock-based compensation expense, $0.9 million in lease expenses and $0.7 million in depreciation. The $14.3 million of cash used in operating assets and liabilities was primarily comprised of (i) an $18.0 million decrease in accounts receivable and (ii) a $4.9 million increase in accounts payable and accrued expenses to support the advancement of our programs, which was partially offset by (a) a $4.9 million increase in prepaid expenses and other assets

due to timing of expense recognition for our research and development costs and (b) a $3.7 million change in our operating lease liabilities.

*Cash Used in Investing Activities*

Net cash used in investing activities was $1.9 million, $2.5 million, and $1.2 million for the years ended December 31, 2024, 2023, and 2022, respectively. The cash used in investing activities in each period was due to purchases of property and equipment.

*Cash Provided by Financing Activities*

Net cash provided by financing activities was $391.8 million for the year ended December 31, 2024, which was primarily related to (i) net proceeds of $151.1 million received from our public offering of common stock in January 2024, after deducting underwriting discounts, commissions and offering expenses; (ii) net proceeds of $228.6 million received from sales of our common stock under the ATM Program, after deducting sales agent commissions and offering expenses; and (iii) proceeds of $12.1 million related to exercises of options to purchase common stock.

Net cash provided by financing activities was $179.0 million for the year ended December 31, 2023, which was primarily related to (i) net proceeds of $175.7 million received from sales of our common stock under the ATM Program, after deducting sales agent commissions and offering expenses; and (ii) proceeds of $3.2 million related to exercises of options to purchase common stock.

Net cash provided by financing activities was $120.3 million for the year ended December 31, 2022, which was primarily related to (i) net proceeds of $119.5 million received from sales of our common stock under the ATM Sales Agreement, after deducting sales agent commissions and before deducting offering expenses; and (ii) proceeds of $0.8 million related to exercises of options to purchase common stock.

**Contractual Obligations and Commitments**

We may incur contingent payments upon our achievement of clinical, regulatory and commercial milestones, as applicable, or royalty payments that we are required to make under the MGH Agreement pursuant to which we have in-licensed certain intellectual property. Due to the uncertainty of the achievement and timing of the events requiring payment under these agreements, the amounts to be paid by us are not fixed or determinable at this time and are excluded from the table below.

Under the terms of the MGH Agreement, we are obligated to pay MGH designated amounts when any licensed product achieves certain developmental milestones. Following the commencement of commercial sales of the licensed products, we will pay designated amounts when certain milestone events occur. The development milestones and commercial milestones range from $50,000 to $10.0 million depending upon the significance of the particular milestone. We are also required to pay MGH royalties on all sales of licensed products, with such royalties ranging from the low-single digits to mid-single digits of sales, as well as royalties ranging in the low-double digits of sublicense income depending on the stage of development of the relevant product or process when the sublicense is granted.

The following table summarizes our contractual obligations as of December 31, 2024 and the effects such obligations are expected to have on our liquidity and cash flow in future periods (in thousands):

| | PAYMENTS DUE BY PERIOD | | | | |
|---|---|---|---|---|---|
| | TOTAL | LESS THAN 1 YEAR | 1 TO 3 YEARS | 4 TO 5 YEARS | MORE THAN 5 YEARS |
| Operating lease commitments | $ 25,798 | $ 3,800 | $ 12,378 | $ 6,886 | $ 2,734 |
| Total | $ 25,798 | $ 3,800 | $ 12,378 | $ 6,886 | $ 2,734 |

On September 7, 2021, we entered into an indenture of lease, or the 1050 Waltham Lease, with Revolution Labs Owner, LLC, or the Landlord, pursuant to which we are leasing approximately 35,662 square feet of office, laboratory and vivarium space located at 1050 Waltham Street, Lexington, Massachusetts, or the Premises, for our new principal executive office. In December 2022, we received access to 31,991 square feet of office and laboratory space, or the Phase A Premises, which is considered a distinct lease component. In January 2023, we entered into a first amendment to the 1050 Waltham Lease, or the Lease Amendment. Under the terms of the Lease Amendment, we agreed to the phased delivery of the Premises to us by the Landlord, with the Phase A Premises delivered first, and the additional approximately 3,671 rentable square feet of vivarium space, or the Phase B Premises, delivered at a later date, and established the rent commencement dates for the Phase A Premises and the Phase B Premises accordingly. In March 2023, we received access to the Phase B Premises. Rent commenced in November 2023 for the Premises. The 1050 Waltham Lease is expected to expire on November 30, 2031. In July 2024, we entered into a sublease, or the Sublease Agreement, with Accent Therapeutics, Inc., pursuant to

which we sublet approximately 20,000 square feet of office and laboratory space located at 1050 Waltham Street, Lexington, Massachusetts, expanding our existing headquarters. The Sublease Agreement expires on September 30, 2029.

***Purchase Commitments***

We enter into agreements in the normal course of business with contract manufacturing organizations for process development, raw material purchases and manufacturing services. These contracts typically do not contain minimum purchase commitments and are generally cancellable by us upon written notice. Payments due upon cancellation consist of payments for services provided or expenses incurred, including noncancellable obligations of our service providers, up to the date of cancellation and, in the case of certain arrangements with contract manufacturing organizations, may include noncancellable fees. Under such agreements, the exact amounts owed by us in the event of termination will be based on the timing of the termination and the exact terms of the agreement. As of December 31, 2024, we have committed up to approximately $27.2 million under these agreements which are expected to be paid through 2029.

## Critical Accounting Estimates

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

While our significant accounting policies are described in greater detail in Note 2 to our consolidated financial statements appearing 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.

*Revenue Recognition*

To date, our revenues have consisted solely of payments received related to research collaborations and licensing of intellectual property. We apply the revenue recognition guidance in accordance with Financial Accounting Standards Board, Accounting Standards Codification, or ASC, Subtopic 606, Revenue from Contracts with Customers, or ASC 606. Under ASC 606, we recognize revenue when our customers obtain 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.

To determine the appropriate amount of revenue to be recognized for arrangements determined to be within the scope of ASC 606, we perform the following five steps: (i) identification of the promised goods or services in the contract; (ii) determination of whether the promised goods or services are performance obligations including whether they are distinct in the context of the contract; (iii) measurement of the transaction price, including the constraint on variable consideration; (iv) allocation of the transaction price to the performance obligations; and (v) recognition of revenue when (or as) we satisfy each performance obligation. We only apply the five-step model to contracts when it is probable that we will collect consideration we are entitled to in exchange for the goods or services we transfer to our customer. All variable consideration, including milestones and royalties, is constrained until the cumulative revenue related to the consideration is no longer probable of reversal.

The consideration allocated to each performance obligation is recognized as revenue when control is transferred for the related goods or services. For performance obligations which consist of licenses and other promises, we utilize judgment to assess the nature of the combined performance obligation to determine whether the combined performance obligation is satisfied over time or at a point in time and, if over time, the appropriate method of measuring progress. We evaluate the measure of progress each reporting period and, if necessary, adjust the measure of performance and related revenue recognition.

We receive payments from our customers based on billing schedules established in each contract. Upfront payments and fees are recorded as deferred revenue upon receipt or when due until we satisfy our obligations under these arrangements. Amounts are recorded as accounts receivable when our right to consideration is unconditional.

*Accrued Research and Development Expenses*

As part of the process of preparing our consolidated financial statements, we are required to estimate our external research and development expenses. We make estimates of our accrued expenses as of each balance sheet date in the consolidated financial statements based on facts and circumstances known to us at that time. 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. In accruing research and development expenses, we estimate the time period over which services will be performed 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 the estimate, we adjust the accrual or the amount of prepaid expenses 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 reporting amounts that are too high or too low in any particular period. To date, there have not been any material adjustments to our prior estimates of accrued and prepaid research and development expenses.

*Stock-Based Compensation*

We account for all stock-based compensation awards granted to employees and non-employees as stock-based compensation expense at fair value. Our stock-based awards include stock options and performance-based stock options. The measurement date for awards is the date of grant. For stock options that vest based on service conditions, stock-based compensation costs are recognized as expense over the requisite service period, which is the vesting period, on a straight-line basis. For stock options with performance conditions, stock-based compensation costs are recognized as expense using the accelerated attribution method when it is probable that the performance condition will be achieved. Our Black-Scholes option-pricing model requires the input of subjective assumptions, including the expected volatility of the price of our common stock. We lack company-specific historical and implied volatility information. Therefore, we estimate our expected stock volatility based on the historical volatility of a publicly traded set of peer companies and expect to continue to do so until such time as we have adequate historical data regarding the volatility of our own traded stock price. These estimates involve inherent uncertainties and the application of management's judgment. If factors change and these assumptions either increase or decrease, our stock-based compensation expense could materially differ in the future. Stock-based compensation expense is classified in the accompanying statements of operations based on the function to which the related services are provided. We recognize stock-based compensation expense for the portion of awards that have vested. Forfeitures are recorded as they occur. The fair value of each stock option grant is estimated on the date of grant using the Black-Scholes option-pricing model.

### Recently Issued Accounting Pronouncements

A description of recently issued accounting pronouncements that may potentially impact our financial position and results of operations is disclosed in Note 2 to our consolidated financial statements appearing elsewhere in this Annual Report on Form 10-K.

## ITEM 7A. QUANTITATIVE AND QUALITATIVE DISCLOSURES ABOUT MARKET RISK

We are exposed to market risks in the ordinary course of our business. Market risk represents the risk of loss that may impact our financial position due to adverse changes in financial market prices and rates. Our market risk exposure is primarily the result of interest rate sensitivities.

### Interest Rate Sensitivity

As of December 31, 2024 and December 31, 2023, we had cash and cash equivalents of $559.9 million and $331.1 million, respectively. Our exposure to interest rate sensitivity is impacted by changes in the underlying U.S. bank interest rates. Our surplus cash has been invested in money market fund accounts as well as interest-bearing savings accounts from time to time. We have not entered into investments for trading or speculative purposes. Due to the conservative nature of our investment portfolio, which is predicated on capital preservation of investments with short-term maturities, we do not believe an immediate one percentage point change in interest rates would have a material effect on the fair market value of our portfolio, and therefore we do not expect our operating results or cash flows to be significantly affected by changes in market interest rates.

As of December 31, 2024 and 2023, we had no debt outstanding that is subject to interest rate variability. Therefore, we are not subject to interest rate risk related to debt.

## ITEM 8. FINANCIAL STATEMENTS AND SUPPLEMENTARY DATA

The information required by this Item 8 is contained beginning on page F-1 of this Annual Report on Form 10-K and is incorporated herein by reference.

## ITEM 9. CHANGES IN AND DISAGREEMENTS WITH ACCOUNTANTS ON ACCOUNTING AND FINANCIAL DISCLOSURE

None.

## ITEM 9A. CONTROLS AND PROCEDURES

### Evaluation of Disclosure Controls and Procedures

We maintain "disclosure controls and procedures," as defined in Rule 13a-15(e) and Rule 15d-15(e) under the Exchange Act that are designed to ensure that information required to be disclosed by a company in the reports that it files or submits under the Exchange Act is recorded, processed, summarized and reported, within the time periods specified in the SEC's rules and forms. Disclosure controls and procedures include, without limitation, controls and procedures designed to ensure that information required to be disclosed by a company in the reports that it files or submits under the Exchange Act is accumulated and communicated to our management, including our principal executive and principal financial officers, as appropriate to allow timely decisions regarding required disclosure.

Our management, with the participation of our Chief Executive Officer and our Chief Financial Officer, evaluated the effectiveness of our disclosure controls and procedures as of December 31, 2024. Based on the evaluation of our disclosure controls and procedures as of December 31, 2024, our Chief Executive Officer and Chief Financial Officer concluded that, as of such date, our disclosure controls and procedures were effective at the reasonable assurance level.

### 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) promulgated under the Exchange Act as a process designed by, or under the supervision of, our principal executive and principal financial officers and effected by our 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 the assets of the company;
- 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
- 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. Therefore, even those systems determined to be effective can provide only reasonable assurance with respect to financial statement preparation and presentation. 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 management assessed the effectiveness of our internal control over financial reporting as of December 31, 2024. In making this assessment, management used the criteria set forth by the Committee of Sponsoring Organizations of the Treadway Commission in *Internal Control—Integrated Framework* (2013 framework) (COSO). Based on its assessment, management concludes that, as of December 31, 2024, our internal control over financial reporting is effective based on those criteria.

### Changes in Internal Control over Financial Reporting

There were no changes 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, 2024 that has materially affected, or is reasonably likely to materially affect, our internal control over financial reporting. We have not experienced any material impact to our internal controls over financial reporting despite the fact that certain of our employees are continuing to partially work remotely. We are continually monitoring and assessing the hybrid work model on our internal controls to minimize any potential impact on the design and operating effectiveness of such controls.

### Inherent Limitations on Effectiveness of Controls

Our disclosure controls and procedures and internal control over financial reporting are designed to provide reasonable assurance of achieving the desired control objectives. Our management recognizes that any control system, no matter how

well designed and operated, is based upon certain judgments and assumptions and cannot provide absolute assurance that its objectives will be met. Similarly, an evaluation of controls cannot provide absolute assurance that misstatements due to error or fraud will not occur or that all control issues and instances of fraud, if any, have been detected.

Our independent registered public accounting firm, Deloitte & Touche LLP, has audited our internal control over financial reporting as of December 31, 2024 as stated in their report set forth below:

**REPORT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM**

To the stockholders and the Board of Directors of Keros Therapeutics, Inc.

**Opinion on Internal Control over Financial Reporting**

We have audited the internal control over financial reporting of Keros Therapeutics, Inc. and subsidiaries (the "Company") as of December 31, 2024, based on criteria established in *Internal Control — Integrated Framework (2013)* issued by the Committee of Sponsoring Organizations of the Treadway Commission (COSO). In our opinion, the Company maintained, in all material respects, effective internal control over financial reporting as of December 31, 2024, based on criteria established in *Internal Control — Integrated Framework (2013)* issued by COSO.

We have also audited, in accordance with the standards of the Public Company Accounting Oversight Board (United States) (PCAOB), the consolidated financial statements as of and for the year ended December 31, 2024, of the Company and our report dated February 26, 2025, expressed an unqualified opinion on those financial statements.

**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 Annual 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/ Deloitte & Touche LLP

Boston, Massachusetts

February 26, 2025

## ITEM 9B. OTHER INFORMATION

During the three months ended December 31, 2024, no director or officer of the Company adopted or terminated a "Rule 10b5-1 trading arrangement" or "non-Rule 10b5-1 trading arrangement," as each term is defined in Item 408(a) of Regulation S-K.

## ITEM 9C. DISCLOSURE REGARDING FOREIGN JURISDICTIONS THAT PREVENT INSPECTIONS

Not applicable.

## PART III

We will file a definitive Proxy Statement for our 2025 Annual Meeting of Stockholders, or our 2025 Proxy Statement, with the SEC, pursuant to Regulation 14A, not later than 120 days after the end of our fiscal year. Accordingly, certain information required by Part III has been omitted under General Instruction G(3) to Form 10-K. Only those sections of the 2025 Proxy Statement that specifically address the items set forth herein are incorporated by reference.

### ITEM 10. DIRECTORS, EXECUTIVE OFFICERS, AND CORPORATE GOVERNANCE

The information required by this Item 10 will be included under the headers “Proposal 1 - Election of Directors,” “Executive Officers” and “Information Regarding the Board of Directors and Corporate Governance” in our 2025 Proxy Statement and is incorporated herein by reference.

We have adopted a written Code of Business Conduct and Ethics, or the Code of Conduct, applicable to all of our employees, executive officers and directors, including our principal executive officer, principal financial officer and principal accounting officer. A current copy of the Code of Conduct is available on the Investors section of our website, www.kerostx.com, under "Corporate Governance." We intend to disclose on our website any amendments to, or waivers from, our Code of Conduct that are required to be disclosed pursuant to SEC rules.

We have adopted insider trading policies and procedures governing the purchase, sale, and/or other dispositions of our securities by directors, officers and employees, a copy of which is attached as an exhibit to this Annual Report on Form 10-K. In addition, it is our intent to comply with the applicable laws and regulations relating to insider trading.

### ITEM 11. EXECUTIVE COMPENSATION

The information required by this Item 11 will be included under the header “Executive Compensation” in our 2025 Proxy Statement and is incorporated herein by reference.

### ITEM 12. SECURITY OWNERSHIP OF CERTAIN BENEFICIAL OWNERS AND RELATED STOCKHOLDER MATTERS

The information required by this Item 12 will be included under the header “Security Ownership of Certain Beneficial Owners and Management” in our 2025 Proxy Statement 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 under the header “Transactions with Related Persons and Indemnification” in our 2025 Proxy Statement and is incorporated herein by reference.

### ITEM 14. PRINCIPAL ACCOUNTANT FEES AND SERVICES

The information required by this Item 14 will be included under the header “Proposal 2 - Ratification of Selection of Independent Registered Public Accounting Firm” in our 2025 Proxy Statement and is incorporated herein by reference.

## PART IV

### ITEM 15. EXHIBITS, FINANCIAL STATEMENT SCHEDULES

**(a) The following documents are filed as part of this Annual Report on Form 10-K:**

(1) The Consolidated Financial Statements required to be filed by Item 8 of this Annual Report on Form 10-K, and filed in this Item 15, are as follows:



(2) The Consolidated Financial Statement Schedule have been omitted because they are either not applicable or the required information is included in the Consolidated Financial Statements or notes thereto listed in (a)(1) above.

(3) Exhibits are incorporated herein by reference or are filed with this Annual Report on Form 10-K as indicated below

**(b) Exhibits**

| EXHIBIT NO. | DESCRIPTION | FORM | FILE NO. | EXHIBIT | FILING DATE |
|---|---|---|---|---|---|
| 3.1 | Amended and Restated Certificate of Incorporation of the Registrant. | 8-K | 001-39264 | 3.1 | April 13, 2020 |
| 3.2 | Amended and Restated Bylaws of the Registrant. | 8-K | 001-39264 | 3.2 | April 13, 2020 |
| 4.1 | Amended and Restated Investors' Rights Agreement by and among the registrant and certain of its stockholders, dated as of March 2, 2020. | S-1 | 333-237212 | 4.1 | March 16, 2020 |
| 4.2 | Form of Common Stock Certificate. | S-1/A | 333-237212 | 4.2 | April 1, 2020 |
| 4.3* | Description of the Registrant's Securities. | | | | |
| 10.1 | Form of Indemnity Agreement between the registrant and its directors and officers. | S-1/A | 333-237212 | 10.1 | April 1, 2020 |
| 10.2+ | 2017 Stock Incentive Plan, as amended. | S-1 | 333-237212 | 10.2 | March 16, 2020 |
| 10.3+ | Form of Stock Option Grant Notice and Option Agreement for the 2017 Stock Incentive Plan, as amended. | S-1 | 333-237212 | 10.3 | March 16, 2020 |
| 10.4+ | 2020 Equity Incentive Plan. | S-1/A | 333-237212 | 10.4 | April 1, 2020 |
| 10.5*+ | Forms of Stock Option Grant Notice, Option Agreement, Notice of Exercise, Restricted Stock Unit Grant Notice and Restricted Stock Unit Award Agreement for the 2020 Equity Incentive Plan. | | | | |
| 10.6+ | 2020 Employee Stock Purchase Plan. | S-1/A | 333-237212 | 10.6 | April 1, 2020 |
| 10.7+ | Amended and Restated Non-Employee Director Compensation Policy | 10-Q | 001-39264 | 10.1 | August 7, 2024 |
| 10.8+ | Offer Letter Agreement by and between the registrant and Jasbir Seehra, dated as of December 14, 2015. | S-1 | 333-237212 | 10.7 | March 16, 2020 |

| | | | | | |
|---|---|---|---|---|---|
| 10.9# | Exclusive Patent License Agreement by and between the registrant and The General Hospital Corporation, d/b/a Massachusetts General Hospital, or MGH, dated as of April 5, 2016, as amended by Amendment #1 by and between the registrant and The Brigham and Women's Hospital, Inc. on May 12, 2017 and by Amendment #2 by and between the registrant and MGH on February 23, 2018. | S-1 | 333-237212 | 10.10 | March 16, 2020 |
| 10.10# | License Agreement by and between the registrant and Hansoh (Shanghai) Healthtech Co., Ltd., dated as of December 12, 2021, as amended by Amendment No. 1 by and between the registrant and Hansoh (Shanghai) Healthtech Co., Ltd., dated as of February 10, 2022. | 10-K | 001-39264 | 10.10 | March 9, 2022 |
| 10.11# | Amendment No. 2, dated as of March 11, 2022, and Amendment No. 3, dated as of December 11, 2022, to License Agreement by and between the registrant and Hansoh (Shanghai) Healthtech Co., Ltd. | 10-K | 001-39264 | 10.11 | March 9, 2023 |
| 10.12# | Amendment No. 4 dated as of April 12, 2023, to License Agreement by and between the registrant and Hansoh (Shanghai) Healthtech Co., Ltd. | 10-K | 001-39264 | 10.12 | February 28, 2024 |
| 10.13 | Lease Agreement by and between the registrant and 128 Spring Street Lexington, LLC, dated March 20, 2017, as amended by the First Amendment to Lease Agreement by and between the registrant and 128 Spring Street Lexington, LLC, dated July 1, 2019 and by the Second Amendment to Lease Agreement by and between the registrant and 128 Spring Street Lexington, LLC, dated August 8, 2019. | S-1 | 333-237212 | 10.12 | March 16, 2020 |
| 10.14 | Third Amendment to Lease Agreement by and between the registrant and 99 Hayden LLC, dated August 4, 2021. | 10-Q | 001-39264 | 10.3 | August 5, 2021 |
| 10.15+ | Offer Letter Agreement by and between the registrant and Keith Regnante, dated as of February 7, 2020. | S-1 | 333-237212 | 10.13 | March 16, 2020 |
| 10.16+ | Employment Agreement by and between the registrant and Jasbir Seehra, dated as of March 31, 2020, effective as of April 13, 2020. | S-1/A | 333-237212 | 10.14 | April 1, 2020 |
| 10.17+ | Employment Agreement by and between the registrant and Keith Regnante, dated as of March 31, 2020, effective as of April 13, 2020. | S-1/A | 333-237212 | 10.17 | April 1, 2020 |
| 10.18+ | Employment Agreement by and between the registrant and Simon Cooper, dated as of July 30, 2021 effective as of August 2, 2021. | 8-K | 001-39264 | 10.2 | August 2, 2021 |
| 10.19+ | Employment Agreement by and between the registrant and Christopher Rovaldi, dated as of January 28, 2022 effective as of February 1, 2022. | 8-K | 001-39264 | 10.1 | January 31, 2022 |
| 10.20+ | First Amendment to the Employment Agreement by and between the registrant and Keith Regnante, dated as of January 1, 2022. | 10-K | 001-39264 | 10.21 | March 9, 2022 |
| 10.21+ | First Amendment to the Employment Agreement by and between the registrant and Simon Cooper, dated as of January 1, 2022. | 10-K | 001-39264 | 10.22 | March 9, 2022 |
| 10.22 | Indenture of Lease by and between the registrant and Revolution Labs Owner, LLC, dated September 7, 2021. | 10-Q | 001-39264 | 10.1 | November 4, 2021 |
| 10.23 | First Amendment to Lease, by and between the registrant and Revolution Labs Owner, LLC, dated January 6, 2023. | 10-Q | 001-39264 | 10.1 | May 4, 2023 |
| 10.24*# | Exclusive License Agreement by and between the registrant and Takeda Pharmaceuticals U.S.A., Inc., dated as of December 3, 2024. | | | | |

| | | | | | |
|---|---|---|---|---|---|
| 10.25+ | Employment Agreement by and between the registrant and Yung H. Chyung, dated as of October 15, 2024 effective as of November 1, 2024. | 8-K | 001-39264 | 10.1 | October 16, 2024 |
| 19* | Insider Trading Policy. | | | | |
| 21.1* | Subsidiaries of Keros Therapeutics, Inc. | | | | |
| 23.1* | Consent of Independent Registered Public Accounting Firm. | | | | |
| 31.1* | Certification of Principal Executive Officer Pursuant to Rules 13a-14(a) and 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) and 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. | | | | |
| 97* | Incentive Compensation Recoupment Policy. | | | | |
| 101.INS | Inline XBRL Instance Document - the instance document does not appear in the Interactive Data File because its XBRL tags are embedded within the Inline XBRL 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 - the cover page interactive data is embedded within the Inline XBRL document or included within the Exhibit 101 attachments | | | | |

* Filed herewith

** Furnished herewith and not deemed to be “filed” for purposes of Section 18 of the Exchange Act, and shall not be deemed to be incorporated by reference into any filing under the Securities Act of 1933, as amended, or the Exchange Act (whether made before or after the date of the Form 10-K), irrespective of any general incorporation language contained in such filing.

\+ Indicates management contract or compensatory plan.

\# Certain portions of this exhibit (indicated by asterisks) have been omitted because they are not material and would likely cause competitive harm to Keros Therapeutics, Inc. if publicly disclosed.

The agreements and other documents filed as exhibits to this Annual Report on Form 10-K are not intended to provide factual information or other disclosure other than with respect to the terms of the agreements or other documents themselves, and you should not rely on them for that purpose. In particular, any representations and warranties made by us in these agreements or other documents were made solely within the specific context of the relevant agreement or document and may not describe the actual state of affairs as of the date they were made or at any other time.

## ITEM 16. FORM 10-K SUMMARY

Not applicable.

## SIGNATURES

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

**Keros Therapeutics, Inc.**

Date: February 26, 2025

By: /s/ Jasbir Seehra
Jasbir Seehra, Ph.D.
Chief Executive Officer
(Principal Executive Officer)

## POWER OF ATTORNEY AND SIGNATURES

KNOW ALL BY THESE PRESENTS, that each person whose signature appears below constitutes and appoints Jasbir Seehra, Ph.D., and Keith Regnante, and each of them, as his or her true and lawful attorneys-in-fact and agents, with full power of substitution for him or her, and in his or her name in any and all capacities, to sign any and all amendments to this Annual Report on Form 10-K, and to file the same, with exhibits thereto and other documents in connection therewith, with the U.S. Securities and Exchange Commission, granting unto said attorneys-in-fact and agents, and each of them, full power and authority to do and perform each and every act and thing requisite and necessary to be done therewith, as fully to all intents and purposes as he or she might or could do in person, hereby ratifying and confirming all that said attorneys-in-fact and agents, and either of them, his or her substitute or substitutes, may lawfully do or cause to be done by virtue hereof.

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

| NAME | TITLE | DATE |
|---|---|---|
| /s/ Jasbir Seehra<br>Jasbir Seehra, Ph.D. | Chief Executive Officer and Director<br>*(Principal Executive Officer)* | February 26, 2025 |
| /s/ Keith Regnante<br>Keith Regnante | Chief Financial Officer<br>*(Principal Financial Officer and Principal Accounting Officer)* | February 26, 2025 |
| /s/ Jean-Jacques Bienaimé<br>Jean-Jacques Bienaimé | Director | February 26, 2025 |
| /s/ Nima Farzan<br>Nima Farzan | Director | February 26, 2025 |
| /s/ Carl Gordon<br>Carl Gordon, Ph.D., C.F.A. | Director | February 26, 2025 |
| /s/ Mary Ann Gray<br>Mary Ann Gray, Ph.D. | Director | February 26, 2025 |
| /s/ Tomer Kariv<br>Tomer Kariv | Director | February 26, 2025 |
| /s/ Julius Knowles<br>Julius Knowles | Director | February 26, 2025 |
| /s/ Ran Nussbaum<br>Ran Nussbaum | Director | February 26, 2025 |
| /s/ Alpna Seth<br>Alpna Seth, Ph.D. | Director | February 26, 2025 |

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## INDEX TO CONSOLIDATED FINANCIAL STATEMENTS

## REPORT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

To the stockholders and the Board of Directors of Keros Therapeutics, Inc.

**Opinion on the Financial Statements**

We have audited the accompanying consolidated balance sheets of Keros Therapeutics, Inc. and subsidiaries (the "Company") as of December 31, 2024 and 2023, the related consolidated statements of operations, stockholders' equity, and cash flows, for each of the three years in the period ended December 31, 2024, and the related notes (collectively referred to as the "financial statements"). In our opinion, the financial statements present fairly, in all material respects, the financial position of the Company as of December 31, 2024 and 2023, and the results of its operations and its cash flows for each of the three years in the period ended December 31, 2024, in conformity with accounting principles generally accepted in the United States of America.

We have also 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, 2024, based on criteria established in *Internal Control — Integrated Framework (2013)* issued by the Committee of Sponsoring Organizations of the Treadway Commission and our report dated February 26, 2025, expressed an unqualified opinion on the Company's internal control over financial reporting.

**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 critical audit matters does not alter in any way our opinion on the 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.

**Accrued and Prepaid Research and Development and Manufacturing Expenses — Refer to Notes 2, 4 and 6 to the financial statements**

*Critical Audit Matter Description*

As disclosed in Note 2 to the financial statements, the Company records accrued and prepaid research and development expenses for external clinical trial costs and manufacturing activities based on estimates of the progress to completion of specific tasks within individual contract research and contract manufacturing arrangements. Estimates of expenses incurred are determined by reviewing information provided to the Company by its service providers and through discussions with both internal personnel and external service providers as to the status of specific tasks within arrangements. Expenses incurred in excess of amounts invoiced are recorded as accrued expenses. Payments made in excess of expenses incurred are recorded as prepaid costs. As of December 31, 2024, the Company has recorded accrued external research, development, and manufacturing costs of $9.4 million and prepaid research, development and manufacturing costs of $21.3 million.

We identified auditing the estimates of the progress to completion of specific tasks performed by contract research and contract manufacturing service providers as a critical audit matter due to the (i) the level of judgment required by management and the volume of such estimates made by management and (ii) the high degree of auditor judgment, subjectivity, and an increased extent of effort in performing procedures to evaluate the reasonableness of management’s estimates of progress to completion.

*How the Critical Audit Matter Was Addressed in the Audit*

Our audit procedures related to accrued and prepaid external research and development expenses and manufacturing costs included the following, among others:

- We tested the design and effectiveness of relevant controls over the estimation of accrued and prepaid research and development expenses and manufacturing costs.
- For a sample of contracts with service providers performing research and development, and manufacturing activities, we performed the following:
    - Evaluated the appropriateness of the method used by management to develop its estimates of progress to completion of specific tasks.
    - Tested the completeness and accuracy of the underlying data used in the estimates of progress to completion through inspection of the terms of contracts and statements of work between the Company and its service providers and testing of actual billed expenses under the contracts.
    - Performed corroborating inquiries with Company personnel responsible for overseeing the activities performed by the Company's contract research and contract manufacturing service providers, which may include the service providers' estimate of completed tasks or progress of completion of certain tasks within the arrangement.

/s/ Deloitte & Touche LLP

Boston, Massachusetts

February 26, 2025

We have served as the Company's auditor since 2019.

**KEROS THERAPEUTICS, INC.**

**Consolidated Balance Sheets**
(In thousands, except share and per share data)

| | DECEMBER 31, | |
|---|---|---|
| | **2024** | **2023** |
| **ASSETS** | | |
| CURRENT ASSETS: | | |
| Cash and cash equivalents | $ 559,931 | $ 331,147 |
| Accounts receivable | 2,742 | 143 |
| Prepaid expenses and other current assets | 26,220 | 16,003 |
| Total current assets | 588,893 | 347,293 |
| Operating lease right-of-use assets | 19,251 | 15,334 |
| Property and equipment, net | 4,237 | 4,134 |
| Restricted cash | 1,449 | 1,212 |
| Other long term assets | 2,056 | 2,052 |
| TOTAL ASSETS | $ 615,886 | $ 370,025 |
| **LIABILITIES AND STOCKHOLDERS' EQUITY** | | |
| CURRENT LIABILITIES: | | |
| Accounts payable | $ 4,602 | $ 5,450 |
| Current portion of operating lease liabilities | 1,978 | 1,005 |
| Accrued expenses and other current liabilities | 20,870 | 17,918 |
| Total current liabilities | 27,450 | 24,373 |
| Operating lease liabilities, net of current portion | 16,883 | 13,439 |
| Total liabilities | 44,333 | 37,812 |
| COMMITMENTS AND CONTINGENCIES (Note 11) | | |
| STOCKHOLDERS' EQUITY: | | |
| Preferred stock, par value of $0.0001 per share; 10,000,000 shares authorized as of December 31, 2024 and December 31, 2023; no shares issued and outstanding | — | — |
| Common stock, par value of $0.0001 per share; 200,000,000 shares authorized as of December 31, 2024 and December 31, 2023; 40,554,705 and 31,841,084 shares issued and outstanding as of December 31, 2024 and December 31, 2023, respectively | 4 | 3 |
| Additional paid-in capital | 1,140,328 | 713,636 |
| Accumulated deficit | (568,779) | (381,426) |
| Total stockholders' equity | 571,553 | 332,213 |
| TOTAL LIABILITIES AND STOCKHOLDERS' EQUITY | $ 615,886 | $ 370,025 |

See notes to consolidated financial statements.

**KEROS THERAPEUTICS, INC.**

**Consolidated Statements of Operations**
(In thousands, except share and per share data)

| | YEAR ENDED DECEMBER 31, | | |
|---|---|---|---|
| | **2024** | **2023** | **2022** |
| REVENUE: | | | |
| Service and other revenue | $ 550 | $ 151 | $ — |
| License revenue | 3,000 | — | — |
| Total revenue | 3,550 | 151 | — |
| OPERATING EXPENSES: | | | |
| Research and development | (173,629) | (135,258) | (87,265) |
| General and administrative | (40,754) | (34,834) | (27,525) |
| Total operating expenses | (214,383) | (170,092) | (114,790) |
| LOSS FROM OPERATIONS | (210,833) | (169,941) | (114,790) |
| OTHER INCOME (EXPENSE), NET: | | | |
| Interest expense, net | — | — | (1) |
| Research and development incentive income | 1,238 | 2,400 | 7,081 |
| Dividend income | 23,496 | 14,755 | 3,644 |
| Other expense, net | (954) | (206) | (613) |
| Total other income (expense), net | 23,780 | 16,949 | 10,111 |
| Loss before income taxes | (187,053) | (152,992) | (104,679) |
| Income tax provision | (300) | — | — |
| Net loss | $ (187,353) | $ (152,992) | $ (104,679) |
| Net loss attributable to common stockholders—basic and diluted | $ (187,353) | $ (152,992) | $ (104,679) |
| Net loss per share attributable to common stockholders—basic and diluted | $ (5.00) | $ (5.20) | $ (4.15) |
| Weighted-average common stock outstanding—basic and diluted | 37,437,652 | 29,447,119 | 25,241,030 |

See notes to consolidated financial statements.

**KEROS THERAPEUTICS, INC.**

**Consolidated Statements of Stockholders' Equity**
(In thousands, except share and per share data)

| | COMMON STOCK $0.0001 PAR VALUE | | ADDITIONAL PAID-IN CAPITAL | ACCUMULATED DEFICIT | TOTAL STOCKHOLDER S' EQUITY |
|---|---|---|---|---|---|
| | SHARES | AMOUNT | | | |
| **BALANCE, January 1, 2022** | 23,974,834 | $ 2 | $ 366,927 | $ (123,755) | $ 243,174 |
| Issuance of common stock under the ATM agreement, net of commissions and offering cost of $1,971 | 3,410,384 | — | 119,428 | — | 119,428 |
| Exercise of common stock options | 158,235 | — | 818 | — | 818 |
| Stock-based compensation | — | — | 18,682 | — | 18,682 |
| Net loss | — | — | — | (104,679) | (104,679) |
| **BALANCE, December 31, 2022** | 27,543,453 | $ 2 | $ 505,855 | $ (228,434) | $ 277,423 |
| Issuance of common stock under the ATM agreement, net of commissions and offering cost of $2,708 | 4,061,606 | 1 | 175,793 | — | 175,794 |
| Exercise of common stock options | 236,025 | — | 3,225 | — | 3,225 |
| Stock-based compensation | — | — | 28,763 | — | 28,763 |
| Net loss | — | — | — | (152,992) | (152,992) |
| **BALANCE, December 31, 2023** | 31,841,084 | $ 3 | $ 713,636 | $ (381,426) | $ 332,213 |
| Issuance of common stock, net of underwriting discounts, commissions and offering costs of $9,943 | 4,025,000 | — | 151,057 | — | 151,057 |
| Issuance of common stock under the ATM agreement, net of commissions and offering cost of $3,655 | 4,290,096 | 1 | 228,622 | — | 228,623 |
| Exercise of common stock options | 398,525 | — | 12,141 | — | 12,141 |
| Stock-based compensation | — | — | 34,872 | — | 34,872 |
| Net loss | — | — | — | (187,353) | (187,353) |
| **BALANCE, December 31, 2024** | 40,554,705 | $ 4 | $ 1,140,328 | $ (568,779) | $ 571,553 |

See notes to consolidated financial statements.

**KEROS THERAPEUTICS, INC.**

**Consolidated Statements of Cash Flows**
(In thousands)

| | YEAR ENDED DECEMBER 31, | | |
|---|---|---|---|
| | 2024 | 2023 | 2022 |
| CASH FLOWS FROM OPERATING ACTIVITIES: | | | |
| Net loss | $ (187,353) | $ (152,992) | $ (104,679) |
| Adjustments to reconcile net loss to net cash used in operating activities: | | | |
| Depreciation expense | 1,229 | 815 | 674 |
| Loss on disposal of fixed asset | — | 4 | 12 |
| Stock-based compensation expense | 34,872 | 28,763 | 18,682 |
| Non-cash lease expense | 1,820 | 1,552 | 941 |
| Changes in operating assets and liabilities: | | | |
| Accounts receivable | (2,599) | (143) | 18,000 |
| Prepaid expenses and other current assets | (10,217) | (9,284) | (3,321) |
| Other assets | (4) | (478) | (1,574) |
| Accounts payable | (249) | 1,614 | (408) |
| Right-of-use assets and operating lease liabilities | (1,320) | 384 | (3,711) |
| Accrued expenses and other current liabilities | 2,952 | 5,257 | 5,322 |
| Net cash used in operating activities | (160,869) | (124,508) | (70,062) |
| CASH FLOWS FROM INVESTING ACTIVITIES: | | | |
| Purchase of property and equipment | (1,931) | (2,464) | (1,241) |
| Net cash used in investing activities | (1,931) | (2,464) | (1,241) |
| CASH FLOWS FROM FINANCING ACTIVITIES: | | | |
| Proceeds from issuance of common stock, net of underwriting discounts | 151,340 | — | — |
| Payment of issuance costs | (283) | — | — |
| Proceeds from issuance of common stock under the ATM agreement, net of commissions | 228,794 | 175,825 | 119,578 |
| Payment of issuance costs associated with issuance of common stock under the ATM agreement | (171) | (94) | (87) |
| Proceeds from exercise of stock options | 12,141 | 3,225 | 818 |
| Net cash provided by financing activities | 391,821 | 178,956 | 120,309 |
| NET INCREASE IN CASH, CASH EQUIVALENTS AND RESTRICTED CASH | 229,021 | 51,984 | 49,006 |
| Cash, cash equivalents and restricted cash at beginning of year | 332,359 | 280,375 | 231,369 |
| Cash, cash equivalents and restricted cash at end of year | $ 561,380 | $ 332,359 | $ 280,375 |
| SUPPLEMENTAL DISCLOSURE OF CASH FLOW INFORMATION: | | | |
| Property and equipment purchases in accounts payable | $ — | $ 599 | $ 75 |
| Issuance costs in accrued and accounts payable | $ — | $ — | $ 63 |
| Right-of-use assets obtained in exchange for operating lease obligation | $ 5,737 | $ 1,338 | $ 15,423 |

The following table provides a reconciliation of the cash and cash equivalents and restricted cash as of each of the periods shown above:

| | YEAR ENDED DECEMBER 31, | | |
|---|---|---|---|
| | 2024 | 2023 | 2022 |
| Cash and cash equivalents | $ 559,931 | $ 331,147 | $ 279,048 |
| Restricted cash | 1,449 | 1,212 | 1,327 |
| Total cash, cash equivalents and restricted cash | $ 561,380 | $ 332,359 | $ 280,375 |

See notes to consolidated financial statements.

## 1. NATURE OF BUSINESS AND BASIS OF PRESENTATION

Keros Therapeutics, Inc. (“Keros” or the “Company”) was incorporated in 2015 as a Delaware corporation. Its principal offices are in Lexington, Massachusetts. The Company is a clinical-stage biopharmaceutical company focused on developing and commercializing novel therapeutics to treat a wide range of patients with disorders that are linked to dysfunctional signaling of the transforming growth factor-beta (“TGF-ß”) family of proteins.

One of the Company’s product candidates, cibotercept (KER-012), is being developed for the treatment of pulmonary arterial hypertension (“PAH”) and for the treatment of cardiovascular disorders. The Company's second product candidate, KER-065, is being developed for the treatment of neuromuscular diseases. The Company’s most advanced product candidate, elritercept (KER-050), is being developed for the treatment of low blood cell counts (“cytopenias”), including anemia and thrombocytopenia, in patients with myelodysplastic syndromes (“MDS”) and in patients with myelofibrosis.

Since its inception in 2015, the Company has devoted the majority of its resources to business planning, research and development of its product candidates, including conducting clinical trials and preclinical studies, raising capital and recruiting management and technical staff to support these operations. To date, the Company has not generated any revenue from product sales as none of its product candidates have been approved for commercialization.

In December 2022, the Company filed a prospectus supplement to a registration statement on Form S-3ASR (the “Prior Shelf Registration Statement”) for the issuance and sale, if any, of up to $250.0 million in common stock in sales deemed to be an “at the market offering,” as defined by the Securities Act of 1933, as amended (“Securities Act”).

In May 2024, the Company filed a registration statement on Form S-3ASR to replace the Prior Shelf Registration Statement, which became effective immediately upon filing (the “New Shelf Registration Statement”). The New Shelf Registration Statement included a base prospectus under which the Company could issue, so long as the Company qualifies as a “well-known seasoned issuer” as defined in Rule 405 of the Securities Act, an unspecified amount of shares of the Company common stock, preferred stock, debt securities and warrants. In June 2024, the Company filed a prospectus supplement to the New Shelf Registration Statement for the issuance and sale, if any, of up to an additional $350.0 million of shares of its common stock in sales deemed to be an “at-the-market offering,” as defined by the Securities Act. The Company anticipates that the filing of this Annual Report on Form 10-K will render it unable to use its currently effective New Shelf Registration Statement as the Company expects that, on the date of filing of this report, it will no longer meet the criteria of a well-known seasoned issuer.

### *Liquidity and Capital Resources*

The Company’s consolidated financial statements have been prepared on the basis of the Company continuing as a going concern for the next 12 months. Management believes that the Company’s $559.9 million cash and cash equivalents as of December 31, 2024 will allow the Company to continue its operations for at least the next 12 months. In the absence of a significant source of recurring revenue, the continued viability of the Company is dependent on its ability to continue to raise additional capital to finance its operations. If the Company is unable to obtain additional funding, the Company may be forced to delay, reduce or eliminate some or all of its research and development programs, product portfolio expansion or commercialization efforts, which could adversely affect its business prospects, or the Company may be unable to continue operations.

The accompanying consolidated financial statements are prepared in conformity with accounting principles generally accepted in the United States of America (“U.S. GAAP”) and include the accounts of the Company and its wholly owned subsidiaries, Keros Therapeutics Australia Pty Ltd (“Keros Australia”) and Keros Security Corporation, a Massachusetts securities corporation.

## 2. SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES

### *Principles of Consolidation*

The accompanying consolidated financial statements include the accounts of the Company, Keros Australia and Keros Security Corporation. All intercompany accounts and transactions have been eliminated in consolidation.

### *Use of Estimates*

The preparation of financial statements in conformity with U.S. GAAP requires management to make estimates and assumptions that affect the reported amounts of assets, liabilities, revenue, and expenses, and the disclosure of contingent assets and liabilities as of and during the reporting period. The Company bases its estimates and assumptions on historical experience when available and on various factors that it believes to be reasonable under the circumstances. This process may result in actual results differing materially from those estimated amounts used in the preparation of the financial statements if these results differ from historical experience, or other assumptions do not turn out to be substantially accurate,

even if such assumptions are reasonable when made. Significant estimates and assumptions reflected in these consolidated financial statements include, but are not limited to, useful lives assigned to property and equipment and accrued and prepaid research and development expenses. The Company assesses estimates on an ongoing basis; however, actual results could materially differ from those estimates.

***Fair Value Measurements***

Certain assets and liabilities are reported on a recurring basis at fair value. 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.

To the extent that the valuation is based on models or inputs that are less observable or unobservable in the market, the determination of fair value requires more judgment. Accordingly, the degree of judgment exercised by the Company in determining fair value is greatest for instruments categorized in Level 3. A financial instrument's level within the fair value hierarchy is based on the lowest level of any input that is significant to the fair value measurement. The Company had no financial instruments measured at level 3 as of December 31, 2024.

***Cash, Cash Equivalents, and Restricted Cash***

Cash and cash equivalents consist of standard checking accounts and money market funds. The Company considers all highly liquid investments with an original maturity of 90 days or less at the date of purchase to be cash equivalents.

The Company had restricted cash in the form of a certificate of deposit related to its operating lease in Lexington, Massachusetts of $1.4 million and $1.2 million as of December 31, 2024 and December 31, 2023, respectively. The Company provided Accent Therapeutics, Inc. ("Accent Therapeutics") a letter of credit in the amount of approximately $0.2 million upon commencement of the sublease.

***Concentrations of Credit Risk***

Financial instruments that potentially subject the Company to significant concentration of credit risk consist primarily of cash and cash equivalents. The Company may maintain deposits in financial institutions in excess of government insured limits. The Company believes that it is not exposed to significant credit risk as its deposits are held at financial institutions that management believes to be of high credit quality and the Company has not experienced any losses on these deposits. As of December 31, 2024 and 2023, the Company's cash and cash equivalents were held with three financial institutions. The Company believes that the market risk arising from its holdings of these financial instruments is mitigated based on the fact that many of these securities are either government-backed or of high credit rating.

***Property and Equipment***

Property and equipment are recorded at cost. Expenditures for repairs and maintenance are expensed as incurred. When assets are retired or disposed of, the assets and related accumulated depreciation are written off from the accounts, and any resulting gain or loss is included in the determination of net loss. Depreciation is calculated using the straight-line method over the estimated useful lives of the related assets as follows:

| | ESTIMATED USEFUL LIFE |
|---|---|
| Computer equipment and software | 3 years |
| Laboratory equipment | 5 years |
| Office furniture | 5 years |
| Leasehold improvements | lesser of useful life or remaining lease term |

***Impairment of Long-Lived Assets***

The Company evaluates its long-lived assets for impairment whenever events or changes in circumstances indicate that the carrying amount of an asset may not be recoverable. Recoverability of assets to be held and used is measured by a comparison of the carrying amount of an asset to future undiscounted net cash flows expected to be generated by the asset. If such assets are considered to be impaired, the impairment to be recognized is measured by the amount by which the

carrying amount of the assets exceed the fair value of the assets. Assets to be disposed of are reported at the lower of the carrying amount or fair value less costs to sell. To date, no impairments have been recognized for these assets.

***Leases***

The Company accounts for its leases under Accounting Standards Codification ("ASC") Topic 842, *Leases* ("ASC 842"). At the inception of an arrangement, the Company determines whether the arrangement is or contains a lease based on the unique facts and circumstances present in the arrangement. Leases with a term greater than 12 months are recognized on the balance sheet as right-of-use, or ROU, assets and current and non-current lease liabilities, as applicable. The Company has elected not to recognize on the balance sheet leases with terms of 12 months or less. The Company typically only includes an initial lease term in its assessment of a lease arrangement. Options to renew a lease are not included in the Company's assessment unless there is reasonable certainty that the Company will renew.

Operating lease liabilities and their corresponding ROU assets are recorded based on the present value of future lease payments over the expected remaining lease term. Lease cost for operating leases is recognized on a straight-line basis over the lease term as an operating expense. Certain adjustments to the ROU asset may be required for items such as lease prepayments or incentives received. The interest rate implicit in lease contracts is typically not readily determinable. As a result, the Company utilizes its incremental borrowing rate, which reflects the fixed rate at which the Company could borrow on a collateralized basis the amount of the lease payments in the same currency, for a similar term, in a similar economic environment.

For all asset classes of its leases, the Company has elected to account for the lease and non-lease components together for existing classes of underlying assets.

***Guarantees and Indemnifications***

As permitted under Delaware law, the Company indemnifies its officers, directors, consultants and employees for certain events or occurrences that happen by reason of the relationship with, or position held at, the Company. Through December 31, 2024, the Company had not experienced any losses related to these indemnification obligations, and no claims were outstanding. The Company does not expect significant claims related to these indemnification obligations and, consequently, concluded that the fair value of these obligations is negligible, and no related liabilities have been established.

***Research and Development Costs***

Research and development costs are charged to expense as incurred. Research and development costs consist of expenses incurred in performing research and development activities, including salaries and benefits, materials and supplies, preclinical expenses, stock-based compensation expense, depreciation of equipment, contract services with contract research organizations that conduct research, preclinical and clinical activities on the Company's behalf, as well as contract manufacturing organizations that manufacture drug product for use in the Company's preclinical studies and clinical trials, facilities, and other outside expenses. Costs for external development activities are recognized based on an evaluation of the progress to completion of specific tasks using information provided to the Company by its vendors. Payments for these activities are based on the terms of the individual arrangements, which may differ from the pattern of costs incurred, and are reflected in the consolidated financial statements as prepaid expense or accrued research and development expense.

Nonrefundable advance payments for goods or services to be received in the future for use in research and development activities are recorded as prepaid expenses and expensed as the related goods are delivered or the services are performed.

***Research and Development Incentive***

Research and development incentive income includes payments under the Research and Development Tax Incentive (the "R&D Incentive") from the Australian government. The R&D Incentive is one of the key elements of the Australian government's support for Australia's innovation system and was developed to assist businesses recover some of the costs of undertaking research and development. Since July 1, 2021, the R&D Incentive has provided eligible companies that engage in research and development activities with either a refundable or non-refundable tax offset depending on a company's aggregated revenue as follows:

- Refundable tax offset of up to 18.5% above a company's underlying tax rate where aggregated revenue is less than AUD$20.0 million per annum, or

- Non-refundable tax offset of up to 16.5% above a company's underlying tax rate where aggregated revenue is equal to or greater than AUD$20.0 million per annum.

The Company has assessed its research and development ("R&D") activities and expenditures to determine which activities and expenditures in Australia are likely to be eligible under the R&D Incentive. The Company estimates the refundable or non-refundable tax offset available to it based on available information at the time. This estimate is also reviewed by the Company's external tax advisors on an annual basis.

The Company's estimate of the cash refund it expects to receive related to the R&D Incentive is included in other assets in the accompanying consolidated balance sheet and such amounts are recorded as research and development incentive

income in the statement of operations. The Company recognizes research and development incentive income when there is reasonable assurance that the income will be received, the relevant expenditure has been incurred, and the consideration can be reliably measured. The Company has received payments and has recorded other income from the R&D Incentive of $1.2 million, $2.4 million, and $7.1 million for the years ended December 31, 2024, 2023 and 2022, respectively, related to the R&D Incentive as defined above.

***Revenue Recognition***

The Company recognizes revenue in accordance with ASC Topic 606, *Revenue from Contracts with Customers* ("ASC 606"). The Company enters into certain agreements that are within the scope of ASC 606, under which the Company licenses, may license or grants an option to license rights to certain of the Company's product candidates and performs research and development services in connection with such arrangements. The terms of these arrangements typically include payment of one or more of the following: non-refundable, upfront fees; reimbursement of research and development costs; development, clinical, regulatory and commercial sales milestone payments, and royalties on net sales of licensed products.

Under ASC 606, 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 the appropriate amount of revenue to be recognized for arrangements determined to be within the scope of ASC 606, the Company performs the following five steps: (i) identification of the promised goods or services in the contract; (ii) determination of whether the promised goods or services are performance obligations including whether they are distinct; (iii) measurement of the transaction price, including the constraint on variable consideration; (iv) allocation of the transaction price to the performance obligations; and (v) recognition of revenue when (or as) the Company satisfies each performance obligation. The Company only applies the five-step model to contracts when it is probable that the entity will collect consideration it is entitled to in exchange for the goods or services it transfers to the customer.

The promised goods or services in the Company's arrangements typically consist of a license, or option to license, rights to the Company's intellectual property or research and development services. The Company provides options to additional items in such arrangements, which are accounted for as separate contracts when the customer elects to exercise such options, unless the option provides a material right to the customer. Performance obligations are promised goods or services in a contract to transfer a distinct good or service to the customer and are considered distinct when (i) the customer can benefit from the good or service on its own or together with other readily available resources and (ii) the promised good or service is separately identifiable from other promises in the contract. In assessing whether promised goods or services are distinct, the Company considers factors such as the stage of development of the underlying intellectual property, the capabilities of the customer to develop the intellectual property on its own or whether the required expertise is readily available and whether the goods or services are integral or dependent to other goods or services in the contract.

The Company estimates the transaction price based on the amount expected to be received for transferring the promised goods or services in the contract. The consideration may include fixed consideration and variable consideration. At the inception of each arrangement that includes variable consideration, the Company evaluates the amount of potential payment and the likelihood that the payments will be received. The Company utilizes either the most likely amount method or expected value method to estimate the amount expected to be received based on which method best predicts the amount expected to be received. The amount of variable consideration that is included in the transaction price may be constrained and is included in the transaction price only to the extent that it is probable that a significant reversal in the amount of the cumulative revenue recognized will not occur in a future period.

The Company's contracts often include development and regulatory milestone payments that are assessed under the most likely amount method and constrained if it is probable that a significant revenue reversal would occur. Milestone payments that are not within the Company's control or the licensee's control, such as regulatory approvals, are not considered probable of being achieved until those approvals are received. At the end of each reporting period, the Company re-evaluates the probability of achievement of such development and clinical milestones and any related constraint, and if necessary, adjusts its estimate of the overall transaction price. Any such adjustments are recorded on a cumulative catch-up basis, which would affect revenue in the period of adjustment.

For arrangements that include sales-based royalties, including milestone payments based on the level of sales, and the license is deemed to be the predominant item to which the royalties relate, the Company recognizes revenue at the later of (i) when the related sales occur, or (ii) when the performance obligation to which some or all of the royalty has been allocated has been satisfied (or partially satisfied). To date, the Company has not recognized any royalty revenue resulting from any of the Company's collaboration or strategic alliance arrangements.

The Company allocates the transaction price based on the estimated standalone selling price. The Company must develop assumptions that require judgment to determine the stand-alone selling price for each performance obligation identified in the contract. The Company utilizes key assumptions to determine the stand-alone selling price, which may include other comparable transactions, pricing considered in negotiating the transaction and the estimated costs. Variable consideration is allocated specifically to one or more performance obligations in a contract when the terms of the variable consideration relate to the satisfaction of the performance obligation and the resulting amounts allocated are consistent with the amounts the Company would expect to receive for the satisfaction of each performance obligation.

The consideration allocated to each performance obligation is recognized as revenue when control is transferred for the related goods or services. For performance obligations which consist of licenses and other promises, the Company utilizes judgment to assess the nature of the combined performance obligation to determine whether the combined performance obligation is satisfied over time or at a point in time and, if over time, the appropriate method of measuring progress. The Company evaluates the measure of progress each reporting period and, if necessary, adjusts the measure of performance and related revenue recognition.

The Company receives payments from its customers based on billing schedules established in each contract. Upfront payments and fees are recorded as deferred revenue upon receipt or when due until the Company performs its obligations under these arrangements. Amounts are recorded as accounts receivable when the Company's right to consideration is unconditional.

***Foreign Currency Transactions***

The functional currency for the Company's wholly owned foreign subsidiary, Keros Australia, is the United States dollar. All foreign currency transaction gains and losses are recognized in the consolidated statement of operations.

***Segment Information***

Operating segments are identified as components of an enterprise about which separate discrete financial information is made available for evaluation by the chief operating decision maker ("CODM") in making decisions regarding resource allocation and assessing performance. The Company's CODM is its chief executive officer, who reviews financial information presented on a consolidated basis for the purposes of making operating decisions, assessing financial performance and allocating resources. The Company has one reportable segment and manages its operations on a consolidated basis for the purposes of assessing performance and making operating decisions. The Company's singular concentration is focused on the discovery and development of breakthrough therapeutics for hematological, pulmonary and cardiovascular disorders with high unmet medical need.

***Stock-Based Compensation***

The Company accounts for all stock-based awards granted to employees and non-employees as stock-based compensation expense at fair value. The Company's stock-based awards include stock options. The measurement date for employee and non-employee awards is the date of grant, and stock-based compensation costs are recognized as expense over the requisite service period, which is the vesting period, on a straight-line basis. Stock-based compensation expense is classified in the accompanying consolidated statement of operations based on the function to which the related services are provided. The Company recognizes stock-based compensation expense for the portion of awards that have vested. Forfeitures are recorded as they occur.

The fair value of each stock option grant is estimated on the date of grant using the Black-Scholes option-pricing model. The Company lacks company-specific historical and implied volatility information. Therefore, it estimates its expected stock volatility based on the historical volatility of a publicly traded set of peer companies and expects to continue to do so until such time as it has adequate historical data regarding the volatility of its own traded stock price. The expected term of the Company's stock options has been determined utilizing the "simplified" method for awards that qualify as "plain-vanilla" options. The risk-free interest rate is determined by reference to the U.S. Treasury yield curve in effect at the time of grant of the award for time periods approximately equal to the expected term of the award. Expected dividend yield is based on the fact that the Company has never paid cash dividends on common stock and does not expect to pay any cash dividends in the foreseeable future.

***Income Taxes***

The Company accounts for income taxes under the asset and liability method, which requires the recognition of deferred tax assets and liabilities for the expected future tax consequences of events that have been included in the consolidated financial statements. Under this method, the Company determines deferred tax assets and liabilities on the basis of the differences between the financial statement and tax bases of assets and liabilities by using enacted tax rates in effect for the year in which the differences are expected to reverse. The effect of a change in tax rates on deferred tax assets and liabilities is recognized in income in the period that includes the enactment date.

The Company recognizes deferred tax assets to the extent that these assets are more likely than not to be realized. In making such a determination, the Company considers all available positive and negative evidence, including future reversals of existing taxable temporary differences, projected future taxable income, tax-planning strategies and results of recent operations. If the Company determines that it would be able to realize its deferred tax assets in the future in excess of its net recorded amount, an adjustment would be made to the deferred tax asset valuation allowance, which would reduce the provision for income taxes.

The Company records uncertain tax positions in accordance with ASC 740 on the basis of a two-step process in which (1) the Company determines whether it is more likely than not that the tax positions will be sustained on the basis of the technical merits of the position and (2) for those tax positions that meet the more-likely-than-not recognition threshold, the Company

recognizes the largest amount of tax benefit that is more than 50 percent likely to be realized upon ultimate settlement with the related tax authority.

The Company accounts for interest and penalties related to uncertain tax positions within the provision for income taxes. As of December 31, 2024, there have been no interest or penalties recorded.

***Comprehensive Loss***

Comprehensive loss is defined as the change in equity of a business enterprise during a period from transactions and other events and circumstances from non-owner sources. Comprehensive loss is equal to net loss for all periods presented.

***Net Loss Per Share***

Basic net loss per share is computed by dividing the net loss by the weighted-average number of common shares outstanding during the period, without consideration of potential dilutive securities. Diluted net loss per share is computed using the weighted-average number of common shares outstanding during the period, and if dilutive, the weighted-average number of potential shares of common shares. The Company's potentially dilutive securities, which include stock options, have been excluded from the computation of diluted net loss per share as the effect would be to reduce the net loss per share. Therefore, the weighted-average number of common shares outstanding used to calculate both basic and diluted net loss per share attributable to common stockholders is the same. The Company excluded the following from the computation of diluted net loss per share attributable to common stockholders as of December 31, 2024, 2023 and 2022 because including them would have had an anti-dilutive effect:

| | DECEMBER 31, | | |
|---|---|---|---|
| | 2024 | 2023 | 2022 |
| Options to purchase common stock | 5,384,760 | 4,394,807 | 3,533,169 |
| Employee stock purchase plan shares | 47,694 | — | — |
| Total | 5,432,454 | 4,394,807 | 3,533,169 |

***Recently Adopted Accounting Pronouncements***

In November 2023, the Financial Accounting Standards Board issued Accounting Standards Update ("ASU") No. 2023-07, *Segment Reporting (Topic 280)* ("ASU No. 2023-07"). The amendments in this update expand segment disclosure requirements, including new segment disclosure requirements for entities with a single reportable segment among other disclosure requirements. This update was effective for fiscal years beginning after December 15, 2023, and interim periods within fiscal years beginning after December 15, 2024. The Company adopted ASU No. 2023-07 for its consolidated financial statements for the fiscal year ended December 31, 2024 and included a new disclosure Note 13. Segment Reporting in accordance with ASU No. 2023-07. The adoption of the standard did not have a material impact on the Company's consolidated financial statements.

***Recently Issued Accounting Pronouncements***

In December 2023, the Financial Accounting Standards Board issued ASU No. 2023-09, *Income Taxes (Topic 740): Improvements to Income Tax Disclosures* ("ASU No. 2023-09"). ASU No. 2023-09 requires a public business entity to disclose, on an annual basis, a tabular rate reconciliation using both percentages and currency amounts, broken out into specified categories with certain reconciling items further broken out by nature and jurisdiction to the extent those items exceed a specified threshold. In addition, all entities are required to disclose income taxes paid, net of refunds received disaggregated by federal, state/local and foreign and by jurisdiction if the amount is at least 5% of total income tax payments, net of refunds received. The new standard is effective for annual periods beginning after December 15, 2024, with early adoption permitted. An entity may apply the amendments in ASU No. 2023-09 prospectively by providing the revised disclosures for the period ending December 31, 2025 and continuing to provide the pre-ASU No. 2023-09 disclosures for the prior periods, or may apply the amendments retrospectively by providing the revised disclosures for all period presented. The Company is currently evaluating the impact of ASU No. 2023-09 on its consolidated financial statements and related disclosures.

In November 2024, the Financial Accounting Standards Board issued ASU No. 2024-03, *Income Statement—Reporting Comprehensive Income—Expense Disaggregation Disclosures (Subtopic 220-40): Disaggregation of Income Statement Expenses* ("ASU No. 2024-03"), which intends to improve financial reporting by requiring disclosure of additional information about specific expense categories. This guidance is effective for annual reporting periods beginning after December 15, 2026 and interim reporting periods beginning after December 15, 2027. Early adoption is permitted and the guidance is to be

applied prospectively and may be applied retrospectively. The Company is currently evaluating the impact of this guidance on its consolidated financial statements and related disclosures.

***Risks and Uncertainties***

There have been significant disruptions to global financial markets that have contributed to a general global economic slowdown. While recent trends towards rising inflation have eased, prices continue to rise, which may materially affect the Company's business and corresponding financial position and cash flows. Inflationary factors, such as increases in the cost of materials and supplies relating to the Company's preclinical studies and clinical trials, interest rates and overhead costs may adversely affect its operating results. Rising interest rates present a recent challenge impacting the U.S. economy and could make it more difficult for the Company to obtain traditional financing on acceptable terms, if at all, in the future. Although the Company does not believe that inflation or higher interest rates have had a material impact on its financial position or results of operations to date, the Company may experience increases in the near future (especially if inflation rates rise more quickly) on its operating costs, including its labor costs and research and development costs, due to supply chain constraints, consequences associated with public health crises and global geopolitical tensions, such as the ongoing war between Russia and Ukraine and the war in Israel, worsening global macroeconomic conditions and employee availability and wage increases, which may result in additional stress on the Company's working capital resources. As of the date of issuance of these financial statements, the Company is not aware of any specific event or circumstance that would require the Company to update its estimates, assumptions and judgments or revise the carrying value of its assets or liabilities. Actual results could differ from those estimates, and any such differences may be material to the Company's financial statements.

In addition, the Company is subject to other challenges and risks specific to its business and its ability to execute on its business plan and strategy, as well as risks and uncertainties common to companies in the biopharmaceutical industry with research and development operations, including, without limitation, risks and uncertainties associated with: obtaining regulatory approval of its product candidates; delays or problems in obtaining clinical supply, loss of single source suppliers or failure to comply with manufacturing regulations; product development and the inherent uncertainty of clinical success; the challenges of protecting and enhancing its intellectual property rights; the challenges of complying with applicable regulatory requirements; and identifying, acquiring or in-licensing additional products or product candidates.

## 3. FAIR VALUE MEASUREMENTS

The following table presents information about the Company's financial assets and liabilities measured at fair value on a recurring basis and indicates the level of the fair value hierarchy utilized to determine such fair values (in thousands):

| DESCRIPTION | DECEMBER 31, 2024 | QUOTED PRICES ACTIVE MARKETS FOR IDENTICAL ASSETS (LEVEL 1) | SIGNIFICANT OTHER OBSERVABLE INPUTS (LEVEL 2) | SIGNIFICANT OTHER OBSERVABLE INPUTS (LEVEL 3) |
|---|---|---|---|---|
| *Asset* | | | | |
| Money market funds | $ 556,064 | $ 556,064 | $ — | $ — |
| Total financial assets | $ 556,064 | $ 556,064 | $ — | $ — |

| DESCRIPTION | DECEMBER 31, 2023 | QUOTED PRICES ACTIVE MARKETS FOR IDENTICAL ASSETS (LEVEL 1) | SIGNIFICANT OTHER OBSERVABLE INPUTS (LEVEL 2) | SIGNIFICANT OTHER OBSERVABLE INPUTS (LEVEL 3) |
|---|---|---|---|---|
| *Asset* | | | | |
| Money market funds | $ 325,898 | $ 325,898 | $ — | $ — |
| Total financial assets | $ 325,898 | $ 325,898 | $ — | $ — |

There have been no transfers between fair value levels during the years ended December 31, 2024 and 2023. The carrying values of prepaid expenses, other current assets, accounts payable, and accrued expenses approximate their fair values due to the short-term nature of these assets and liabilities.

## 4. PREPAID EXPENSES AND OTHER CURRENT ASSETS

Prepaid expenses and other current assets as of December 31, 2024 and 2023 consisted of the following (in thousands):

| | DECEMBER 31, | |
|---|---|---|
| | 2024 | 2023 |
| Prepaid external R&D costs | $ 15,748 | $ 10,116 |
| Prepaid external manufacturing costs | 5,545 | 2,303 |
| Prepaid sales tax | 121 | 429 |
| Prepaid insurance | 651 | 638 |
| Prepaid subscriptions | 960 | 568 |
| Interest and dividend receivable | 1,714 | 948 |
| Other | 1,481 | 1,001 |
| Total prepaid expenses and other current assets | $ 26,220 | $ 16,003 |

## 5. PROPERTY AND EQUIPMENT, NET

Property and equipment, net as of December 31, 2024 and 2023 consisted of the following (in thousands):

| | DECEMBER 31, | |
|---|---|---|
| | 2024 | 2023 |
| Computer equipment and software | $ 35 | $ 35 |
| Laboratory equipment | 5,978 | 5,279 |
| Office furniture | 1,173 | 540 |
| Total | 7,186 | 5,854 |
| Less: accumulated depreciation | (2,949) | (1,720) |
| Property and equipment, net | $ 4,237 | $ 4,134 |

Depreciation expense was $1.2 million, $0.8 million, and $0.7 million for each of the years ended December 31, 2024, 2023, and 2022, respectively.

## 6. ACCRUED EXPENSES AND OTHER CURRENT LIABILITIES

Accrued expenses and other current liabilities as of December 31, 2024 and 2023 consisted of the following (in thousands):

| | DECEMBER 31, | |
|---|---|---|
| | 2024 | 2023 |
| Accrued external R&D costs | $ 5,139 | $ 3,904 |
| Accrued external manufacturing costs | 4,308 | 5,288 |
| Accrued compensation and benefits | 10,130 | 7,542 |
| Accrued legal and consultants | 877 | 519 |
| Other | 416 | 665 |
| Total accrued expenses and other current liabilities | $ 20,870 | $ 17,918 |

## 7. LICENSE AGREEMENTS

### *Massachusetts General Hospital*

On April 5, 2016, the Company entered into an exclusive patent license agreement with The General Hospital Corporation d/b/a Massachusetts General Hospital (“MGH”). Under the license agreement with MGH (as amended in May 2017 and February 2018, the “MGH Agreement”), the Company obtained an exclusive, worldwide license, with the right to sublicense, under certain patents and technical information of MGH, to make, have made, use, have used, sell, have sold, lease, have leased, import, have imported or otherwise transfer licensed products and processes for use in the treatment, diagnosis, palliation and prevention of diseases and disorders in humans and animals. The Company is required to use commercially reasonable efforts to develop and commercialize licensed products and processes and must achieve certain required diligence milestones.

Under the terms of the MGH Agreement, the Company is required to pay a low-five digit to mid-five digit annual maintenance fee prior to the first commercial sale of its first product or process, a mid-five digit annual maintenance fee after the first commercial sale of its first product or process that is creditable against royalties, certain clinical and regulatory milestone payments for the first three products or indications to achieve such milestones, which milestone payments are $8.6 million in the aggregate, and certain commercial milestone payments for the first three products or indications to achieve such milestones, which milestone payments are $18.0 million in the aggregate. The Company made payments of $50,000 and $300,000 in 2020 and 2021, respectively, for the achievement of the clinical and regulatory milestones of (i) filing of an IND in the first country and (ii) the completion of a Phase 1 clinical trial, respectively. The Company is also obligated to pay tiered royalties on net sales of licensed products ranging in the low-single digits to mid-single digits. The royalty rates are subject to up to a maximum 50% reduction for lack of a valid claim, in the event that it is necessary for the Company to obtain a license to any third-party intellectual property related to the licensed products, and generic competition. The obligation to pay royalties under the MGH Agreement expires on a licensed product-by-licensed product and country-by-country basis upon the later of expiry of the last valid claim of the licensed patents that cover such licensed product in such country or ten years from the first commercial sale of such product in such country. The Company is also obligated to pay a percentage of non-royalty-related payments received by it from sublicensees ranging in the low-double digits and a change of control fee equal to a low-single digit percentage of the payments received as part of any completed transaction up to a low seven-digit amount.

The MGH Agreement expires upon expiry of the last remaining royalty obligation for a licensed product or process. Under the MGH Agreement, MGH may terminate the agreement upon the Company's uncured material breach or insolvency, a challenge by the Company of the licensed patents and certain other specified breaches of the MGH Agreement. The Company may terminate the agreement for any reason upon specified prior written notice to MGH.

***Hansoh Agreement***

On December 12, 2021, the Company entered into a license agreement with Hansoh. Refer to Note 12, Revenue from Contracts with Customers, for more information regarding this agreement.

## 8. COMMON STOCK

As of December 31, 2024, the Company's amended and restated certificate of incorporation authorized the Company to issue 200,000,000 shares of common stock at a par value of $0.0001 per share.

On December 12, 2022, the Company filed a prospectus supplement to its registration statement on Form S-3ASR for the issuance and sale, if any, of up to $250.0 million of shares of its common stock under a sales agreement with Leerink Partners LLC (the "ATM Sales Agreement").The Company anticipates that the filing of this Annual Report on Form 10-K will render it unable to use its currently effective New Shelf Registration Statement as the Company expects that, on the date of filing of this report, it will no longer meet the criteria of a well-known seasoned issuer.

On May 3, 2024, the Company filed the New Registration Statement to replace the Prior Shelf Registration Statement that was set to expire, including a base prospectus, which became effective immediately upon filing, under which the Company could issue an unspecified amount of shares of the Company common stock, preferred stock, debt securities and warrants. On June 17, 2024, the Company filed a prospectus supplement to the New Shelf Registration Statement for the issuance and sale, if any, of up to an additional $350.0 million of shares of its common stock under the ATM Sales Agreement.

For the year ended December 31, 2022, the Company raised gross proceeds of $121.4 million pursuant to the ATM Offering through the sale of 3,410,384 shares of common stock at a weighted average price of $35.60 per share. The net proceeds from the ATM Offering for the year ended December 31, 2022 were approximately $119.4 million after deducting sales agent commissions of $1.8 million and offering expenses of $0.2 million.

For the year ended December 31, 2023, the Company raised gross proceeds of $178.5 million pursuant to the ATM Offering through the sale of 4,061,606 shares of common stock at a weighted average price of $43.95 per share. The net proceeds from the ATM Offering for the year ended December 31, 2023 were approximately $175.8 million after deducting sales agent commissions of $2.7 million.

For the year ended December 31, 2024, the Company raised gross proceeds of $232.3 million pursuant to the ATM Offering through the sale of 4,290,096 shares of common stock at a weighted average price of $54.14 per share. The net proceeds from the ATM Offering for the year ended December 31, 2024 were approximately $228.6 million after deducting sales agent commissions of $3.5 million and offering expenses of less than $0.2 million. As of December 31, 2024, the Company was eligible to offer and sell, from time to time, shares of its common stock for an aggregate offering amount of up to $117.7 million (less any sales agent commissions) available under the ATM Offering.

On January 8, 2024, the Company closed an underwritten public offering in which 4,025,000 shares of common stock were issued and sold, which included 525,000 shares of common stock issued and sold pursuant to the exercise in full of the underwriters' option to purchase additional shares, at a public offering price of $40.00 per share. The aggregate net proceeds from the public offering were approximately $151.1 million, after deducting underwriting discounts and commissions and offering expenses.

The following is a summary of the rights and privileges of the holders of common stock as of December 31, 2024:

*Liquidation Preference:* In the event of liquidation, dissolution or winding up, holders of common stock will be entitled to share ratably in the net assets legally available for distribution to stockholders after the payment of all debts and other liabilities and the satisfaction of any liquidation preference granted to the holders of any then-outstanding shares of preferred stock.

*Dividends:* Subject to preferences that may be applicable to any then-outstanding preferred stock, holders of common stock are entitled to receive ratably those dividends, if any, as may be declared from time to time by the Board out of legally available funds. As of December 31, 2024, no cash dividends have been declared or paid.

*Voting Rights:* Each holder of common stock is entitled to one vote for each share on all matters submitted to a vote of the stockholders, including the election of directors. Under the Company's amended and restated certificate of incorporation and amended and restated bylaws, stockholders will not have cumulative voting rights. Because of this, the holders of a majority of the shares of common stock entitled to vote in any election of directors can elect all of the directors standing for election, if they should so choose.

*Rights and Preferences*: Holders of common stock have no preemptive, conversion or subscription rights and there are no redemption or sinking fund provisions applicable to the common stock. The rights, preferences and privileges of the holders of common stock are subject to, and may be adversely affected by, the rights of the holders of shares of any series of preferred stock that the Company may designate in the future.

As of December 31, 2024, 2023, and 2022, the Company has reserved the following shares of common stock for the potential exercise of stock options:

| | DECEMBER 31, | | |
|---|---|---|---|
| | 2024 | 2023 | 2022 |
| Options to purchase common stock | 5,384,760 | 4,394,807 | 3,533,169 |
| Employee stock purchase plan shares | 47,694 | — | — |
| Total | 5,432,454 | 4,394,807 | 3,533,169 |

## 9. STOCK-BASED COMPENSATION

***2017 Stock Incentive Plan***

The Board adopted the 2017 Stock Incentive Plan (the "2017 Plan") in February 2017, and the stockholders approved the 2017 Plan in March 2017. The 2017 Plan was most recently amended in March 2020.

As of December 31, 2024, there were an aggregate of 477,752 shares of common stock issuable upon the exercise of outstanding options under the 2017 Plan. Any options or awards outstanding under the 2017 Plan remain outstanding and effective.

***2020 Equity Incentive Plan***

In April 2020, the 2020 Equity Incentive Plan (the "2020 Plan") became effective, and, as a result, no further awards will be made under the 2017 Plan. The 2020 Plan provides for the grant of stock options qualifying as incentive stock options ("ISOs"), to employees and for the grant of nonstatutory stock options ("NSOs"), restricted stock awards, restricted stock unit awards, stock appreciation rights, performance stock awards and other forms of stock compensation to employees, consultants and directors. The 2020 Plan also provides for the grant of performance cash awards to employees, consultants and directors. Any previously granted awards under the 2017 Plan will remain outstanding in accordance with their respective terms.

Under the 2020 Plan, there is an annual increase on January 1 of each year from January 1, 2021 continuing through January 1, 2030, by 4.0% of the total number of shares of common stock outstanding on December 31 of the preceding calendar year, or a lesser number of shares as may be determined by the Board. On January 1, 2023, the Company increased the number of shares available for future grant under the 2020 Plan by 1,101,738 shares. On January 1, 2024, the Company increased the number of shares available for future grant under the 2020 Plan by 1,273,643 shares. On January 1, 2025, the Company increased the number of shares available for future grant under the 2020 Plan by 1,622,188 shares. The awards granted under the 2020 Plan typically vest over a four-year period and have a 10-year contractual term.

As of December 31, 2024, there were an aggregate of 4,907,008 shares of common stock issuable upon the exercise of outstanding options under the 2020 Plan. Additionally, there were an aggregate of 861,617 shares reserved for future issuance under the 2020 Plan, including shares forfeited from the 2017 Plan.

***2020 Employee Stock Purchase Plan***

In March 2020, the Board adopted and the Company's stockholders approved the 2020 Employee Stock Purchase Plan ("ESPP"). The ESPP became effective on April 7, 2020. Under the ESPP, eligible employees can purchase shares of the Company's common stock, based on a percentage of their compensation, subject to certain limits. The purchase price per share is equal to the lower of 85% of the fair market value of the Company's common stock on the first trading day of the twenty-four month offering period, or on the applicable purchase date. Each offering under the ESPP consists of two twelve-month purchase periods.

Under the ESPP, there is an annual increase on January 1 of each year from January 1, 2021 continuing through January 1, 2030, by the lesser of (i) 1.0% of the total number of shares of common stock outstanding on December 31 of the preceding calendar year, (ii) 455,852 shares or (iii) or a lesser number of shares as may be determined by the Board. On January 1, 2025, the Company increased the number of shares available for future grant under the ESPP by 405,547 shares. If purchase rights granted under the ESPP terminate without having been exercised, the shares of our common stock not purchased under such purchase rights will again become available for issuance under the ESPP.

As of December 31, 2024, no shares of common stock were purchased under the ESPP. As of December 31, 2024, there was an aggregate of 1,247,861 shares reserved for future issuance under the ESPP.

***Stock Option Valuation***

The weighted-average assumptions that the Company used in the Black-Scholes option-pricing model to determine the grant-date fair value of stock options granted for the years ended December 31, 2024, 2023, and 2022 were as follows:

| | YEAR ENDED DECEMBER 31, | | |
|---|---|---|---|
| | 2024 | 2023 | 2022 |
| Risk-free interest rate | 4.30 % | 3.96 % | 2.24 % |
| Expected term (in years) | 5.91 | 6.05 | 6.06 |
| Expected volatility | 81.92 % | 81.34 % | 83.03 % |
| Expected dividend yield | 0.00 % | 0.00 % | 0.00 % |

A summary of option activity during the year ended December 31, 2024 is as follows (in thousands except share and per share data):

| | NUMBER OF OPTIONS | WEIGHTED-AVERAGE EXERCISE PRICE | WEIGHTED-AVERAGE REMAINING CONTRACTUAL TERM (IN YEARS) | AGGREGATE INTRINSIC VALUE |
|---|---|---|---|---|
| Outstanding as of January 1, 2024 | 4,394,807 | $ 36.08 | 7.31 | $ 46,319 |
| Granted | 1,643,300 | 57.07 | | |
| Exercised | (398,525) | 30.47 | | $ 10,126 |
| Cancelled or forfeited | (227,762) | 50.47 | | |
| Expired | (27,060) | 56.52 | | |
| Outstanding as of December 31, 2024 | 5,384,760 | $ 42.19 | 7.18 | $ 7,395 |
| Options exercisable as of December 31, 2024 | 2,903,204 | $ 32.52 | 5.90 | $ 7,395 |

The aggregate intrinsic value of stock options is calculated as the difference between the exercise price of the stock options and the fair value of the Company’s common stock for those stock options that had exercise prices lower than the fair value of the Company’s common stock.

The weighted-average grant date fair value per share of options granted during each of the years ended December 31, 2024, 2023, and 2022 was $40.92, $35.24 and $31.18, respectively. As of December 31, 2024, there was $82.0 million of unrecognized stock-based compensation expense related to unvested stock options, including 4.9 million of unrecognized stock-based compensation expense related to unvested performance-based stock options. The unrecognized stock-based compensation expense is estimated to be recognized over a period of 2.49 years.

***Stock-Based Compensation Expense***

Total stock-based compensation expense recorded as research and development and general and administrative expenses, respectively, for employees, directors and non-employees during the years ended December 31, 2024, 2023 and 2022 is as follows (in thousands):

| | YEAR ENDED DECEMBER 31, | | |
|---|---|---|---|
| | 2024 | 2023 | 2022 |
| Research and development | $ 18,294 | $ 14,082 | $ 8,205 |
| General and administrative | 16,578 | 14,681 | 10,477 |
| Total stock-based compensation expense | $ 34,872 | $ 28,763 | $ 18,682 |

## 10. INCOME TAXES

Loss before income taxes for the years ended December 31, 2024, 2023 and 2022 consisted of the following (in thousands):

| | YEAR ENDED DECEMBER 31, | | |
|---|---|---|---|
| | 2024 | 2023 | 2022 |
| United States | $ (189,315) | $ (156,571) | $ (112,240) |
| Foreign | 2,262 | 3,579 | 7,561 |
| Loss before income taxes | $ (187,053) | $ (152,992) | $ (104,679) |

The components of the provision for income taxes for the years ended December 31, 2024, 2023 and 2022 consisted of the following (in thousands):

| | YEAR ENDED DECEMBER 31, | | |
|---|---|---|---|
| | 2024 | 2023 | 2022 |
| Current income tax provision: | | | |
| Federal | $ — | $ — | $ — |
| State | — | — | — |
| Foreign | 300 | — | — |
| Total current income tax provision | $ 300 | $ — | $ — |
| Total deferred income tax provision | $ — | $ — | $ — |
| Total income tax provision | $ 300 | $ — | $ — |

A reconciliation of the Company's statutory income tax rate to the Company's effective income tax rate for the years ended December 31, 2024, 2023 and 2022 was as follows:

| | YEAR ENDED DECEMBER 31, | | |
|---|---|---|---|
| | 2024 | 2023 | 2022 |
| Income at U.S. statutory rate | 21.0 % | 21.0 % | 21.0 % |
| State taxes | 8.8 | 1.2 | 5.2 |
| Stock compensation | (0.6) | (0.6) | (2.8) |
| Other permanent differences | (1.3) | (3.0) | (1.4) |
| Research and development credits | 1.2 | 3.0 | 2.5 |
| Impact of foreign operations | (0.1) | (0.1) | (0.3) |
| Foreign withholding taxes | (0.2) | — | — |
| Other | (3.2) | 3.0 | (3.3) |
| Tax credits | 1.2 | 0.8 | 3.2 |
| Change in valuation allowance | (27.0) | (25.3) | (24.1) |
| Effective tax rate | (0.2)% | — % | — % |

The net deferred income tax asset balance as of December 31, 2024 and 2023 related to the following (in thousands):

| | YEAR ENDED DECEMBER 31, | |
|---|---|---|
| | 2024 | 2023 |
| Net operating loss carryforwards | $ 45,084 | $ 36,245 |
| Research and development tax credits | 16,184 | 14,134 |
| Capitalized research and development expenses | 78,413 | 36,363 |
| Stock-based compensation | 7,558 | 10,794 |
| Operating lease liability | 5,068 | 3,457 |
| Accrued expenses | 2,626 | 1,774 |
| Intangibles | — | — |
| Other | $ 269 | $ 285 |
| Total deferred tax assets | $ 155,202 | $ 103,052 |
| Valuation allowance | (150,037) | (99,390) |
| Net deferred tax assets | $ 5,165 | $ 3,662 |
| Deferred tax liability | | |
| Operating lease right-of-use asset | (5,165) | (3,662) |
| Net deferred tax assets | $ — | $ — |

As of December 31, 2024, the Company had U.S. federal and state net operating loss ("NOL") carryforwards of $160.3 million and $180.9 million, respectively. Of the $160.3 million in federal NOLs, $0.2 million will expire in 2035 and the remaining $160.1 million can be carried forward indefinitely. The state NOL carryforwards begin to expire in 2039.

As of December 31, 2024, the Company had U.S. federal and state research and development tax credit carryforwards of $11.9 million and $5.4 million, respectively. As of December 31, 2023, the Company had U.S. federal and state research and development tax credit carryforwards of $10.4 million and $4.8 million, respectively. The tax credits begin to expire in 2035.

Under the provisions of the Internal Revenue Code of 1986, as amended (the "Code"), the NOL and tax credit carryforwards are subject to review and potential adjustments by the Internal Revenue Services and state tax authorities. Under Section 382 of the Code ("Section 382"), certain substantial changes in the Company's ownership, including the sale of the Company or significant changes in ownership due to sales of equity, may have limited, or may limit in the future, the amount of NOL carryforwards or tax credits which could be used annually to offset future taxable income. The Company had updated its analyses under Section 382 through September 30, 2024, and determined that on April 15, 2016 and April 13, 2020, ownership changes had occurred. Based on the Company's analysis, the Company has determined that $0.3 million and $0.3 million of its federal and state NOL carryforwards, respectively, are limited by Section 382 as of September 30, 2024 and have been written off in the prior period. The remaining unused carryforwards remain available for future periods. The Company may also experience ownership changes in the future as a result of subsequent shifts in the Company's stock ownership, some of which may be outside the Company's control. As a result, its ability to use its pre-change NOLs or tax credits to offset U.S. federal taxable income may be subject to limitations, which could potentially result in increased future tax liability. In addition, at the state level, there may be periods during which the use of NOLs is suspended or otherwise limited, which could accelerate or permanently increase state taxes owed.

Management of the Company has evaluated the positive and negative evidence bearing upon the realizability of its deferred tax assets, which are comprised principally of research and development credits and NOLs. Under the applicable accounting standards, management has considered the Company's history of losses and concluded that it is more likely than not that the Company will not recognize the benefits of federal and state deferred tax assets. Accordingly, a full valuation allowance was maintained as of December 31, 2024 and 2023. A change in the Company's valuation allowance was recorded in 2024 and 2023 in the amount of $50.6 million and $38.7 million, respectively, due primarily to the generation of additional net deferred tax assets.

The Tax Cuts and Jobs Act resulted in significant changes to the treatment of research and development ("R&D") expenditures under Section 174. For tax years beginning after December 31, 2021, taxpayers are required to capitalize and amortize all R&D expenditures that are paid or incurred in connection with their trade or business. Specifically, costs for U.S.-based R&D activities must be amortized over five years and costs for foreign R&D activities must be amortized over 15 years – both using a midyear convention.

The calculation of the Company's tax liabilities involves dealing with uncertainties in the application of complex tax laws and regulations for both federal taxes and the many states in which it operates or does business in. ASC 740 states that a tax benefit from an uncertain tax position may be recognized when it is more likely than not that the position will be sustained upon examination, including resolutions of any related appeals or litigation processes, on the basis of the technical merits.

The Company records uncertain tax positions as liabilities in accordance with ASC 740 and adjusts these liabilities when its judgment changes as a result of the evaluation of new information not previously available. Because of the complexity of some of these uncertainties, the ultimate resolution may result in a payment that is materially different from the Company's current estimate of the unrecognized tax benefit liabilities. These differences will be reflected as increases or decreases to income tax expense in the period in which new information is available.

As of December 31, 2023, the Company did not have any gross unrecognized tax benefits related to income tax reserves. As of December 31, 2024, the Company had certain gross unrecognized tax benefits related to income tax reserves primarily related to federal and state research credit carryforwards of $3.1 million, of which $2.0 million relate to positions taken in prior years and $1.1 million relate to current year positions. The Company does not have any other material gross unrecognized tax benefits related to income tax reserves. The Company does not expect any of its unrecognized tax benefits related to income tax reserves, if recognized, to impact its effective tax rate due to full valuation allowance in the United States.

The Company recognizes interest and penalties related to unrecognized tax benefits on the income tax expense line in the accompanying consolidated statement of operations. As of December 31, 2024 and 2023, the Company had no interest or penalties related to unrecognized tax benefits.

The Company files income 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 income tax examination by federal, state and foreign jurisdictions, where applicable. The Company is currently subject to an income tax examination with the state of Massachusetts for the tax years ended December 31, 2021 and 2022, and does not expect a material impact to the Company's financial statements as a result of such income tax examination. The Company's tax years are still open under statute for income tax examination by the Internal Revenue Service ("IRS") from December 31, 2021 to the present. There are currently no pending income tax examinations with the IRS. To the extent the Company has tax attribute carryforwards, the tax years in which the tax attribute was generated may still be adjusted upon examination by the Internal Revenue Service, state and foreign tax authorities to the extent utilized in a future period.

## 11. COMMITMENTS AND CONTINGENCIES

### *Operating Leases*

On September 7, 2021, the Company entered into an indenture of lease (the "1050 Waltham Lease") with Revolution Labs Owner LLC (the "Landlord"), pursuant to which the Company is leasing approximately 35,662 square feet of office, laboratory and vivarium space located at 1050 Waltham Street, Lexington, Massachusetts (the "Premises") for its new principal executive office. In December 2022, the Company received access to approximately 31,991 square feet of the Premises (the "Phase A Premises") pertaining to the office and laboratory space in order to prepare for use. Accordingly, the 1050 Waltham Lease for the Phase A Premises, which is considered a distinct lease component, was determined to be classified as an operating lease and the Company recorded an ROU asset of $15.4 million and a lease liability of $12.9 million on the consolidated balance sheet as of December 31, 2022. The difference between the ROU asset and lease liability pertains to payments made prior to the Phase A Premises commencement date for leasehold improvements that were deemed to be lessor owned.

In January 2023, the Company entered into a first amendment to the 1050 Waltham Lease (the "Lease Amendment"). Under the terms of the Lease Amendment, a phased delivery of the Premises by the Landlord was established as follows: (i) the delivery of the Phase A Premises in January 2023 and (ii) the delivery of the additional approximately 3,671 rentable square feet of vivarium space (the "Phase B Premises") in March 2023.

As a result of the Lease Amendment, the lease liability for the Phase A Premises was remeasured, resulting in a non-cash decrease to the Company's operating lease liabilities and ROU assets of $0.5 million in the quarter ended March 31, 2023. Upon delivery of the Phase B Premises in March 2023, the Phase B Premises was determined to be classified as an operating lease and the Company recorded an ROU asset of $1.9 million, inclusive of lease payments made prior to commencement, and a lease liability of $1.4 million on the consolidated balance sheets. Upon delivery of the Phase B Premises, the rent commencement date of the Premises was determined to begin in November 2023, with base rent will initially be fixed at $0.2 million per month and will increase by approximately 3% per annum until the 1050 Waltham Lease expires on November 30, 2031. The Company is obligated to reimburse the Landlord for certain variable costs, including its proportional share of taxes and operating expenses which are not included in the measurement of the 1050 Waltham Lease liability. In connection with its entry into the 1050 Waltham Lease, the Company has provided the Landlord a letter of credit in the amount of approximately $1.2 million, which is recognized as restricted cash within other assets on the consolidated balance sheets. The Company has the option to extend the term of the 1050 Waltham Lease for a period of an additional 5 years. As of December 31, 2024, the Company has no reasonable certainty that this option to extend will be exercised.

In July 2024, the Company entered into a sublease (the "Sublease Agreement") with Accent Therapeutics, pursuant to which the Company has sublet approximately 20,000 square feet of office and laboratory space located at 1050 Waltham Street, Lexington, Massachusetts, expanding the Company's existing headquarters. Accordingly, the Sublease Agreement for the premises was determined to be classified as an operating lease. Upon commencement of the sublease, the Company recorded an ROU asset of $5.7 million and a lease liability of $5.7 million. The term of the sublease commenced on July 1,

2024 (the "Sublease Commencement Date"). The Sublease Agreement has a term of 5 years and 3 months, measured from the Sublease Commencement Date.

The Company's obligation for the payment of base rent for the premises began on the Sublease Commencement Date. Base rent was initially fixed at $71.00 per rentable square foot and the Company is only required to pay base rent on 17,500 square feet for the first year of the sublease. The Sublease Agreement also provides for three months of free rent. Base rent will increase by approximately 3% per annum until the Sublease Agreement expires on September 30, 2029.

In connection with its entry into the Sublease Agreement and as a security deposit, the Company provided Accent Therapeutics a letter of credit in the amount of approximately $0.2 million on the Sublease Commencement Date.

The components of the lease cost as of December 31, 2024, 2023, and 2022 consisted of the following (in thousands):

| | YEAR ENDED DECEMBER 31, | | |
|---|---|---|---|
| | 2024 | 2023 | 2022 |
| Operating lease cost | $ 3,521 | $ 2,950 | $ 1,089 |
| Variable payments | 1,554 | 1,317 | 555 |
| Total lease cost | $5,075 | $4,267 | $1,644 |

Other information as of December 31, 2024, 2023 and 2022 (in thousands):

| | DECEMBER 31, | | |
|---|---|---|---|
| | 2024 | 2023 | 2022 |
| Cash paid for amounts included in the measurement of lease liabilities | | | |
| Operating cash flows from operating leases | $3,026 | $1,122 | $913 |
| Right-of-use assets obtained in exchange for new operating lease liabilities | $5,737 | $1,338 | $15,423 |

The weighted-average remaining lease term and discount rate for the leases as of December 31, 2024 and 2023 were as follows:

| | DECEMBER 31, | |
|---|---|---|
| | 2024 | 2023 |
| Weighted-average remaining lease term — operating leases | 6.3 | 7.9 |
| Weighted-average discount rate — operating leases | 10.3 % | 10.3 % |

Maturities of operating lease liabilities at December 31, 2024 are as follows (in thousands):

| MATURITY OF LEASE LIABILITY | |
|---|---|
| 2025 | $ 3,800 |
| 2026 | 4,002 |
| 2027 | 4,125 |
| 2028 | 4,251 |
| 2029 | 3,983 |
| 2030 | 2,903 |
| 2031 | 2,734 |
| Total lease payments | 25,798 |
| Less: imputed interest | (6,937) |
| Total operating lease liabilities | $ 18,861 |
| Included in the consolidated balance sheet: | |
| Current portion of lease liabilities | $ 1,978 |
| Lease liabilities | 16,883 |
| Total operating lease liabilities | $ 18,861 |

### *Purchase Commitments*

The Company enters into agreements in the normal course of business with contract manufacturing organizations for process development, raw material purchases and manufacturing services. These contracts typically do not contain minimum purchase commitments and are generally cancellable by the Company upon written notice. Payments due upon cancellation consist of payments for services provided or expenses incurred, including noncancellable obligations of the Company's service providers, up to the date of cancellation and, in the case of certain arrangements with contract manufacturing organizations, may include noncancellable fees. Under such agreements, the exact amounts owed by the Company in the event of termination will be based on the timing of the termination and the exact terms of the agreement. As of December 31, 2024, the Company has committed up to approximately $27.2 million under these agreements which are expected to be paid through 2029.

### *Legal Proceedings*

The Company is not a party to any litigation and does not have contingency reserves established for any litigation liabilities.

## 12. REVENUE FROM CONTRACTS WITH CUSTOMERS

**Hansoh License Agreement**

In December 2021, the Company entered into a license agreement with Hansoh (the "Hansoh Agreement"). Under the Hansoh Agreement, the Company granted to Hansoh the exclusive right to develop, manufacture and commercialize elritercept and licensed products containing elritercept within the territories of mainland China, Hong Kong and Macau (the "Hansoh Territory").

In connection with the Hansoh Agreement, Hansoh will purchase clinical trial supply of elritercept from the Company, and the parties will also negotiate in good faith to enter into an agreement for commercial supply prior to any anticipated commercialization in the Hansoh Territory. In addition, Hansoh will use commercially reasonable efforts to develop, obtain regulatory approval for, and commercialize licensed products in any region in the Hansoh Territory.

Pursuant to the Hansoh Agreement, the Company received a net one-time $18.0 million upfront license payment in January 2022. In addition to the upfront payment and development milestones achieved to date, the Company will also be eligible to receive up to an aggregate of (i) $23.5 million upon the achievement of specified development milestones and (ii) $144.0 million upon the achievement of specified net sales thresholds for all licensed products in the Hansoh Territory. If a licensed product is approved for marketing in the Hansoh Territory, the Company will be entitled to receive royalty payments based on a tiered percentage of annual net sales in each region within the Hansoh Territory, with such percentage ranging from the low double digit to high teens, subject to specified potential royalty reductions.

Hansoh's obligation to pay royalties for a given licensed product in a given region in the Hansoh Territory will begin on the date of the first commercial sale for such licensed product in such region and continue until the latest of (i) 10 years from the date of the first commercial sale for such licensed product in such region, (ii) the expiration of the last valid claim of certain licensed patents or joint patents, and (iii) expiration of regulatory exclusivity in such region. During the royalty term, neither party will directly or indirectly commercialize a competing product in the Hansoh Territory.

The Hansoh Agreement will continue in force on a region-by-region basis until the expiration of the royalty term. Hansoh may terminate the Agreement in its entirety for convenience, with notice. The Company may terminate the Hansoh Agreement in its entirety for a patent challenge brought by Hansoh or its affiliates or their sublicensees. Either party may terminate the Hansoh Agreement in its entirety (i) if the other party materially breaches the Hansoh Agreement and fails to cure such breach or (ii) upon the bankruptcy of the other party.

The Company evaluated the Hansoh Agreement and concluded that it was subject to ASC 606, as the Company viewed the Hansoh Agreement as a contract with a customer. As such, the Company assessed the terms of the Hansoh Agreement and identified a single performance obligation for the Company to provide Hansoh an exclusive license to develop, manufacture and commercialize elritercept and licensed products containing elritercept in the Hansoh Territory, including the underlying know-how related to such licenses. All other promised goods/services were deemed immaterial in the context of the Hansoh Agreement. Under the Hansoh Agreement, Hansoh was obligated to pay a one-time, net $18.0 million payment to the Company, which was paid in the first quarter of 2022. The Company recognized a gross upfront fee of $20.0 million as revenue and $2.0 million in withholding tax on its consolidated statement of operations for the year ended December 31, 2021, and a receivable, net of withholding tax on its consolidated balance sheet as of December 31, 2021.

The Company will recognize development milestone payments as revenue at the point in time when it is determined that it is probable such milestones will be achieved as all performance obligations will have been satisfied at the point which a milestone might occur (i.e., Hansoh will have assumed all responsibility for the activities under the Hansoh Agreement). The Company will recognize royalty payments and commercial milestone payments as the associated sales of licensed products are recorded by Hansoh, as they predominantly relate to the license granted with the Hansoh Agreement. The Company recognized $3.0 million as revenue and $0.3 million in withholding tax upon the achievement of a development milestone

related to the Hansoh Agreement on its consolidated statement of operations for the year ended December 31, 2024, and a receivable, net of withholding tax, on its consolidated balance sheet as of December 31, 2024.

In connection with the Hansoh Agreement, the Company entered into a manufacturing technology transfer agreement (the "Tech Transfer Agreement") with Hansoh, effective in June 2023. The Tech Transfer Agreement governs the transfer to Hansoh, by the Company of all documents and information required to complete the manufacturing technology transfer. Under the Tech Transfer Agreement, Hansoh is obligated to make certain payments to the Company, at the rates set forth in the Tech Transfer Agreement, as manufacturing technology transfer services are provided over the term of the Tech Transfer Agreement. The Company recognized $96.1 thousand and $150.8 thousand of service and other revenue for the years ended December 31, 2024 and 2023, respectively.

In connection with the Hansoh Agreement, the Company entered into a clinical product supply agreement (the "Supply Agreement") with Hansoh, effective February 2024. The Company evaluated the Supply Agreement and concluded that it was subject to ASC 606, as the Company viewed the Supply Agreement as a contract with a customer. As such, the Company assessed the terms of the Supply Agreement and identified a single performance obligation for the Company to supply Hansoh with clinical product supply. The Company will recognize revenue at a point in time when control transfers, which is deemed to be at the shipping point when the clinical product supply is ready for shipment. As of December 31, 2024, the Company has commenced shipping clinical product supply under the Supply Agreement. The Company recognized $421.1 thousand of other revenue for the year ended December 31, 2024.

### 13. Segment Reporting

The following table presents segment revenue and significant segment expenses (in thousands) for the years ended December 31, 2024, 2023 and 2022:

| | YEAR ENDED DECEMBER 31, | | |
|---|---|---|---|
| | 2024 | 2023 | 2022 |
| REVENUE: | | | |
| Total segment revenue | 3,550 | 151 | — |
| LESS: | | | |
| Cibotercept program expenses | (29,777) | (20,931) | (12,433) |
| KER-065 program expenses | (16,090) | (5,962) | (6,010) |
| Elritercept program expenses | (44,319) | (41,249) | (24,492) |
| Preclinical & development expenses | (12,008) | (12,420) | (9,221) |
| Compensation costs (excluding stock based compensation) | (48,084) | (38,074) | (26,476) |
| Stock-based compensation | (34,872) | (28,763) | (18,682) |
| Depreciation expense | (1,229) | (815) | (674) |
| Other segment items[1] | (27,720) | (19,684) | (10,334) |
| Interest expense | — | — | (1) |
| Dividend income | 23,496 | 14,755 | 3,644 |
| Income tax provision | $ (300) | $ — | $ — |
| Net loss | $ (187,353) | $ (152,992) | $ (104,679) |

The Company manages its operations as a single reportable segment focused on developing novel therapeutics. Segment revenue above is 100 percent attributed to the Company's agreements with Hansoh and is equal to consolidated total revenue. All revenues are derived in the United States where the agreements originated. The Company manages expenses on a program level. The significant expense categories outlined above align with the segment-level information that is regularly provided to the CODM to allocate resources, assess performance of the reportable segment, and make key operating decisions. On a quarterly basis, the CODM reviews financial information, including consolidated net income, clinical expenses by program, other company expenses and a long-range cash flow projection, to make resource decisions for the Company's programs and review and approve corporate goals. No segment asset information is provided above as the CODM is focused on how expenses impact ending cash by period and overall cash runway. Any review of segment assets,

[1]Other segment items include professional fees, facilities and office expenses, marketing and travel expenses, research and development incentive income, and other income and expenses, primarily consisting of other taxes and fees and unrealized and realized gains and losses on foreign currency.

which would focus on cash and cash equivalents, would be at the same level as the consolidated balance sheet. All long-lived assets are held in the United States.

### 14. Subsequent Events

In December 2024, the Company entered into a license agreement with Takeda, which became effective on January 16, 2025. Under the terms of the license agreement with Takeda (the “Takeda Agreement”), the Company granted to Takeda the exclusive right to develop, manufacture and commercialize elritercept and certain derivative compounds globally, excluding the territories of mainland China, Hong Kong and Macau (the “Takeda Territory”).

Pursuant to the terms of the Takeda Agreement, the Company received a $200.0 million upfront payment in February 2025. In addition to the upfront payment, the Company is entitled to receive up to an aggregate of (i) $370.0 million upon the achievement of specified development and commercial milestones and (ii) $740.0 million upon the achievement of specified sales milestones. If a licensed product is approved for marketing in the Takeda Territory, the Company will be entitled to receive royalty payments based on tiered increments of annual net sales in the Takeda Territory, with such percentage ranging from the low double-digits to high teens, subject to specified potential royalty reductions.

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## BOARD OF DIRECTORS

**Jasbir Seehra, Ph.D.**
Chief Executive Officer
Keros Therapeutics, Inc.

**Jean-Jacques Bienaimé**
Former Chief Executive Officer
BioMarin Pharmaceutical Inc.

**Nima Farzan**
Chief Executive Officer
Latigo Biotherapeutics Inc.

**Carl Gordon, Ph.D., C.F.A.**
Founding Member, Managing Partner and
Co-Head of Global Private Equity
OrbiMed Advisors LLC

**Mary Ann Gray, Ph.D.**
President
Gray Strategic Advisors, LLC

**Tomer Kariv**
Managing Partner and Co-Founder
The Pontifax Group

**Julius Knowles**
Partner
Partners Innovation Fund

**Ran Nussbaum**
Managing Partner and Co-Founder
The Pontifax Group

**Alpna Seth, Ph.D.**
Former President and Chief Executive Officer
Nura Bio Inc.

## EXECUTIVE OFFICERS

**Jasbir Seehra, Ph.D.**
Chief Executive Officer

**Yung Chyung, M.D.**
Chief Medical Officer

**Keith Regnante**
Chief Financial Officer

**Christopher Rovaldi**
President and Chief Operating Officer

## CORPORATE INFORMATION

**Corporate Headquarters**
Keros Therapeutics, Inc.
1050 Waltham Street, Suite 302
Lexington, MA 02421
Phone: +1 617 314 6297

**Stock Listing**
Keros Therapeutics, Inc. stock is publicly traded on the Nasdaq Global Market under the ticker symbol: **KROS**

**Investor Relations**
Our investor relations website is located at
ir.kerostx.com
Contact: ir@kerostx.com

**Independent Registered Public Accounting Firm**
Deloitte & Touche LLP
200 Berkeley Street
Boston, MA 02116

**Transfer Agent**
Computershare Trust Company, N.A.
150 Royall Street, Suite 101
Canton, MA 02021
www.computershare.com

**Annual Meeting of Stockholders**
June 4, 2025 at 9:00 a.m. Eastern time

## ANNUAL REPORT ON FORM 10-K

A copy of our Annual Report on Form 10-K filed with the Securities and Exchange Commission (SEC) is available free of charge on the SEC's website at www.sec.gov, in the "Filings" tab of the "Investors & Media" section of our website at www.kerostx.com, or by sending a written request to:

Keros Therapeutics, Inc.
1050 Waltham Street, Suite 302
Lexington, MA 02421
Attention: Corporate Secretary


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