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, 2025

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 001-39062

Korro Bio, Inc.

(Exact name of registrant as specified in its charter)

Delaware	**47-2324450**
(State or other jurisdiction of incorporation or organization)	**(I.R.S. Employer Identification No.)**
60 First Street, 2nd Floor, Suite 250 Cambridge, MA	**02141**
(Address of principal executive offices)	**(Zip Code)**

Registrant's telephone number, including area code: (617) 468-1999

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

Title of each class	Trading Symbol(s)	Name of each exchange on which registered
Common stock, par value $0.001 per share	KRRO	The Nasdaq Capital Market

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

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

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

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

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

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

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

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

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

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

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

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

The aggregate market value of the voting and non-voting common equity held by non-affiliates of the registrant, based on the closing price of the shares of common stock on The Nasdaq Capital Market on June 30, 2025, was $88,968,431.

The number of shares of registrant's Common Stock outstanding as of March 10, 2026 was 14,422,571.

DOCUMENTS INCORPORATED BY REFERENCE

The registrant intends to file a definitive proxy statement pursuant to Regulation 14A relating to the 2026 annual meeting of stockholders within 120 days of the end of the registrant's fiscal year ended December 31, 2025. Portions of such definitive proxy statement are incorporated by reference into Part III of this Annual Report on Form 10-K to the extent stated herein.

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Unless the context otherwise indicates, references in this Annual Report on 10-K to the "Company," the "combined company," "we," "our" and "us" refer, collectively, to Korro Bio, Inc., a Delaware corporation, and its consolidated subsidiaries (including Legacy Korro) after completion of our November 2023 business combination. The term "Legacy Korro" refers to privately held Korro Bio Ops, Inc. (formerly known as Korro Bio, Inc.), which we acquired in the November 2023 business combination. The term "Frequency" refers to our company, Frequency Therapeutics, Inc., prior to completion of our November 2023 business combination.

We use various trademarks and trade names in our business, including without limitation our corporate name and logo. All other trademarks or trade names referred to in this Annual Report on Form 10-K are the property of their respective owners. Solely for convenience, the trademarks and trade names in this Annual Report on Form 10-K may be referred to without the ® and ™ symbols, but such references should not be construed as any indicator that their respective owners will not assert, to the fullest extent under applicable law, their rights thereto.

In this Annual Report, when we refer to our leads or lead candidates, we are referring to our oligonucleotides that we are researching for potential nomination as a development candidate. When we refer to our development candidates, we generally mean an oligonucleotide lead candidate that we have nominated for clinical development.

CAUTIONARY STATEMENT REGARDING FORWARD-LOOKING STATEMENTS

This Annual Report on Form 10-K includes statements that are not historical facts and are considered forward-looking within the meaning of Section 27A of the Securities Act of 1933, as amended, or the Securities Act, and Section 21E of the Securities Exchange Act of 1934, as amended, or the Exchange Act. Our forward-looking statements include, but are not limited to, express or implied statements regarding our or our management team's expectations, hopes, beliefs, intentions or strategies regarding the future. In addition, any statements that refer to projections, forecasts or other characterizations of future events or circumstances, including any underlying assumptions, are forward-looking statements. The words "anticipate," "believe," "contemplate," "continue," "could," "estimate," "expect," "intends," "may," "might," "plan," "possible," "potential," "predict," "project," "should," "will," "would" and similar expressions may identify forward-looking statements, but the absence of these words does not mean that a statement is not forward-looking. Forward-looking statements in this Annual Report on Form 10-K may include, for example, express or implied statements about:

- the timing, progress, results, and cost of our KRRO-121 development program, including our ability to submit a regulatory application in the second half of 2026 for KRRO-121;
- the timing of our expected nomination of a development candidate for our next-generation GalNAc-conjugated alpha-1 antitrypsin deficiency, or AATD, program;
- the initiation, timing, progress, results, cost of and other statements regarding our research and development programs and our current and future preclinical studies and clinical trials, including statements regarding the timing of initiation and completion of studies or trials and related preparatory work, and the period during which the results of the trials will become available;
- our strategy;
- our cash runway and ability to reach meaningful clinical data readouts and data inflection points;
- the effects of our organizational streamlining and workforce reduction;
- the therapeutic and commercial potential of our development candidates;
- our research and development and other expenses;
- our collaboration arrangement with Novo Nordisk A/S, or Novo Nordisk, including effects of the recent pause, and any future collaboration or licensing arrangements;
- our ability to comply with, and the impact of, regulatory requirements, obligations and restrictions on our business and operations;
- our ability to protect our intellectual property and operate our business without infringing upon the intellectual property rights of others, including our ability to obtain and maintain rights to the technologies required to develop and commercialize our development candidates;
- competitive developments, including the impact on our competitive position of rival products and development candidates and our ability to meet such competition; and
- our ability to manage the growth of our business.

These forward-looking statements are subject to known and unknown risks, uncertainties and assumptions about us that may cause our actual results, levels of activity, performance or achievements to be materially different from any future results, levels of activity, performance or achievements expressed or implied by such forward-looking statements, including those set forth under the heading "*Risk Factors*" in Part I, Item 1A of this Annual Report on Form 10-K. Given these risks and uncertainties, you should not place undue reliance on these forward-looking statements. Should one or more of the risks or uncertainties described in this Annual Report on Form 10-K, or should underlying assumptions prove incorrect, actual results and plans could differ materially from those expressed in any forward-looking statements. Except as otherwise required by applicable law, we disclaim any duty to update any forward-looking statements, all of which are expressly qualified by the statements in this section, to reflect events or circumstances after the date of this annual report. We qualify all of our forward-looking statements by these cautionary statements.

SUMMARY OF RISK FACTORS

Our business involves significant risks. Below is a summary of the material risks that our business faces, which makes an investment in our securities speculative and risky. This summary does not address all these risks. These risks are more fully described below under the heading "*Risk Factors*" in Part I, Item 1A of this Annual Report on Form 10-K. Before making investment decisions regarding our securities, you should carefully consider these risks. The occurrence of any of the events or developments described below could have a material adverse effect on our business, results of operations, financial condition, prospects and stock price. In such event, the market price of our securities could decline, and you could lose all or part of your investment. Further, there are additional risks not described below that are either not currently known to us or that we currently deem immaterial, and these additional risks could also materially impair our business, operations or market price of our securities.

- We have incurred significant losses since inception and expect to incur losses for the foreseeable future and may never achieve or maintain profitability.
- We have never generated revenue from product sales and may never become profitable.
- We will need substantial additional funding. If we are unable to raise capital when needed, we will be forced to delay, reduce, eliminate or prioritize among our research and development programs or future commercialization efforts.
- If preclinical studies or clinical trials of any lead candidates or development candidates fail to demonstrate safety and efficacy to the satisfaction of regulatory authorities or do not otherwise produce positive results (such as we experienced in the Phase 1/2a REWRITE clinical trial of KRRO-110 for AATD), we may incur additional costs or experience delays in completing, or ultimately be unable to complete, the development and commercialization of such development candidates.
- We may not realize the anticipated benefits of our organizational streamlining and workforce reduction..
- The gene editing field and RNA editing in particular is relatively new and is evolving rapidly. We are very early in our research and development efforts and may not be successful in identifying and developing development candidates. It will be many years before we or our collaborators commercialize a development candidate or generate any revenues, if ever. Additionally, other gene editing technologies may be discovered that provide significant advantages over RNA editing, which could materially harm our business.
- RNA editing is a novel technology with limited clinical validation for human therapeutic use. The approaches we take to discover and develop novel therapeutics are unproven and may never lead to marketable products.
- We are very early in our development efforts, and our preclinical studies and clinical trials may not be successful. We have yet to successfully complete clinical development of any development candidate, and any favorable results we have may not be predictive of results that may be observed in later preclinical studies or clinical trials, such as our experience in the Phase 1/2a REWRITE clinical trial of KRRO-110 for AATD. If we are unable to commercialize our development candidates or experience significant delays in doing so, our business will be materially harmed.
- Any development candidates we develop may fail in preclinical or clinical development or be delayed to a point where they do not become commercially viable.
- Because we are developing oligonucleotides, which are considered a relatively new class of drugs, there is increased risk that the outcome of our clinical trials will not be sufficient to obtain regulatory approval.
- If we are not able to obtain or protect intellectual property rights related to any of our lead candidates or development candidates, development and commercialization of our oliognucleotide leads or development candidates may be adversely affected.
- We may not be successful in finding strategic collaborators for continuing development of certain of our development candidates or successfully commercializing or competing in the market for certain indications; and we may not see any benefit from our collaboration agreement with Novo Nordisk, which, as of November 2025, is paused for 12 months.
- The price of our common stock is volatile and fluctuates substantially, which could result in substantial losses for our stockholders.
- Our certificate of incorporation and bylaws and provisions under Delaware law could make an acquisition of us more difficult and may prevent attempts by our stockholders to replace or remove our management.
- Our executive officers, directors and principal stockholders have the ability to control or significantly influence all matters submitted to our stockholders for approval.
- Unfavorable global economic conditions could adversely affect our business, financial condition, results of operations or cash flow.
- Our business may be impacted by macroeconomic conditions, including inflation, rising interest rates and volatile market conditions, and other uncertainties beyond our control, including geopolitical events, such as recent U.S. and Israeli military action in Iran, and effects thereof.

PART I

Item 1. Business.

Overview

We are a biopharmaceutical company with a mission to discover, develop and commercialize a new class of genetic medicines based on editing RNA, enabling the treatment of both rare and highly prevalent diseases. We are generating a portfolio of differentiated programs that are designed to harness the body's natural RNA editing process to effect a precise yet transient change to a single nucleoside (adenosine to an inosine edit). By editing RNA instead of DNA, we are expanding the reach of genetic medicines by delivering additional precision and tunability, which has the potential for increased specificity and improved long-term tolerability. We use an oligonucleotide-based approach and expect to bring our medicines to patients by leveraging our proprietary platform with precedented delivery modalities, including N-acetylgalactosamine, or GalNAc, -conjugated delivery for subcutaneous administration, manufacturing know-how, and established regulatory pathways of approved oligonucleotide medicines. However, the scientific evidence to support the feasibility of developing lead candidates using our RNA editing technology is both preliminary and limited. Moreover, regulators have not yet established any definitive guidelines related to overall development considerations for RNA editing therapies and limited clinical data has been generated to date.

The versatility of RNA editing combined with our OPERA platform broadens the therapeutic target space significantly. The advent of large-scale genome sequencing has progressively revealed causal genetic variation underlying several human diseases, both rare and highly prevalent. Genetic mutations, including single nucleotide variants, or SNVs, implicated in disease have been found to be diverse in nature and can affect the function of genes and their associated downstream biochemical pathways. Data correlating DNA to RNA to disease phenotype have demonstrated that SNVs lead to a loss-of-function or a gain-of-function of the gene. In addition, the majority of SNVs implicated in complex diseases are due to modulation of gene function. By editing RNA to mimic a SNV, we believe we will be able to address unmet patient need by transiently modifying gene expression and the resultant protein function.

As our understanding of genetic drivers of disease has increased, significant advances have been made in technologies designed to introduce specific yet permanent changes at the DNA level to treat diseases. While these DNA editing approaches offer great promise for the treatment of certain rare diseases, they present significant risks from potential permanent adverse "off-target" edits. Additionally, the complex nature of DNA editing drug products presents multiple challenges including lack of efficient delivery to target cells and scalable manufacturing, impeding their application to treat complex highly prevalent diseases of larger patient populations. These potential limitations have spurred exploration of alternative approaches to genetic medicine development, such as RNA editing.

Mammals and other lower species like cephalopods have an endogenous process of modifying single nucleosides on RNA, referred to as RNA editing. RNA editing is a natural physiological process, similar to RNA interference, or RNAi, that occurs in cells, including a mechanism mediated by an enzyme called Adenosine Deaminase Acting on RNA, or ADAR. Our RNA editing approach involves co-opting this endogenous editing system via proprietary engineered oligonucleotides to introduce precise edits to RNA. We iteratively optimize the editing efficiency of our oligonucleotides using a combination of ADAR biology, chemistry and machine learning expertise. Using this approach, we can edit the transcriptome with high efficiency and specificity. The application of such an approach can provide the ability to alter a nucleoside and affect biology in meaningful ways.

As opposed to gene silencing with small interfering RNA, or siRNA, or antisense oligonucleotide, or ASO, gapmers, where oligonucleotides are used to silence and knock-down genes and proteins, we intend to either repair or activate biological pathways by editing RNA. Our pipeline has multiple programs, all of which are focused on modifying proteins to provide clinical benefit. These modification approaches can unlock validated target classes that have historically been difficult to drug, enabling us to pursue a broad range of diseases with potentially large addressable patient populations traditionally out-of-scope for other genetic medicine approaches and current traditional drug modalities. Each of our programs demonstrates the versatility of the oligonucleotide-based RNA editing approach to bring additional precision and tunability to address a broad range of rare and highly prevalent diseases.

- Enabling synthetic rescue through engineering *de novo* versions of existing proteins: A SNV observed in human genetic association studies has the potential to inform how to transiently modify a small amount of native protein. We can generate this *de novo* protein with preferred properties using our RNA editing oligonucleotides. In most cases, 10 – 50% of modified version of the native protein is sufficient to provide significant benefit, rather than needing 100% modification. This synthetic rescue approach is designed to restore cellular function without repairing the primary disease-causing genetic mutation. Our lead program, KRRO-121, exemplifies this approach by engineering a *de novo* version of glutamine synthetase, or GS, that is designed to stabilize the protein and enhance ammonia clearance, overcoming the challenges with a dysfunctional urea cycle.

- Repairing pathogenic variants: A SNV that is a pathogenic G-to-A mutation, leading to an aberrant amino acid on a protein, can be repaired using our RNA editing approach. Such an approach is relevant when the patient population has a heterogenous spectrum of disease manifestations from mild-to-severe, and the willingness and utility of a transient repair of the protein is preferable to a DNA modification. Our next-generation GalNAc conjugated lead candidate targeting patients with AATD exemplifies this approach.
- Activating protein pathways: A single SNV observed in human genetic association studies has the potential to inform how to transiently activate a protein pathway. We can generate this protein transiently using our RNA editing approach with an oligonucleotide, thereby engineering a *de novo* protein with preferred properties. Our longevity and liver health program targeting AMP-activated protein kinase gamma 1 protein, or AMPKγ1, exemplifies this approach.
- Other target classes: There are multiple other target classes that can be addressed such as preventing protein aggregation, selectively modulating ion channels and activating kinases that have been traditionally hard to leverage for developing medicines.

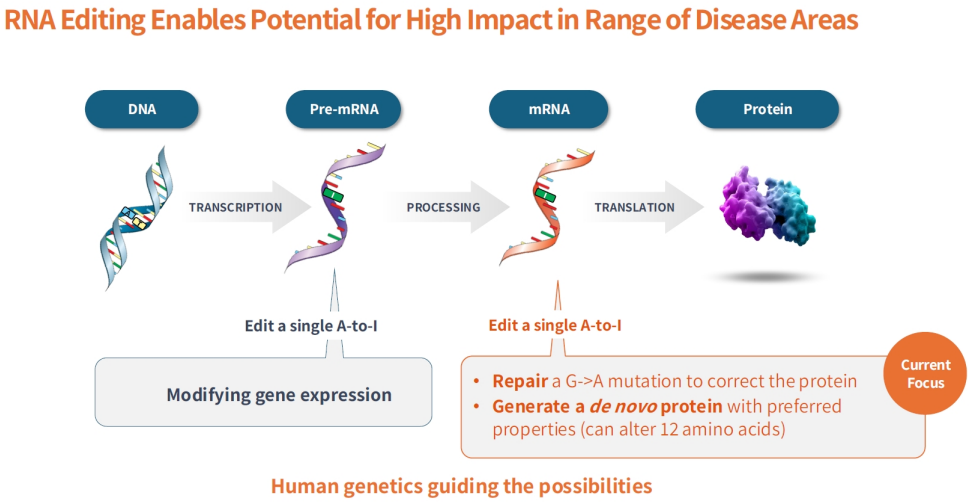


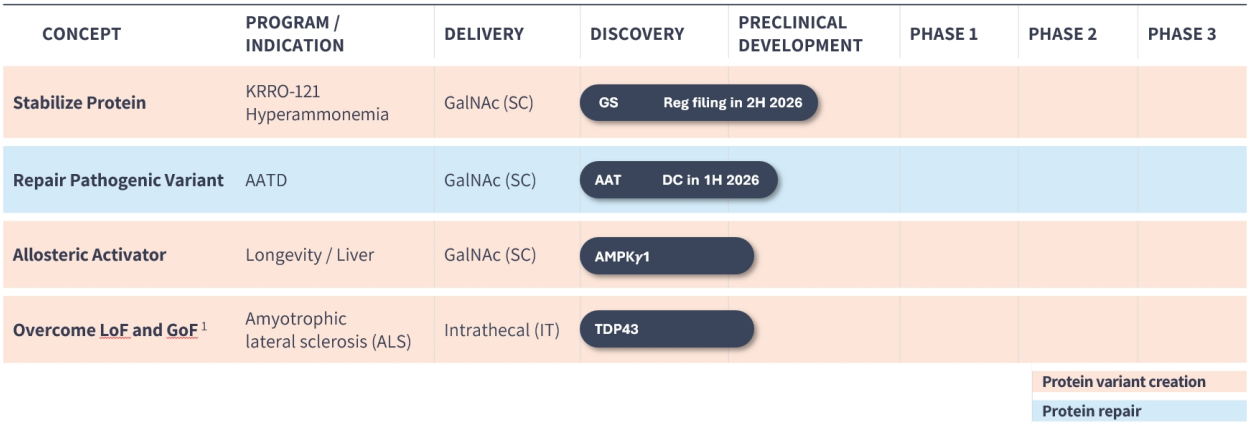
Figure 1: RNA editing, just a single A-to-I nucleoside change, can have profound impact on biological pathways. The applications span a multitude of avenues to impact biology. We are focused on activating and repairing pathways rather than competing with RNA interference technologies.

Our Pipeline

The pipeline chart below demonstrates the breadth of indications, with an initial focus on four wholly-owned programs:

- KRRO-121, our hyperammonemia program, targeting the increased clearance of ammonia in multiple indications;
- Our AATD (GalNAc-conjugated delivery) program targeting the repair of the alpha-1 antitrypsin, or AAT, protein;
- Our longevity and liver health program targeting the activation of AMPKγ1 pathway (GalNAc-conjugated delivery); and
- Our ALS program targeting the creation of a *de novo* variant of TDP-43 (with intrathecal delivery).

We may also have up to two programs partnered with Novo Nordisk, which entered a 12-month pause in November 2025. All of our programs are still in the research or preclinical stage of development and the risk of failure of all of our programs is high.



[1] *De novo* protein variant to prevent toxic gain-of-function, or GoF, with TDP43 aggregation, and continue downstream signaling by overcoming toxic loss-of-function, or LOF.

KRRO-121 – Hyperammonemia Program

We continue to make meaningful advancements across our programs, including KRRO-121 as a potential first-in-class treatment for hyperammonemia that has the potential to address substantial unmet need in patients with poor ammonia control, including those with urea cycle disorders, or UCD, and hepatic encephalopathy, or HE. KRRO-121 is an RNA-editing oligonucleotide conjugated with GalNAc in preclinical development for the potential treatment of UCDs of any mutational background in adults and adolescents. Utilizing our proprietary platform, we designed KRRO-121 to edit the GS mRNA to generate a stabilized, *de novo* variant of GS with enhanced ammonia clearance capacity. This synthetic rescue approach creates a compensating protein rather than repairing the underlying urea cycle defect. By editing GS mRNA to create a *de novo* protein with a single amino acid change that prevents glutamine-induced proteasomal degradation of GS, we aim to maintain consistent ammonia clearance capacity irrespective of the specific enzyme deficiency in patients with UCD and to reduce ammonia levels in patients with HE.

Hyperammonemia, or elevated ammonia in the blood, can lead to neurological impairment that can be potentially permanent, frequent hospitalization, highly restricted diet, elevated infection risk, and additional non-neurological complications. Hyperammonemia can be caused by cirrhosis or urea cycle dysfunction, and clinical studies have shown benefit of lowering ammonia in multiple indications. We believe our approach for treating hyperammonemia has multiple potential advantages:

- Provides a pan-UCD approach addressing multiple UCD subtypes irrespective of their enzyme deficiencies in the urea cycle.
- Direct ammonia control through stabilization of GS protein in the liver.
- Convenient subcutaneous delivery using precedented GalNAc-conjugated technology.
- Potential for reduction in hyperammonemic crises for UCD patients and reduction in HE events for HE patients.

We have generated compelling preclinical data demonstrating proof of concept across multiple RNA editing oligonucleotides targeting GS, including KRRO-121.

- KRRO-121 stabilized GS *in* ornithine transcarbamylase, or OTC, -deficient and argininosuccinate synthase 1, or ASS1, -deficient iPSC-derived hepatocytes, maintaining GS protein levels during ammonia challenge.
- In both OTC-deficient and CPS-1-deficient mice challenged with ammonia, treatment with a mouse-optimized oligonucleotide reduced ammonia, supporting potential to increase protein intake and dietary liberalization.
- In a humanized liver mouse model (PXB), KRRO-121 reduced basal ammonia levels and enhanced ammonia clearance following challenge, with production of stabilized *de novo* GS variant.

- In non-human primates, or NHPs, KRRO-121 displayed >90% delivery to liver, confirmed liver localization with pericentral GS, and no observed changes in liver or kidney function, coagulation, complement, platelets, or cytokines.

Additionally, KRRO-121 represents a significant market opportunity in UCD and HE. There are an estimated 4,200 severe late-onset UCD patients in the United States, or U.S., and 5,100 in the European Union, or EU, and United Kingdom, or UK. UCD patients frequently have ammonia levels greater than 1.5 times the upper limit of normal, leading to increased hyperammonemia risk. Ammonia control is highly challenging in UCD patients today, often requiring nitrogen scavengers plus a strict diet that can lead to malnutrition. In addition to UCD, KRRO-121 has an opportunity to potentially address significant unmet need in HE. There are approximately 2.2 million patients with cirrhosis in the United States, of which approximately 140,000 have severe or recurring HE. Up to 80,000 addressable patients in the United States with severe or recurring HE, high ammonia levels (≥1.5x upper limit of normal), and sufficient liver function may benefit from ammonia-lowering treatment, with an additional 150,000 patients in the European Union and United Kingdom. High ammonia significantly increases hospitalization risk, with greater than 2-fold increase in HE-related hospitalization for addressable HE patients versus all severe or recurring HE patients, and over $10 billion in inpatient charges for HE in the United States each year.

Based on the preclinical data, we believe KRRO-121 has potential to be a best-in-class treatment for ammonia control. We anticipate a regulatory filing to enable commencement of a first-in-human trial in the second half of 2026. The compelling product profile for controlling ammonia is expected to drive strong patient engagement and recruitment. While we believe we can demonstrate many of the key advantages of our development candidate KRRO-121, we are early in our development efforts and not yet certain of the results we may achieve in humans. Such uncertainties include, but are not limited to, the level of ammonia control needed in a target tissue type to achieve a clinical benefit, and associated safety of the *de novo* protein variants we create in humans.

Our AATD Program

We are also developing a next-generation GalNAc-conjugated RNA editing oligonucleotide for the treatment of AATD that has the potential to be disease-modifying and provide a differentiated therapeutic option. Following extensive evaluation of our initial AATD program, KRRO-110, we have strategically pivoted from a lipid nanoparticle, or LNP, based delivery approach to GalNAc-conjugated delivery and made significant improvements on the potency of the next-generation oligonucleotide, to advance a potential best-in-class therapy for AATD patients. We anticipate nominating a development candidate for this program in the second quarter of 2026.

AATD is an inherited genetic disorder that can cause severe progressive lung and liver disease due to a lack of normal AAT protein, with varying intensity based on patient genotype and environmental factors. Patients often develop chronic obstructive pulmonary disorder, or COPD, in the lungs and cirrhosis of the liver, which can result in liver failure or death. There are an estimated 5.5 million individuals with deficiency allele combinations worldwide. The only U.S. Food and Drug Administration, or FDA, -approved treatment for patients with lung manifestations of AATD is augmentation therapy, which utilizes AAT protein purified from pooled human plasma administered weekly by intravenous infusion. Despite being minimally effective and not fully addressing the needs of many AATD patients, augmentation therapy currently represents approximately $1.4 billion in annual sales worldwide, highlighting the significant unmet medical need and commercial opportunity for a superior therapeutic approach.

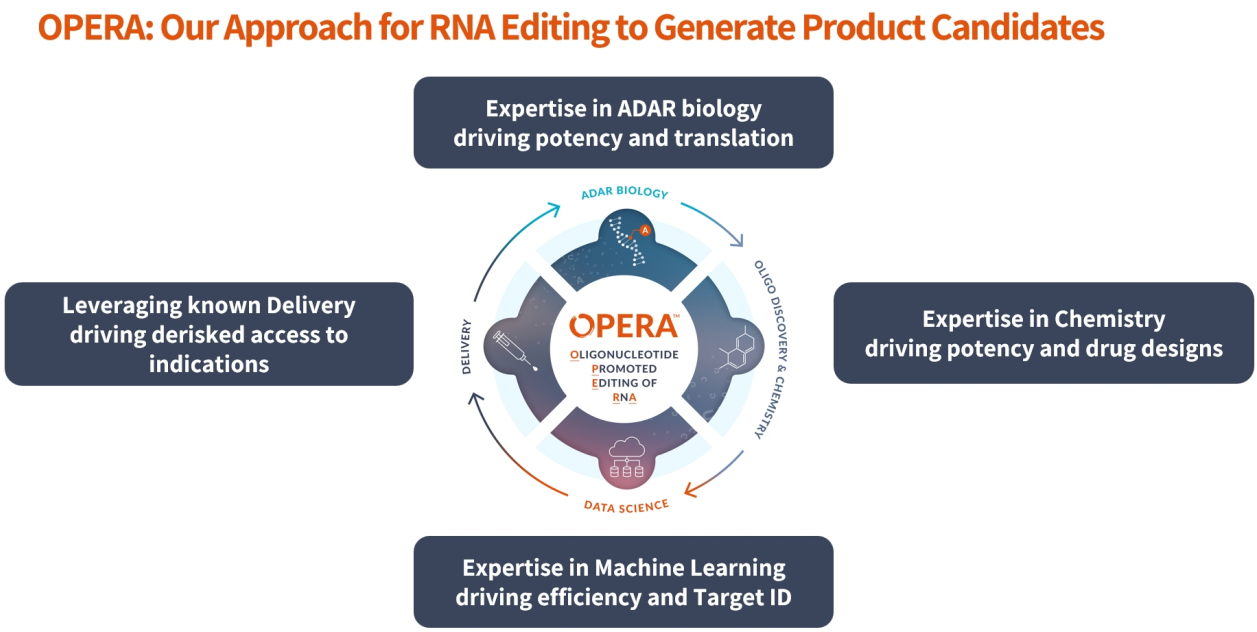
Our next-generation GalNAc-conjugated AATD program utilizes a proprietary RNA editing oligonucleotide specifically designed to leverage endogenous ADAR to make a single base edit in SERPINA1 RNA, correcting the pathogenic G to A SNV that results in the E342K amino acid substitution. This approach is designed to restore the production of normal AAT protein in liver hepatocytes through convenient subcutaneous administration. Our goal is to bring individuals with the Z allele to a phenotype where over 90% of RNA has been modified to produce normal AAT protein, resulting in levels of AAT consistent with individuals in the upper half of the PiMZ genotype and the fully healthy PiMM genotype. We believe the GalNAc-conjugated delivery approach has the potential to offer multiple advantages over our previous LNP-based intravenous approach, including improved potency of the next-generation construct, improved delivery to liver cells using GalNAc conjugation, convenient subcutaneous administration that significantly improves patient experience, and potentially enhanced durability of effect.

Our preclinical studies have demonstrated compelling proof of concept for the GalNAc-conjugated approach to AATD treatment. A GalNAc-conjugated RNA editing lead candidate achieved greater than 90% editing of the SERPINA1 transcript in vivo in a human transgenic mouse model that expresses the human SERPINA1 gene with the Z-mutation. These results demonstrate both the high efficiency and consistency of our next-generation RNA editing oligonucleotide with the GalNAc-conjugated approach in a well-characterized AATD mouse model. Our potential development candidates have also demonstrated

high specificity with minimal off-target effects, supporting the potential for a favorable safety profile in clinical development. The editing efficiency achieved with our GalNAc-conjugated approach represents a significant advancement over our earlier studies and positions our program to potentially deliver transformative outcomes for AATD patients. We anticipate nominating a development candidate among our lead candidates for this program in the second quarter of 2026.

Our OPERA Platform

We have assembled a suite of technologies and capabilities to build our RNA editing platform, Oligonucleotide Promoted Editing of RNA, or OPERA.



OPERA integrates a deep understanding of ADAR biology with expertise in oligonucleotide chemistry, machine learning optimization of oligonucleotides and fit-for-purpose, derisked delivery, all of which are expected to enable rapid iteration of our development candidates across therapeutic targets. OPERA relies on the following key components that enable us to generate the proprietary RNA editing oligonucleotides that form the basis of our differentiated development candidates:

- Expertise in ADAR biology, supported by extensive preclinical research using *in vitro* assays and proprietary mouse models as well as the fundamental work of our scientific advisors and founders to elucidate key insights and know-how of ADAR biology. This enables an understanding of ADAR activity translation among different species and disease states, allowing us to develop novel lead candidates.
- Expertise in oligonucleotide chemistry, enabled by the ability to identify and incorporate chemical modifications to generate a fully modified synthetic oligonucleotide. This increases our ability to generate potent oligonucleotides with drug-like properties, thereby increasing the editing and translational efficiency of our lead candidates.
- Machine learning optimization of oligonucleotides and target identification, driven by data science and computational capabilities for rapid and efficient design and iteration resulting in optimal lead candidates for each disease or disease target being pursued.
- Leveraging known and derisked delivery modalities, made possible by tissue-specific and validated delivery technologies that may potentially derisk our lead candidates and enhance biodistribution, specificity, durability and editing efficiency of lead candidates.

Such lead candidates are single stranded oligonucleotides designed to have high target efficiency and specificity by leveraging the pillars of OPERA. The versatility of RNA editing combined with our OPERA platform broadens the therapeutic target space significantly.

Our Strategy

Our mission is to discover, develop and commercialize a new class of RNA editing therapies capable of improving the lives of patients with rare and highly prevalent diseases. We do this by applying our proprietary RNA editing platform, OPERA, which combines our unique expertise in ADAR biology and oligonucleotide chemistry with machine learning-driven optimization and leveraging existing delivery. Our RNA editing oligonucleotides are designed to harness the body's natural RNA editing processes to make a precise single A-to-I edit on RNA. However, this has primarily been observed in preclinical studies and in a limited number of human subjects in our now terminated REWRITE clinical program investigating KRRO-110, an LNP-encapsulated oligonucleotide as a treatment for AATD.

Our lead program, KRRO-121 for hyperammonemia, utilizes GalNAc-conjugated delivery with a regulatory filing anticipated in the second half of 2026. Our goal is to develop a portfolio of RNA editing oligonucleotides, to help alleviate major unmet medical needs, with best-in-class properties by executing on the following key pillars of our strategy:

- **Develop a pipeline of programs focused on modifying proteins to activate biological pathways using RNA editing.** We are leveraging significant advances in the understanding of the relationship between DNA, RNA and disease phenotypes to develop novel therapeutic approaches across a range of validated biological targets. Our novel class of RNA editing therapeutics combines the precision of genomic therapies with the properties associated with traditional approved drugs, such as titratability and ability to re-dose. Using our approach, in preclinical studies, we have demonstrated the ability to modify protein function or engineer proteins to potentially endow them with desirable properties to treat disease. This approach can unlock validated target classes that have historically been deemed undruggable, enabling us to pursue a broad range of diseases, including those with high prevalence.
- **Advance KRRO-121 as a potentially first-in-class treatment for hyperammonemia, our first example of synthetic rescue.** Our lead program, KRRO-121, has the potential to provide a differentiated therapeutic option for patients with UCD and HE by enhancing ammonia clearance. KRRO-121 can potentially achieve this through the stabilization of GS, specifically in the liver. Our preclinical data has demonstrated proof of concept across multiple *in vitro* and *in vivo* models, including a humanized liver mouse model. KRRO-121 utilizes GalNAc-conjugated delivery for convenient subcutaneous administration. We anticipate a regulatory filing to enable commencement of a first-in-human trial in the second half of 2026. However, regulators have not yet established any definitive guidelines related to overall development considerations for RNA editing therapies.
- **Develop a best-in-class GalNAc-conjugated therapy for patients with AATD.** We are advancing a GalNAc-conjugated RNA editing oligonucleotide for AATD that utilizes subcutaneous delivery to repair the protein malfunction caused in the AATD patients, by editing the SERPINA1 RNA in the liver. Our RNA editing lead candidates for AATD have generated compelling preclinical data demonstrating greater than 90% editing of the SERPINA1 transcript achieved using GalNAc delivery *in vivo,* thus restoring the production of normal AAT protein. We expect to nominate a development candidate for our AATD program in the second quarter of 2026. Depending on the evidence of efficacy and tolerability, we intend to pursue expedited regulatory pathways globally.
- **Continue to optimize and enhance our OPERA platform.** We believe we have built a leading RNA editing company through a combination of our OPERA platform, intellectual property strategy and human capital. Our computationally driven approach enables rapid design and optimization of potential lead candidates. We intend to continue to incorporate new data into these machine learning models to improve their ability to predict editing efficiency and to more expeditiously optimize and nominate new development candidates, although there is no guarantee that this will result in an accelerated development or approval timeline, if at all.
- **Maximize the potential of our OPERA platform through collaborations and strategic partnerships.** We believe the versatility of our OPERA platform has the potential to create transformative genetic medicines for both rare and highly prevalent diseases. To fully realize this potential, we have established and plan to continue to actively seek out innovative collaborations, licenses, and strategic alliances with clinical leaders, academic medical centers of excellence, patient advocacy groups, and pioneering companies, including, for example, our collaboration with Novo Nordisk for up to two partnered programs for cardiometabolic diseases, which entered a 12-month pause in November 2025. Given the versatility and broad potential of our OPERA platform across therapeutic areas, especially

in diseases with high prevalence, we may enter into additional strategic partnerships with external parties that have complementary capabilities to broaden and accelerate access to our RNA editing therapies.

- **Invest in human capital and encourage innovation to maintain a leading position and advance the frontiers of genetic medicines.** We are a mission-driven organization, and we thrive through a strong culture that embodies our core values. We are actively working to rewrite the future of medicine and remain on the cutting edge of science and research by working better together and being dynamically different in employing a diverse team with varied expertise, enabled by kindness, integrity and respect. We have attracted a talented team of industry experts and experienced scientists as part of a high-performing and nimble organization. Our research and development organization is comprised of individuals with relevant expertise in drug development.

Positioned for Value Creation in 2026 and Beyond

We are well positioned to create significant value in 2026 and beyond with multiple anticipated milestones, with multiple anticipated development candidates:

- Regulatory filing for KRRO-121 for hyperammonemia anticipated in the second half of 2026.
- Development candidate nomination for our next-generation GalNAc-conjugated AATD program expected in the second quarter of 2026.
- Continued advancement of our longevity and liver health and ALS programs, with cash runway into the second half of 2028 supporting achievement of these milestones

We believe RNA editing has potential beyond the treatment of rare genetic diseases, and our goal is to apply our OPERA platform to help patients with highly prevalent diseases, including HE.

Expanding the Frontiers of Genetic Medicines: RNA Editing

The advent of large-scale genome sequencing has progressively revealed causal genetic variation underlying several human diseases, both rare and highly prevalent. Genetic mutations, including SNVs, implicated in disease have been found to be diverse in nature and can affect the function of genes and their associated downstream biochemical pathways. Natural genetic variations, revealed by population-level genomic studies, have also been shown to protect against or to increase the risk of disease. Beyond these developments, groundbreaking advances in gene therapy, cell therapy and RNA therapeutics have resulted in several approvals that have transformed the treatment of certain genetic diseases and cancers as well as the prevention of infectious diseases, such as COVID-19. In addition, various DNA editing approaches have been developed that introduce specific genetic changes to DNA to treat diseases. First generation CRISPR-Cas9 DNA editing has demonstrated the potential to knockout pathogenic mutations at the single gene level with several programs in clinical development and the first *ex vivo* DNA editing therapeutic for a rare hematological condition on file at the FDA. Next generation DNA editing approaches have entered the clinic and hold the promise to edit DNA at the single nucleotide level.

Despite these advances, significant risks exist with DNA editing approaches. A key concern is the introduction of unwanted DNA modifications (“off-target” edits), which could have permanent adverse effects such as chromosomal integration and non-specific insertions, deletions and substitutions. Additionally, due to the complexity of a multicomponent DNA editing product, delivery to target cells can be challenging and even more so if there is a need to edit multiple genetic loci. Furthermore, manufacturing is highly complex and expanding to commercial scale remains challenging, specifically for a highly prevalent indication. Given these challenges, DNA editing approaches will likely remain a focus for certain rare diseases, while its ability to treat diseases of high prevalence continues to be limited.

ADAR-mediated RNA editing

RNA editing involves altering a sequence of RNA, which intrinsically has the potential to address some of the limitations of DNA editing. RNA editing mediated by adenosine deaminase acting on RNA, or “ADAR-mediated” RNA editing, has emerged as a differentiated approach that can generate oligonucleotide having features that combine the precision of genomic therapies with the properties commonly associated with current approved drugs such as titratability and ability to re-dose. Importantly, these drug-like characteristics enable ADAR-mediated RNA editing candidates to be potentially safer and target diseases with high prevalence that would be difficult for DNA editing approaches to address.

ADARs are a family of enzymes present inside a cell, that bind RNA. ADARs bind double-stranded RNA structures, and convert a single base of adenosine (A) on RNA, into an inosine (I) that is typically translated as a guanosine (G), using an

enzymatic process. ADAR mediated editing is found at high levels in cephalopods both on the coding and non-coding regions of the RNA. In humans, there are fewer recoding events, and most of the endogenous editing events occur in non-coding regions.

Humans have two known active endogenous ADAR enzymes, ADAR1 and ADAR2. ADAR1 is constitutively expressed and is present in most tissues within the body, whereas ADAR2 is more highly expressed in tissues such as the brain. The ADARs are essential enzymes for normal physiologic function. ADAR-driven RNA editing has been found to be critical for the function of a number of proteins, such as the glutamate ionotropic receptor, which has been found to be almost always RNA-edited in humans. Given ADARs' natural function to catalyze A-to-I edits, this endogenous editing system can be leveraged to make programmed edits to RNA. This ability to introduce programmed highly targeted edits into RNA has the potential to expand the reach of genetic medicines with an ability to modify proteins to achieve a desired function.

Oligonucleotide-based ADAR-mediated RNA Editing

There are multiple therapeutic approaches to utilize ADAR-mediated RNA editing, including synthetic oligonucleotides, engineered ADARs, and Cas-based editing approaches. Our therapeutic approach delivers oligonucleotides to target tissues and cells to introduce precise edits to RNA through recruitment of endogenous ADAR.

Normally, ADARs are recruited to target RNA editing sites through recognition of specific double-stranded RNA structures such as naturally occurring hairpins or loops in endogenous transcripts. Importantly, one can mimic these double-stranded RNA structures by introducing complementary synthetic oligonucleotides into cells. An oligonucleotide can be engineered to mimic the double-stranded RNA structure such that endogenous ADAR is recruited. Using this targeted approach, a site directed specific A-to-I edit can be introduced.

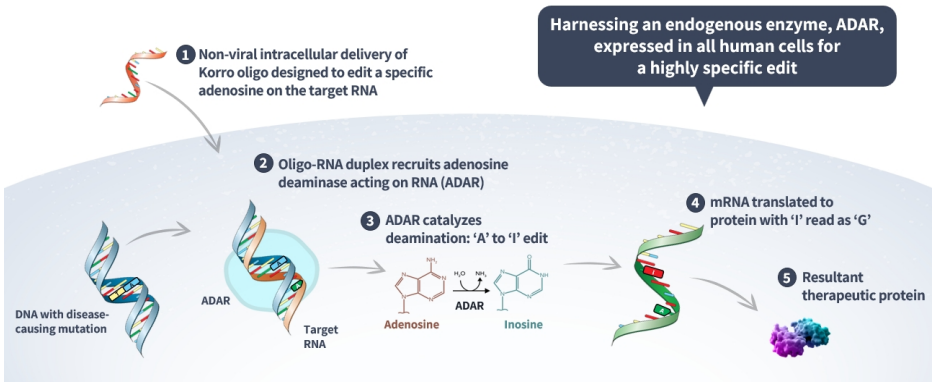


Figure 2: Mechanism of RNA editing using our proprietary platform

Key Advantages of Oligonucleotide-Based ADAR-Mediated RNA Editing as a Therapeutic Modality

Over the last two decades, there has been significant research around and development of oligonucleotide-based therapeutics, including modalities such as siRNA and ASOs, that has led to the approval of multiple drugs. Specifically, developments in oligonucleotide chemistry, delivery technologies, tolerability, and manufacturing, combined with better defined regulatory pathways, have led to the approval of oligonucleotide-based therapeutics specific for multiple different tissue types. We believe that oligonucleotide-based ADAR-mediated RNA editing is a groundbreaking technology that is ideally suited to expand the application of genetic medicines for indications that DNA editing is unable to address. We differentiate our approach from DNA-editing by leveraging the know-how from approved oligonucleotide therapies in development of our lead candidates.

While we believe we can demonstrate many of the key advantages of RNA editing, including specificity, delivery, tolerability, manufacturing, and regulatory, we are very early in our development efforts and not yet certain of the results we may achieve. Such uncertainties include but are not limited to the level of editing efficiency needed in a target tissue type to achieve a clinical benefit, and associated safety of our edits in humans.

- Specificity: Oligonucleotide-based ADAR-mediated RNA editing enables highly precise edits at the target single nucleotide level on the RNA with low risk of off-target or bystander edits, addressing a key safety concern associated with other DNA editing approaches that carry the risk of permanent insertions and deletions as well as chromosomal

integration. Using synthetic oligonucleotides, appropriate chemical modifications can be introduced to increase the overall specificity and targeting efficiency for the site directed RNA editing. The OPERA oligonucleotides are designed to be highly site selective with minimal to no bystander effects or halo effects. To assess global off-target editing, we use a bulk RNA-seq approach to detect base frequency changes at potential off target sites between control and treated samples. We sequence target amplicons via next-generation sequencing and assess potential A to G editing at all sites across the transcript. In preclinical *in vivo* studies, we have shown that off-target RNA editing using our technology is negligible and transient.

- Delivery: Oligonucleotide-based ADAR-mediated RNA leverages well-established, clinically precedented delivery approaches used in other approved products, such as ligand-based approaches. One example of a well-established and clinically validated ligand-based delivery approach is GalNAc delivery of oligonucleotides, which provides highly specific and effective delivery to hepatocytes with improved durability and enables convenient subcutaneous administration. Multiple FDA-approved products utilize GalNAc-conjugated delivery, including GIVLAARI and OXLUMO.
- Tolerability: ADAR-mediated RNA editing has a low risk of immunogenicity and can potentially lower off-target editing events resulting in an improved tolerability profile compared to DNA editing approaches. The lower risk of immunogenicity enables the ability to re-dose patients if required, a significant limitation of editing approaches that utilize viral vectors and bacterial Cas systems that carry a higher risk of immunogenicity. The transient and reversible nature of ADAR-based editing confers an ability to modify or cease dosing as needed.
- Manufacturing: Reliance on endogenous ADAR enzymes and the simple drug constructs of oligonucleotide-based therapies has significant advantages over the complexities associated with the manufacturing and delivery of multi-component exogenous complexes used in DNA editing. Manufacturing processes for oligonucleotide-based therapies are well established, cost efficient and scalable to effectively address highly prevalent indications.
- Regulatory: Precedence of marketed oligonucleotide drugs with similar size and types of chemical modifications that therapeutic RNA editing lead candidates exhibit. Guidance for the development of oligonucleotide therapeutics by global agencies, including the FDA, provides for an established pathway for the approval of this class of therapeutics. However, regulators have not yet established any definitive guidelines related to overall development considerations for RNA editing therapies and limited clinical data has been generated to date.

Our OPERA – Oligonucleotide Promoted Editing of RNA – Platform

We believe we are the leading RNA editing company and have assembled a suite of technologies and capabilities called OPERA, Oligonucleotide Promoted Editing of RNA, to generate differentiated RNA editing lead candidates. A key challenge in developing a therapeutic approach for site-directed RNA editing is to design and optimize oligonucleotides that can drive high-efficiency. This efficiency is facilitated both by the ability to repurpose and optimize oligonucleotide constructs based on existing methods as well as utilizing computational methods to innovate on chemistry and design of the constructs. Our oligonucleotides capable of forming Watson-Crick base pairing with the target RNA and efficiently inducing the deamination reaction by endogenously recruiting ADAR enzymes.

We have assembled a suite of technologies and capabilities to build our RNA editing platform, Oligonucleotide Promoted Editing of RNA, or OPERA.

OPERA relies on the following key components that enable us to generate our differentiated RNA editing oligonucleotides:

- Expertise in ADAR biology: Our insights and know-how of ADAR biology allow us to design oligonucleotides that efficiently recruit ADARs and promote deamination while maintaining selectivity and stability. RNA editing is dependent on endogenous ADAR expression levels and requires expertise in the physiological role of ADAR, its cell and tissue distribution, the factors that lead to efficient recruitment of ADAR to targeted sites and any consequences that may arise from co-opting ADAR from its normal function.

- We have found no evidence that our RNA editing oligonucleotides interfere with endogenous RNA editing occurring naturally in a cell. ADAR naturally edits thousands of targets for a variety of reasons. We have looked at natural editing sites and chose AJUBA, COG and COPA as they have shown to be edited by ADAR to different degrees. In this experiment outlined in Figure 3, ZZ HLC cell lines were transfected with RNA editing oligonucleotides targeting two different genes. The assays were evaluated for % editing for Target A and Target B sites as well as natural editing sites in COG, COPA and AJUBA. As shown below, natural editing sites remained unaffected compared to the

control group, demonstrating that our RNA editing oligonucleotides are not likely to have any effect on the degree of editing of native RNA molecules.

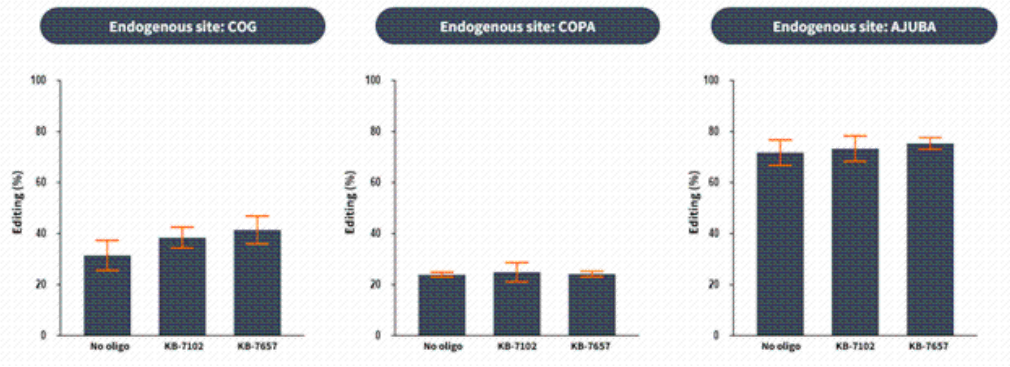


Figure 3. Our RNA editing oligonucleotides show no evidence of interference with endogenous ADAR editing as demonstrated at the above endogenous sites

- Expertise in oligonucleotide chemistry: We have a differentiated ability to create oligonucleotide designs capable of efficiently recruiting endogenous ADAR with chemical modifications that direct high specificity editing. Our oligonucleotides increase the potency and durability of ADAR activation, thereby increasing the editing efficiency and translational efficacy of our RNA editing oligonucleotides. We have identified critical structural, sequence, and chemistry requirements for our RNA editing oligonucleotides that drive efficient recruitment of ADARs and subsequent A-to-I editing. Examples of differentiation include oligonucleotide length for efficient ADAR recruitment, use of precedented and proprietary chemistries within the oligonucleotide, as well as backbone chemistries that provide improved metabolic stability. Additionally, we combine this with 2' modification chemistries that, together, create oligonucleotides with improved editing efficiency and durability. As RNA editing is an emerging technology, there is a lack of guiding principles to design site-selective RNA editing oligonucleotides. To address this knowledge gap, we developed a robust in-house process using our high-throughput cell-based assay and machine learning capabilities to design and synthesize up to approximately 1,200 oligonucleotides per month and generate up to 6,000 assay data points for any given target.
- Machine learning optimization of oligonucleotides and target identification: We have built data science capabilities and a dedicated team to extract lessons from existing and newly generated experimental data to expeditiously and efficiently design and optimize RNA editing oligonucleotides. Our proprietary machine learning models have been trained to accurately predict oligonucleotide structure and observed levels of editing. We have been able to demonstrate that these models are able to make accurate editing predictions even for previously unseen chemical modifications demonstrating their generalizability across targets. We have demonstrated the utility of our machine learning models through an increase in overall editing efficiency of new RNA editing oligonucleotides. In some cases, we have been able to go from design-to-data in as little as five weeks. However, there is no guarantee that this will result in an accelerated development or approval timeline, if at all.

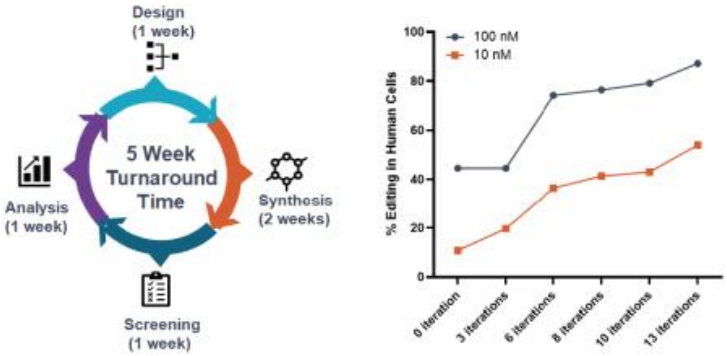
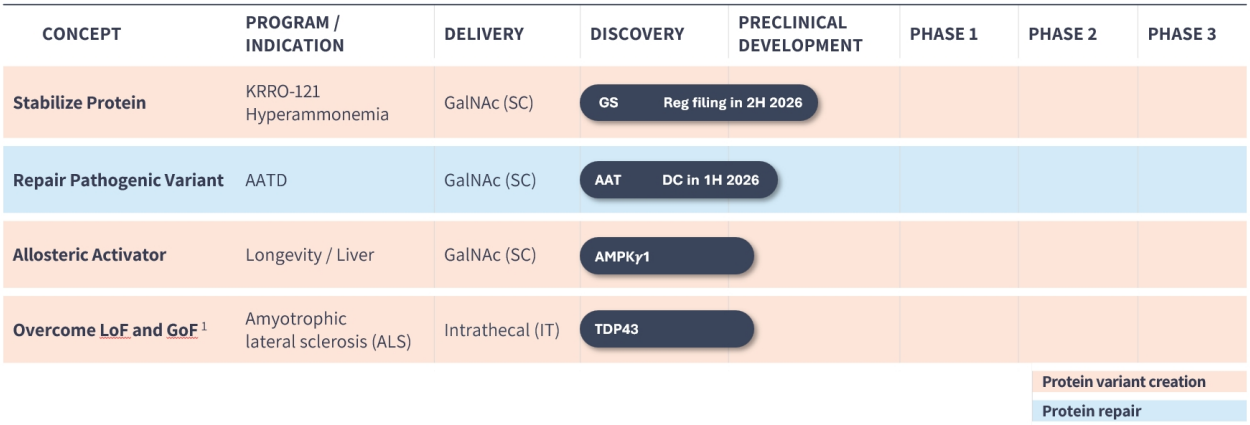


Figure 4. We have shown our ability to rapidly iterate RNA editing oligonucleotides to maximize editing efficiency

- Structural modeling is another tool that complements our ability to increase the efficiency of our RNA editing oligonucleotides. Detailed structural modeling includes shape, size and orientation requirements that can lead to successful deamination at the editing site. These aspects have an important impact on our ability to optimize RNA editing oligonucleotides. As an example, a modification predicted by structural analyses led to a conformational change that was shown to improve editing efficiency in the coding region of the Target A *in vivo*.
- Leveraging known delivery modalities: Our RNA editing oligonucleotides utilize short synthetic oligonucleotides, which we believe can be efficiently delivered using technologies such as GalNAc, which is well established and clinically validated and has been developed for precedented modalities such as siRNAs and ASOs. GalNAc has optimal characteristics suited for a given therapeutic application, and we believe has the potential to derisk our lead candidates. Using RNA editing oligonucleotides, we achieved greater than 50% editing in vivo utilizing a ligand-based GalNAc conjugate delivery approach. Ligand-based approaches (e.g., GalNAc for liver hepatocytes) can also be used for effective delivery and to improve durability with OPERA's RNA editing oligonucleotides, which we have also evaluated in preclinical *in vivo* models. In contrast to treatments targeting liver hepatocytes where there is a need for a delivery system, our RNA editing oligonucleotides have been delivered intrathecally to the central nervous system without a need for any delivery system in preclinical mouse models. Thus, our choice of delivery system is a fit-for-purpose model that is dependent on the oligonucleotide design as well the suitability for the indication and tissue localization of the target.

Our Pipeline Demonstrates the Versatility of the OPERA Platform

We are advancing a broad pipeline of four programs that are wholly owned and demonstrate the versatility of our OPERA platform. We also have the opportunity to advance up to two programs under our collaboration with Novo Nordisk, which entered a 12-month pause in November 2025. Our most advanced program, KRRO-121 for hyperammonemia, is advancing toward a regulatory filing anticipated in the second half of 2026. Our AATD program is progressing with a next-generation GalNAc-conjugated candidate, with development candidate nomination expected in the second quarter of 2026. All of our programs are in the research or preclinical stage of development. The risk of failure of all of our programs is high.



[1] *De novo* protein variant to prevent toxic GoF with TDP43 aggregation and continue downstream signaling by overcoming toxic LOF

Approximately 85% of the human proteome has historically been considered undruggable through traditional therapeutic modalities as many proteins lack defined small molecule binding sites or are inaccessible by biologics. The versatility of RNA editing, combined with our OPERA platform, addresses a meaningful portion of the undruggable human proteome and broadens the target space. Our target identification and selection for programs is based on strong genetic evidence implicating each target in its disease pathology.

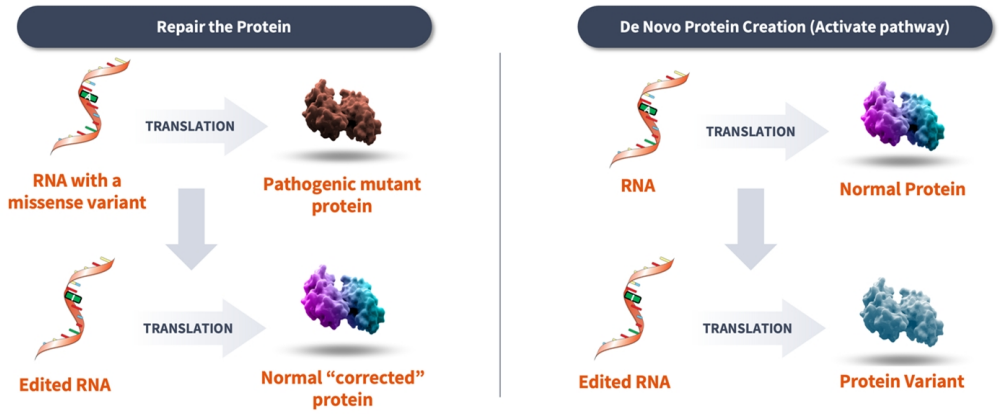


Figure 5: Applications of RNA editing are broad and can be applied in multiple ways to generate a de novo protein with enhanced and augmented properties by just modifying a single amino acid through RNA editing.

Our initial focus is to make edits to the coding region of a transcriptome. Making changes post-transcriptionally, after the mRNA has been created and prior to the protein being translated, provides an exquisite, selective approach for modifying proteins. In preclinical studies, we have demonstrated that single RNA changes can stabilize proteins, disrupt protein-protein interactions, prevent protein aggregation, selectively modulate an ion channel and selectively activate a kinase. These modification approaches have the potential to unlock validated target classes that have historically been difficult to drug, enabling us to pursue a broad range of diseases, including those with high prevalence and large market opportunities.

Stabilize Protein: We are using OPERA to engineer protein stability and enable synthetic rescue. Enabling synthetic rescue provides a novel modality to target intracellular proteins. Our lead program, KRRO-121, exemplifies this synthetic rescue approach by engineering a *de novo* GS protein with a single amino acid change that is designed to prevent glutamine-induced proteasomal degradation, thereby maintaining ammonia clearance capacity. This approach creates a protein that is engineered to retain full enzymatic activity while resisting the natural degradation pathway, highlighting the broad capabilities of what our OPERA RNA editing platform can accomplish in driving biological change. By focusing specifically on hepatocytes, and delivering our RNA editing oligonucleotides via a GalNAc conjugate, we have the ability to provide control over the cell types on which the GS is stabilized, thereby enhancing the safety profile of the candidate.

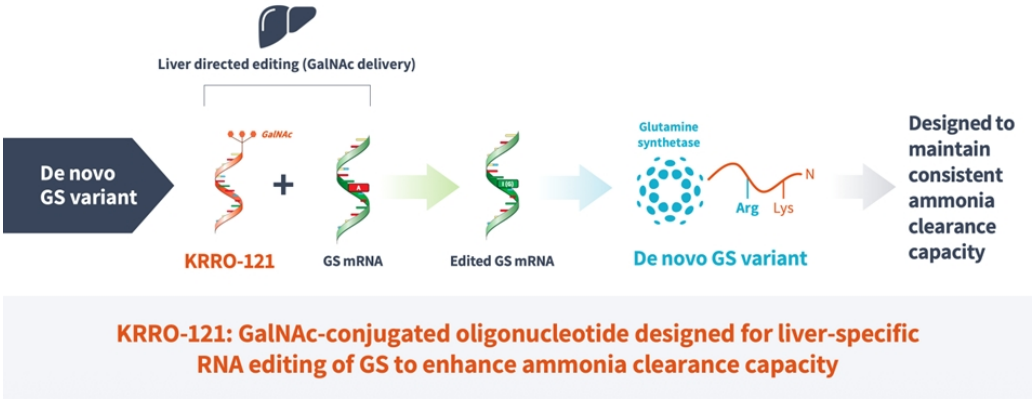


Figure 6. KRRO-121 introduces a single amino acid change in GS to enhance ammonia clearance

Repairing pathogenic variants: Our OPERA platform enables the development of RNA editing therapies that can repair SNVs on RNA to express normal proteins through the introduction of precise genetic changes without creating permanent changes to the genome. These normal proteins can be uniquely expressed at desired levels and duration to address both rare and

highly prevalent diseases caused by a pathogenic SNV. This approach is especially relevant when the same underlying genetic SNV manifests in a broad disease phenotype from mild to severe forms of the disease.

Our program for AATD addresses a single genetic SNV in the SERPINA1 gene that causes the development of AAT deficiency, which has a high unmet medical need and for which there are no disease modifying treatment options. The disease manifests with a heterogenous population having both liver and lung pathologies. By specifically editing a single nucleotide, the normal synthesis of AAT is restored, resulting in secretion of normal AAT to levels that are predicted to protect the lung from further decline in function. The correction of a subset of AAT produced also prevents aggregation of AAT protein in the liver, thereby potentially alleviating damage to the liver.

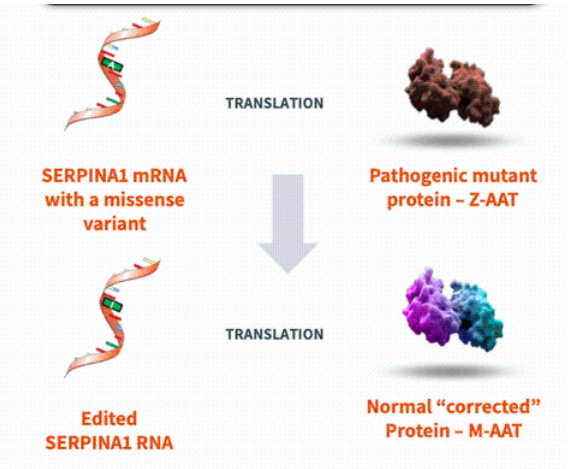


Figure 7: A glutamic acid was converted to a lysine with a single RNA edit, leading to the correction of the AAT protein in patients with AATD with a at least a single Z-allele

Other Target Classes: In addition to engineering protein stability and repairing proteins, we are also advancing lead candidates to selectively activate intracellular kinases in the liver and in the central nervous system to prevent protein aggregation within neuronal cells.

Rather than treating late-stage disease, we are focused on extending organ health-span, or longevity. The three fundamental reasons as to why organs age are: metabolic dysfunction, oxidative stress, and inflammation accumulation. AMPK, when activated, inhibits anabolic pathways like lipogenesis and protein synthesis, activates catabolic pathways including fatty acid oxidation and autophagy, and regulates glucose homeostasis by enhancing insulin sensitivity. The γ1 subunit—AMPKγ1—represents the optimal liver therapeutic target because of its hepatocyte enrichment. Our longevity and liver health program targeting AMPKγ1 in the liver exemplifies our kinase activation approach, where a single RNA edit is designed to activate a master metabolic regulator with the goal of restoring metabolic status and improving liver function.

In addition to our longevity and liver health program, we have been focused on creating a *de novo* version of a normal protein that, under certain disease states, can prevent the aggregation of the native version, while preserving the native protein's intrinsic function. This is a therapeutic approach that has the potential to provide a differentiated therapeutic option over knocking down or silencing the protein through alternate mechanisms. Intracellular protein aggregation is a cause of multiple diseases across the body. Specifically in neurodegenerative diseases, accumulation of specific proteins within neurons are pathogenic including Alzheimer's disease, Parkinson's disease, and ALS. In pathological conditions, such as ALS, TAR DNA-binding protein 43, or TDP-43, is depleted from the nucleus and accumulates as protein aggregates in the cytoplasm in hyperphosphorylated, ubiquitinated, and cleaved forms. These aggregates are observed in more than 90% of ALS patients. A single RNA edit to TDP-43 transcript is predicted to lead to the synthesis of a *de novo* protein that does not aggregate and preserves its normal function. Given TDP-43 is essential for neuronal health, knocking down the protein could be detrimental.

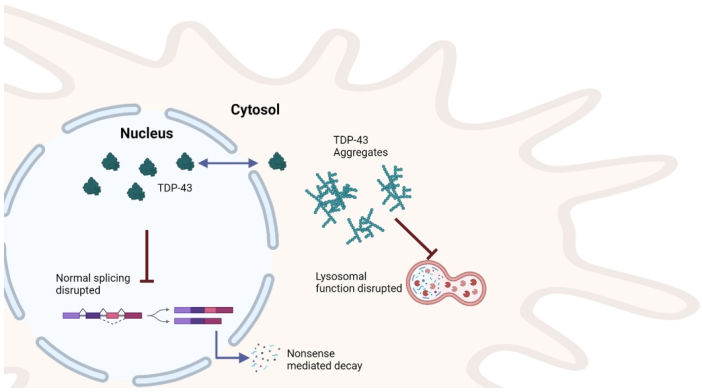


Figure 8. Our lead candidates can reduce pathogenic aggregation of undesirable proteins

We believe that the elegance and versatility of our RNA editing approach will enable a robust pipeline of potentially disease modifying development candidates to treat diseases previously unattainable by genetic medicine approaches. While the above examples demonstrate the breadth of applications enabled by OPERA, we believe our RNA editing approach will bring the first genetic medicine to address the complex genetic underpinnings of highly prevalent diseases.

Our Hyperammonemia Program: KRRO-121 – Stabilizing Glutamine Synthetase to Clear Ammonia

Our development candidate, KRRO-121, is a potential first-in-class treatment for hyperammonemia that could address substantial unmet need in patients with poor ammonia control, including those with UCD and HE. KRRO-121 is an RNA-editing oligonucleotide conjugated with GalNAc to deliver the construct specifically to the liver. Utilizing our proprietary OPERA platform, KRRO-121 is designed to generate a stabilized, *de novo* variant of GS with enhanced ammonia clearance capacity.

There are an estimated 4,200 severe late-onset UCD patients in United States, and 5,100 in the European Union and United Kingdom, and there are approximately 80,000 addressable patients in the United States with severe or recurring HE, high ammonia levels (≥1.5x upper limit of normal), and sufficient liver function may benefit from ammonia-lowering treatment, with approximately an additional 150,000 patients in the European Union and United Kingdom.

In addition to the inherent benefits of ADAR-based RNA editing described earlier, we believe our approach for potentially treating hyperammonemia has additional potential advantages:

- Provides a pan-UCD approach addressing multiple UCD subtypes irrespective of their enzyme deficiencies in the urea cycle.
- Stabilization of GS protein specifically in the liver.
- Convenient subcutaneous delivery with the potential for >once in 2-week delivery using precedented GalNAc-conjugated technology.
- Potential for additional benefits including a reduction in hyperammonemic crises and diet liberalization for UCD patients, and a reduction in HE events for HE patients.

We have generated compelling preclinical data demonstrating proof of concept for stabilizing GS using mouse surrogate compounds as well as for KRRO-121 in human systems. KRRO-121 maintains GS protein levels during ammonia challenge in OTC-deficient and ASS1-deficient iPSC-derived hepatocytes. In OTC-deficient mice challenged with ammonia, treatment with a mouse-optimized oligonucleotide reduced ammonia, supporting the potential to both maintain ammonia levels as well as the potential to increase protein intake and dietary liberalization in patients with UCD. In CPS-1 deficient mice, ammonia was reduced post-ammonia challenge, with nonsignificant increase in plasma glutamine levels. In a humanized liver mouse model (PXB), KRRO-121 reduced basal ammonia levels and enhanced ammonia clearance following challenge, with production of stabilized *de novo* GS variant. In NHPs, KRRO-121 displayed >90% delivery to liver, confirmed liver localization with pericentral GS, and no observed changes in liver or kidney function, coagulation, complement, platelets, or cytokines.

Based on the preclinical data, we believe KRRO-121 has potential to be a first-in-class treatment for ammonia control. We anticipate submitting a regulatory filing to enable commencement of a first-in-human trial in the second half of 2026. The compelling product profile for controlling ammonia is expected to drive strong patient engagement and recruitment. While we

believe we can demonstrate many of the key advantages of RNA editing, we are very early in our development efforts and not yet certain of the results we may achieve. Such uncertainties include, but are not limited to, the level of editing efficiency needed in a target tissue type to achieve a clinical benefit, and associated safety of our edits in humans.

Hyperammonemia Overview

Ammonia is a toxic byproduct of protein metabolism. The body clears ammonia through two complementary pathways: the urea cycle, which is expressed primarily in the liver and converts ammonia to urea for excretion, and the GS pathway, which is expressed in many tissues including the liver, brain and muscle, and converts ammonia and glutamate into glutamine.

Hyperammonemia, characterized by elevated levels of toxic ammonia in the blood, is a life-threatening condition resulting from the body's diminished clearance capacity. When this clearance is compromised, ammonia accumulates systemically, driving pathology across multiple disease states. High ammonia levels are directly linked to severe clinical outcomes. The pathology of hyperammonemia manifests through:

- **Neurological Impairment:** Elevated ammonia is neurotoxic, leading to cognitive decline, encephalopathy, and potentially permanent brain damage.
- **Systemic Complications:** Beyond the brain, hyperammonemia is associated with elevated infection risks and other non-neurological complications.
- **Severe Lifestyle Restrictions:** Patients currently face highly restricted diets to limit protein intake, which can paradoxically lead to malnutrition and metabolic instability.
- **High Healthcare Utilization:** Uncontrolled ammonia drives frequent, costly hospitalizations.

Glutamine Synthetase and its function

GS is an enzyme primarily responsible for clearing toxic ammonia from the body. It catalyzes the condensation of glutamate and ammonia to form glutamine. This reaction is a critical, complementary pathway to the urea cycle for detoxifying ammonia. While the urea cycle is expressed primarily in the liver, GS is expressed in many tissues, including the liver, brain, and muscle. GS plays a "scavenging" role, in addition to the urea cycle, to prevent the ammonia from staying in systemic circulation. The stability and activity of GS are tightly regulated by the levels of its product, glutamine. When glutamine levels rise, it drives the degradation of GS protein through known mechanisms. This degradation mechanism involves the acetylation of key N-terminal lysine residues on the GS protein, which tags it for proteasomal degradation. This creates a feedback loop where high glutamine leads to reduced GS levels, diminishing the body's ammonia clearance capacity. Conversely, when glutamine is low, GS remains stable (without lysine acetylation) to maximize ammonia clearance.

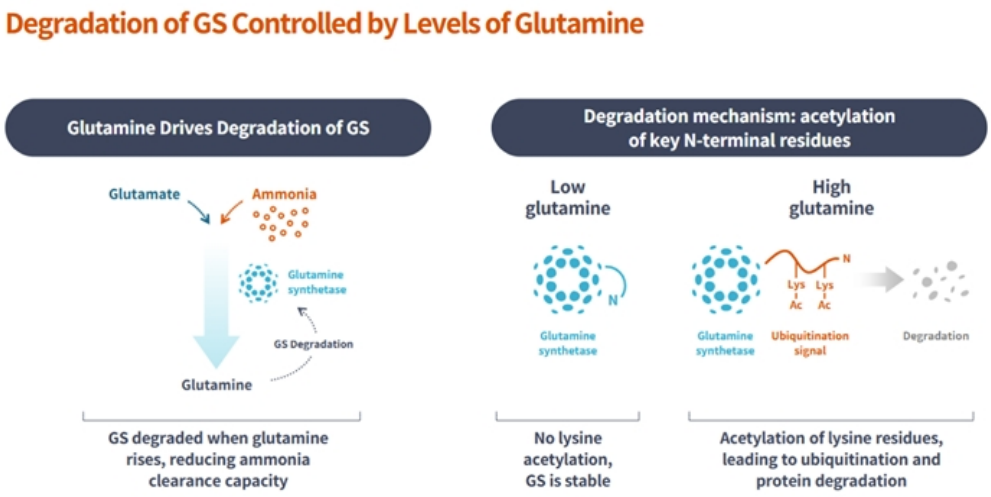


Figure 9. Depicts the glutamine-mediated feedback regulation of GS protein stability, illustrating how elevated glutamine levels trigger degradation of GS, thereby modulating the body's ammonia clearance capacity.

Urea Cycle Disorders

UCDs are a group of severe, inherited metabolic diseases caused by mutations in the genes that encode one or more of the eight enzymes and transporters necessary to convert ammonia into urea. The inability of the body to properly metabolize ammonia leads to the accumulation of toxic systemic levels in circulation, ultimately resulting in severe health outcomes, such as neurologic disability, seizure and death. UCDs occur across all age groups, from infants to adults, and mild symptoms may go unnoticed until a stressor, such as illness, surgery, protein consumption or environmental stress, overwhelms compensatory functions, resulting in hyperammonemic crisis. The incidence of UCDs in the United States is estimated to be approximately one in 35,000 births. The most common UCD, accounting for approximately 60% of UCD diagnoses, is OTC deficiency. The next two most common genetic subtypes are caused by mutations in the genes coding for the enzymes argininosuccinate lyase, or ASL, and ASS1, affecting approximately 16% and 14% of UCD patients, respectively.

There are approximately 6,500 UCD patients in the United States, of which approximately 4,600 are post-neonatal onset and approximately 4,200 are severe late-onset patients who we believe could benefit from pharmacological therapy. We estimate an additional approximately 5,100 addressable patients exist in the European Union and United Kingdom. There are no FDA-approved, disease-modifying therapies to treat the most prevalent UCDs. The standard of care is supportive in nature and intended to reduce the frequency of, but not eliminate, hyperammonemic crises. Current protocols for patients involve strict adherence to a low-protein diet along with the prophylactic use of nitrogen scavenger agents, which carry an onerous pill regimen and significantly diminish the quality of life for patients. Despite these measures, 20% to 25% of patients experience breakthrough hyperammonemic crises. Liver transplantation is the only definitive treatment option.

Current standard of care for all UCD subtypes are drugs that fall in the class of nitrogen scavengers. These include Sodium phenylbutyrate (NaPBA, Buphenyl®) and Glycerol phenylbutyrate (GPB, Ravicti®), both of which are prodrugs of phenylacetic acid, which is converted to phenylacetyl glutamine and excreted in urine. Both the approved products are an oral suspension taken three times a day. The current approved products have the potential to control ammonia levels in UCD patients; however, it is challenging for multiple reasons including compliance in school age kids and adolescents, severe dietary restrictions where the diets sometimes do not resemble food, and both drugs having a narrow therapeutic index despite the need to take it multiple times a day.

Hepatic Encephalopathy

HE is a brain dysfunction caused by liver insufficiency and/or portal systemic shunting. Because the damaged liver in cirrhosis cannot function normally, neurotoxins such as ammonia are inadequately removed from systemic circulation and travel to the brain, where they affect neurotransmission. This can cause episodes of HE, which may present as alterations in consciousness, cognition, and behavior that range from minimal to severe. Overt HE occurs in 30% to 40% of patients with

cirrhosis at some point during the clinical course of their disease. As the burden of chronic liver disease and cirrhosis is increasing, the frequency of HE is also increasing.

There are approximately 2.2 million patients with cirrhosis in the United States, of whom approximately 140,000 experience severe or recurring HE. We estimate that up to approximately 80,000 of these patients who have high ammonia levels and sufficient liver function could potentially benefit from an ammonia-lowering treatment such as KRRO-121. We estimate an additional approximately 150,000 addressable patients in the European Union and United Kingdom. Current standard of care includes rifaximin and lactulose, which reduce ammonia production by gut bacteria but do not directly address ammonia clearance capacity. The unmet need, like UCD patients, is very high. The current standard of care does not reduce ammonia to levels that is needed, drugs approved for UCD are not used in HE patients as they are not approved and/or the compliance in HE patients is challenging given all of the other drugs needed. HE is also not prioritized for a liver transplant. In addition, the healthcare utilization of these patients is one of the highest for patients with liver disease, making the unmet need high both from a medical and pharmacoeconomic standpoint.

Alternative Treatments in Development for UCD and HE

The treatment landscape for UCD remains an area of active investigation, with multiple modalities in clinical development. Gene therapy and gene editing approaches attempt to deliver a functional copy of the deficient urea cycle gene, most notably OTC. Given the inherent risks associated with DNA-based approaches, both these approaches would likely be most applicable for only the most severe patients, and clinical development is presently limited to only those with OTC deficiency. An mRNA-based approach to deliver functional mRNA to hepatocytes via LNPs has also been tested in patients. However, the requirement for repeated intravenous dosing and the potential for immune responses to the delivery vehicle may limit long-term feasibility and restrict patient independence.

Our approach has distinct potential advantages over these alternative treatments in development, including:

- Pan-UCD applicability with potential to address all subtypes regardless of genotype.
- Improved ammonia control complementary to the existing standard of care.
- Transient, redosable, and titratable approach with convenient subcutaneous administration.

For hepatic encephalopathy, the pipeline remains limited and has faced multiple recent setbacks. Approaches targeting ammonia removal have shown signs of efficacy in early-stage trials, but none appear to be in active clinical development. Microbiome-based approaches have also been tested, but to date, none have successfully progressed through late-stage clinical development for the treatment of HE, and there is limited evidence supporting ammonia-lowering effects of these approaches.

Our Differentiated Approach: Engineering a Stable GS Variant Through Synthetic Rescue

KRRO-121

KRRO-121 exemplifies our synthetic rescue approach, in which a targeted mRNA edit is introduced to compensate for the functional deficiency caused by a primary disease-causing mutation. Rather than attempting to repair the underlying genetic defect in the urea cycle, KRRO-121 is designed to leverage endogenous ADAR to make a single nucleoside edit to GS mRNA, corresponding to a single amino acid change, thereby creating a *de novo* GS variant that is designed to bypass the degradation vulnerability and restore ammonia clearance capacity. Under normal physiological conditions, GS is subject to glutamine-induced feedback degradation: when glutamine levels rise, key N-terminal lysine residues on GS are acetylated, leading to ubiquitination and proteasomal degradation of the enzyme. This degradation reduces the cell's capacity to clear ammonia precisely when ammonia clearance is most needed. The modification introduced by KRRO-121 replaces a lysine residue with an arginine, which is resistant to acetylation and therefore resistant to glutamine-induced degradation. The resultant *de novo* GS protein is intended to retain full enzymatic activity but resist proteasome-mediated degradation, potentially providing sustained ammonia detoxification capacity regardless of the specific UCD enzyme deficiency. This synthetic rescue strategy is engineered to enable KRRO-121 to address hyperammonemia through a pathway independent of the urea cycle, rather than attempting to repair the specific enzyme deficiency. This approach is supported by human genetic evidence. Published genetic studies have identified

patients with start-loss variants in GS that result in loss of N-terminal lysine residues, leading to stabilized GS protein and stable enzymatic activity.

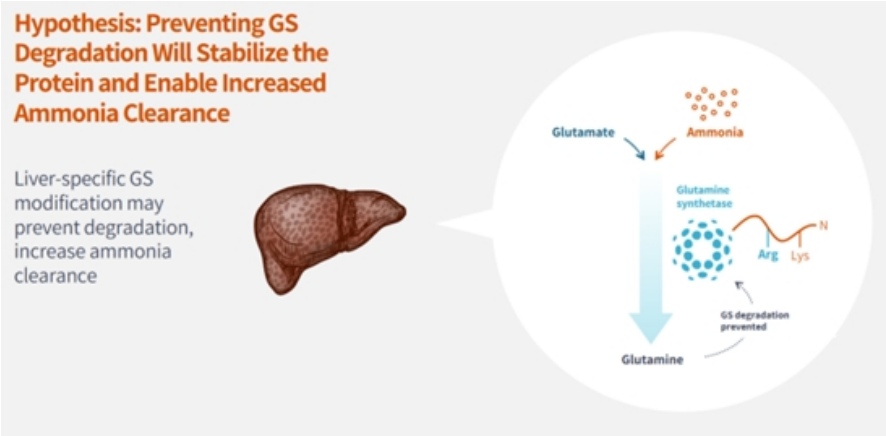


Figure 10. Depicts KRRO-121's lysine residue replacement to create a stabilized de novo GS variant that resists glutamine degradation, intended to maintain ammonia clearance.

We believe our approach has multiple potential advantages:

- **Pan-UCD approach through synthetic rescue:** By enhancing ammonia clearance through a pathway independent of the urea cycle, KRRO-121 has the potential to benefit patients with UCD regardless of the specific enzyme deficiency, including OTC, ASL, ASS1 and other subtypes.
- **Dual indication potential:** The ammonia-lowering mechanism of KRRO-121 may address both UCD and HE, two distinct conditions with a shared pathology of hyperammonemia.
- **Convenient subcutaneous delivery:** KRRO-121 utilizes GalNAc-conjugated delivery, a well-established and clinically validated approach that enables convenient subcutaneous administration with targeted delivery to liver hepatocytes.
- **Potential for dietary liberalization:** By providing enhanced ammonia clearance capacity, KRRO-121 may enable relaxation of the strict dietary protein restrictions that significantly diminish quality of life for UCD patients.

Summary of our preclinical studies and data generated leading to KRRO-121 selection

We have generated compelling preclinical data establishing proof of concept for KRRO-121 across multiple model systems:

- *In vitro* studies in primary human hepatocytes demonstrated dose-dependent RNA editing.
- *In vitro* studies in human induced pluripotent stem cell-derived hepatocytes bearing either the OTC-D175V or the ASS1D309 mutation demonstrated the ability to maintain stable levels of GS under conditions of ammonia overload in two subtypes of UCD.

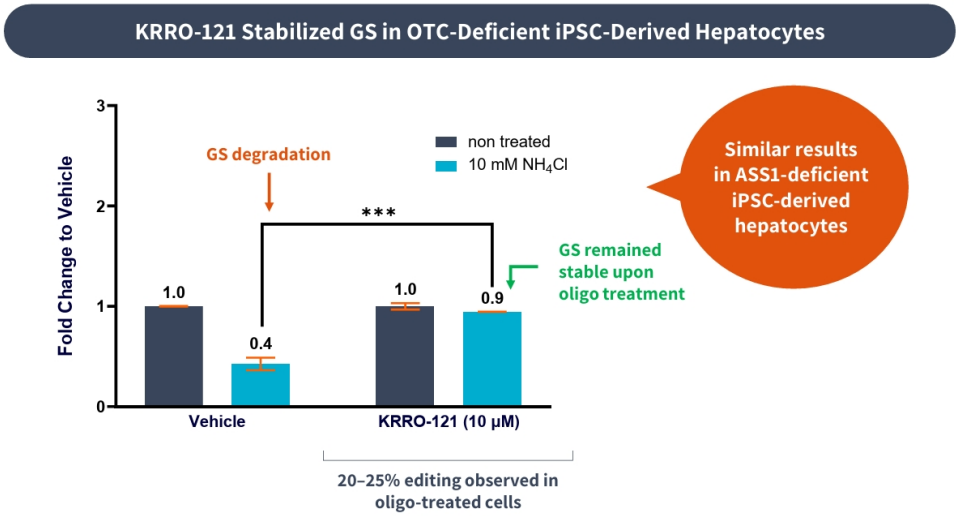


Figure 11. OTC D175V human iPSC-derived hepatocytes differentiated for 14 days, then treated with oligonucleotide.

- *In vivo* activity was demonstrated in OTC mice (OTCspf/ash), with >50% improved ammonia clearance.

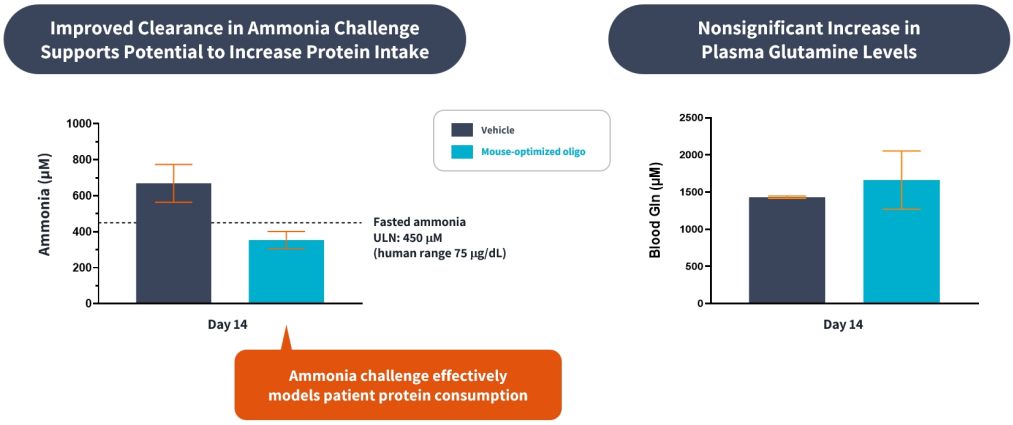


Figure 12. Ammonia Reduction in OTC-Deficient Mice

- *In vivo* activity in a humanized mouse model (PXB) demonstrated approximately 20% editing at the mRNA level, leading to improved ammonia clearance during hyperammonemia challenge, resulting in approximately 20% of the stabilized protein post ammonia challenge without any significant degradation in the total protein. KRRO-121 significantly reduced ammonia levels in both basal state and following ammonia challenge, while maintaining steady glutamine levels post-challenge.
- Favorable tolerability profiles were observed in exploratory toxicology studies conducted in mice and NHPs. In NHPs, KRRO-121 displayed >90% delivery to liver, confirmed liver localization with pericentral GS, and no observed changes in liver or kidney function, coagulation, complement, platelets, or cytokines.

While we believe we can demonstrate many of the key advantages of RNA editing, we are early in our development efforts and not yet certain of the results we may achieve. Such uncertainties include, but are not limited to, the level of editing efficiency needed in a target tissue type to achieve a clinical benefit, and associated safety of our edits in humans.

KRRO-121 Next Steps

We anticipate a regulatory filing for KRRO-121 to enable commencement of a first-in-human clinical trial in the second half of 2026. Good laboratory practice, or GLP, -compliant toxicology studies in mouse and monkey are planned to support the proposed first-in-human study. KRRO-121 is being developed for the treatment of UCDs in adults and adolescents, with potential expansion into HE. However, KRRO-121 is in preclinical development and there is no guarantee that it will be successful.

Our AATD Program: RNA Editing to Repair Pathogenic Missense Variant

We are developing a next-generation GalNAc-conjugated RNA editing oligonucleotide for the potential treatment of AATD that has the potential to be disease-modifying and provide a differentiated therapeutic option. AATD is an inherited genetic disorder that can cause severe progressive lung and liver disease due to a lack of normal AAT, with varying intensity based on patient genotype and environmental factors. Patients often develop chronic obstructive pulmonary disorder, or COPD, in the lungs and cirrhosis of the liver, which can result in liver failure or death.

There are an estimated 5.5 million individuals with deficiency allele combinations worldwide. There is a single approved modality, a once-a-week infusion of pooled human plasma derived AAT, that does not adequately address the lung or liver manifestations of AATD. Within the United States alone, the opportunity to improve the existing standard of care and expand the treated population represents a large market opportunity.

Our AATD lead candidates are proprietary RNA editing oligonucleotides conjugated with GalNAc and administered subcutaneously with delivery to liver hepatocytes, where they co-opt endogenous ADAR to edit a nucleoside in the SERPINA1 transcript and restore production of normal AAT. The GalNAc conjugate approach enables convenient subcutaneous administration with targeted, liver-specific delivery to hepatocytes. GalNAc-conjugated delivery is a well-established and clinically validated approach that has been used in multiple FDA-approved products, including GIVLAARI and OXLUMO, providing a precedented delivery technology with an established safety and efficacy profile. By repairing the protein, we aim to bring individuals with the Z mutation to a phenotype where over 90% of RNA has been corrected to produce normal AAT, preserving lung and liver function and preventing further damage.

In addition to the inherent benefits of ADAR-based RNA editing described earlier, we believe our approach has additional potential advantages, including convenient subcutaneous delivery:

- Provides a disease modifying therapy for both lung and liver manifestations by transiently editing over 90% of RNA transcripts in hepatocytes to restore normal AAT protein
- Provides a treatment option that can be tailored to address the broad spectrum of severity within the AATD population
- Potential to enable physiologic regulation of AAT using endogenous ADAR, thereby increasing normal AAT production during inflammation
- Convenient subcutaneous dosing using precedented GalNAc-conjugated delivery with liver-targeted specificity

We have generated compelling preclinical data demonstrating proof of concept across multiple RNA editing oligonucleotides targeting the SERPINA1 gene. We have achieved greater than 90% editing of the SERPINA1 transcript using GalNAc delivery *in vivo*, with results demonstrated in both NSG-PiZ and C57BL/6-PiZ mouse models. We first pursued a development candidate, KRRO-110, for the treatment of AATD, which used an LNP delivery modality. However, following initial results from our REWRITE trial announced in November 2025, we pivoted to a GalNAC delivery modality. See "—Termination of REWRITE Clinical Program" below.

AATD Overview

AAT function

AAT is a protease inhibitor belonging to the Serpin family. It is produced in the liver and circulates in its native state in human blood at approximately 1.5 g/L, one of the highest concentrations observed for protease inhibitors. The main role of AAT is to protect tissue from proteases released by neutrophils, such as neutrophil elastase. Neutrophil elastase is an enzyme that fights infections in the lungs but can also attack normal lung tissue. If not sufficiently inhibited by AAT, neutrophil elastase destroys elastin in the lung, leading to degradation of lung function. Factors that increase lung inflammation, such as smoking or

infections, increase the elastase burden in the lung, leading to severe and potentially life-threatening lung damage in AATD patients.

Genotypes of AATD

AATD is an inherited, autosomal recessive genetic disorder that is most frequently caused by a single nucleotide variant, or SNV, mutation in the SERPINA1 gene. The most common of these SNVs is the "Z" mutation, corresponding to a mutation of glutamate 342 to lysine, or E342K. A healthy individual typically exhibits an "MM" genotype, or PiMM, while an individual with a single Z allele would exhibit a heterozygous, or PiMZ genotype, and an individual with two Z alleles would exhibit a homozygous, or PiZZ, genotype.

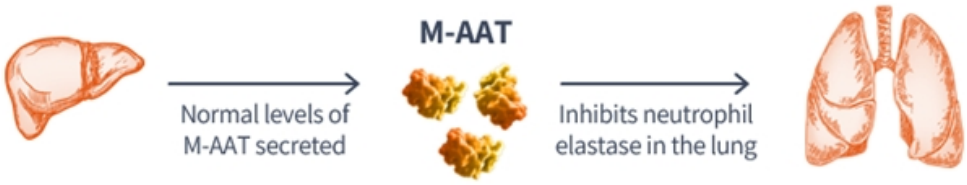


Figure 13. PiMM genotype (normal liver and lung)

Impact of Z mutations on liver and lung function

The presence of a single Z allele can lead to insufficient production of normal AAT, as well as the production of dysfunctional AAT, causing manifestations of disease in both the lungs and liver. The severity of disease manifestation can vary according to each patient's genotype, as well as environmental factors, such as exposure to inflammatory respiratory agents or other complications.

PiZZ individuals experience greater manifestations of disease as a result of their very low levels of normal AAT (10% - 15% of normal levels), which are insufficient to prevent lung damage after an influx of neutrophils. They are also at high risk of developing emphysema or COPD, which can present in individuals as early as in their thirties and forties. PiZZ individuals with additional environmental risk factors such as smoking or infection frequently develop COPD as early adults and develop very severe symptoms.

In addition to lung disease, PiZZ individuals can also manifest with liver disease as a result of dysfunctional AAT aggregating in the liver. In adults, this can cause liver inflammation and cirrhosis, ultimately leading to liver failure or cancer. In addition, as many as 10% of newborns with the PiZZ genotype develop cholestatic hepatitis. A quarter of impacted neonates suffer acute liver failure and require an emergency transplant.

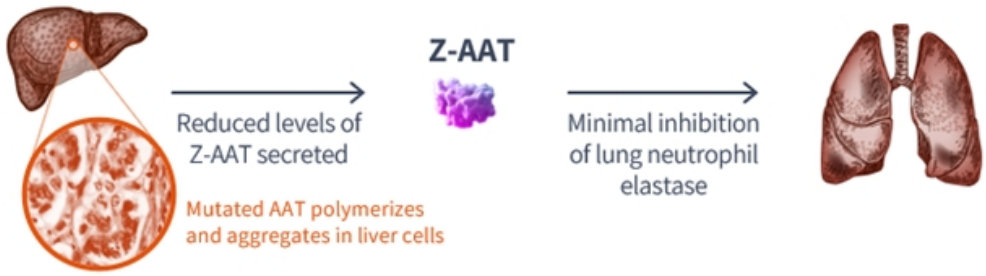


Figure 14. PiZZ genotype that results in fibrotic liver and decreased lung function

Data from the UK Biobank, or UKBB, as well as published literature, have allowed researchers to determine the threshold levels of circulating AAT that are directly linked to the PiMZ and PiZZ genotypes. In Figure 15 below, the range of AAT levels associated with normal individuals (PiMM) is compared with the range of AAT levels observed in mutated PiMZ and PiZZ patients.

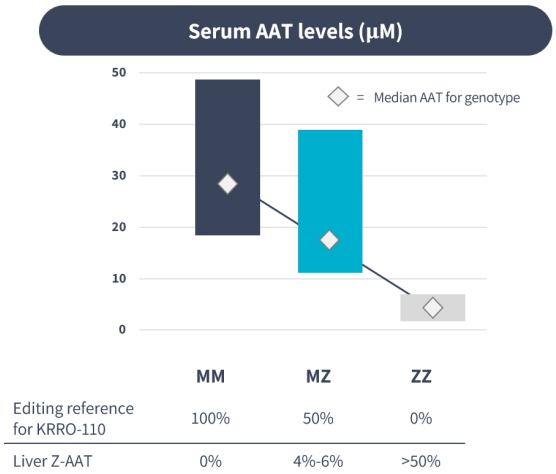


Figure 15. Median Levels of AAT and link to outcomes in liver and lung

In Figure 16 below, the Odds Ratios, or OR, associated with developing COPD and cirrhosis of the liver are compared across the two genotypes, with key findings summarized below:

- COPD: PiMZ individuals have minimal increased risk of developing COPD relative to healthy PiMM individuals, while PiZZ individuals are at very high risk with an OR of 8.8
- Cirrhosis of the liver: PiMZ individuals have mildly elevated risk of developing cirrhosis of the liver with an OR of 1.5, while PiZZ individuals have significantly elevated risk with an OR of 7.8

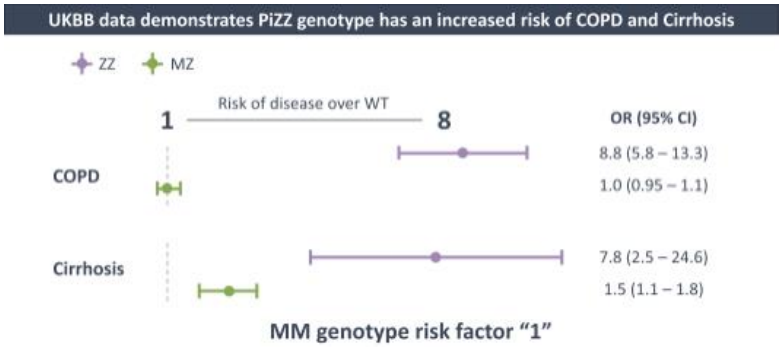


Figure 16. Risk of developing COPD and cirrhosis for different genotypes associated with AATD. Adapted from "The undiagnosed disease burden associated with alpha-1 antitrypsin deficiency genotypes." By Nakanishi T, Forgetta V, Handa T, et al. Eur Respir J 2020; 56:2001441

Based on these findings, we believe that achieving normal AAT protein levels between the ranges of the PiMZ and PiMM genotypes has the potential to alleviate the increased risk of COPD and cirrhosis of the liver, and to meaningfully improve clinical outcomes for PiZZ patients. We further believe that by achieving greater than 90% editing efficiency across cells, we can reach these target levels and modify disease progression.

Prevalence of AATD and limitations of currently approved therapy

AATD is one of the three most common, potentially lethal, rare diseases affecting those of European descent. Worldwide, there are an estimated 5.5 million individuals with deficiency allele combinations. Studies suggest that clinical unawareness of AATD results in a significant number of patients that go undiagnosed or misdiagnosed. There are currently an estimated 100,000 patients in the United States with a PiZZ genotype, and 125,000 patients across the United Kingdom, Germany, France, Spain and Italy. Studies of PiMZ prevalence suggest as many as one in 49 individuals in the United States and one in 58 individuals across Europe.

The only FDA-approved treatment for patients with lung manifestations of AATD (co-indicated with COPD) is augmentation therapy, which utilizes AAT protein purified from pooled human plasma. The purified AAT is administered weekly by intravenous infusion with the goal of maintaining a serum level of AAT above the 11 μM threshold. Even when the serum level can be maintained at or above this threshold, augmentation therapy has not clearly demonstrated its ability to adequately address lung damage nor liver inflammation caused by AAT aggregation. Augmentation therapy is approved in only a few countries due to its limited efficacy. Lung and/or liver transplantation are the only other available treatment options, outside of standard management of the disease manifestations of AATD.

Despite being minimally effective and not fully addressing the needs of many AATD patients, augmentation therapy currently represents approximately $1.4 billion in annual sales worldwide.

Alternative Treatments in Development for AATD

There are a number of therapies in development to treat AATD. Certain DNA editing approaches attempt to add a normal copy of SERPINA1 gene or permanently correct the mutation within the SERPINA1 gene. DNA editing as a treatment would likely be evaluated on a risk-benefit trade-off relative to the severity of the manifestation of AATD, limiting the applicability of DNA editing approaches to the broader AATD patient population.

Additional approaches outside of DNA editing are also in development. There are approaches which attempt to use siRNA to knock-out the production of dysfunctional AAT protein, which only alleviates the liver manifestation of AATD, while potentially worsening the lung manifestation. Replacing plasma derived protein for augmentation therapy with a fusion protein is another approach in development. This fusion protein aims to introduce AAT on an antibody scaffold to improve upon the existing dosing paradigm and activity levels achieved in augmentation therapy. Fusion proteins do not resolve the liver manifestation and are unable to physiologically regulate AAT levels.

We believe many of these approaches have inherent limitations including the following:

- Inability to adequately address the spectrum of clinical pathologies associated with AATD
- Inability to achieve adequate expression of normal AAT to bring patients back to PiMM genotype
- Considerable safety and tolerability concerns
- Potential issues around manufacturability and scalability for the AATD population

Our Approach to Overcome the Limitations: Transiently Correcting the SERPINA1 Variant on RNA

We are developing a GalNAc-conjugated RNA editing oligonucleotide to treat patients with AATD. Our lead candidates are designed to leverage endogenous ADAR to make a single base edit in SERPINA1 mRNA, correcting the amino acid codon created by the pathogenic E342K SNV which stems from a single G-to-A mutation. Specifically, our oligonucleotide edits the adenosine (A) to an inosine (I), thereby correcting the faulty amino acid and leading to the production of normal AAT protein.

Our goal is to bring individuals with the Z mutation to a phenotype where over 90% of RNA has been corrected to produce normal AAT protein. This would result in levels of AAT consistent with individuals in the upper half of the PiMZ genotype and the fully healthy PiMM genotype. Through our GalNAc-conjugated approach in human transgenic mouse models, we have shown our ability to drive the required change in RNA sequence with high efficiency, leading to secretion of AAT at target levels.

We believe our approach has multiple potential advantages, in addition to those conferred by the RNA editing modality:

- **Provides a tailored disease modifying treatment option to address the heterogeneity of the AATD population:** We leverage a transient base editing approach leading to restoration of normal AAT. The transient nature of our approach allows us to address a broader AATD patient population, inclusive of PiMZ and PiZZ genotypes. As transient editing is not permanent in nature, we have the ability to adjust dosing and even cease dosing as needed, providing a meaningful benefit in potential safety profile.
- **Provides a disease modifying therapy for both lung and liver manifestations:** By transiently editing over 90% of RNA transcripts in hepatocytes, we believe we can restore levels of normal AAT protein consistent with a PiMZ to PiMM phenotype. These levels of normal AAT have the potential to prevent further lung damage and reduce the risk of dysfunctional AAT aggregating in the liver.
- **Potential to enable physiologic regulation of AAT using endogenous ADAR:** Augmentation therapy and other treatments targeting static thresholds for AAT expression do not address the underlying mechanism of AAT

regulation, which is endogenously regulated by inflammation and can sometimes lead to as much as 90uM of AAT in humans. During an inflammatory response, there is a simultaneous increase in ADAR levels. Our ADAR-based therapy has the potential to restore natural physiologic regulation by increasing the prevalence of editing during periods of greater AAT production.

- **Liver-targeted delivery using precedented GalNAc-conjugated technology:** GalNAc conjugates provide highly specific delivery to hepatocytes with proven clinical track record. This delivery approach enables convenient subcutaneous administration, improving patient experience compared to intravenous infusion.

Next-Generation GalNAc-Conjugated AATD Program

We are developing a next-generation GalNAc-conjugated RNA editing oligonucleotide for AATD with development candidate nomination anticipated in the second quarter of 2026. Our preclinical studies have demonstrated compelling proof of concept for the GalNAc-conjugated approach.

We have generated highly compelling preclinical data that forms the basis for our proof of mechanism. We have affirmed that multiple disease modifying early generation lead candidates have demonstrated proof-of-concept in *in vivo* studies leading to the anticipated selection of our next-generation GalNAc-conjugated development candidate for AATD. To assess and differentiate our GalNAc-conjugated lead candidates in mouse models used widely in the AATD field, we used the NSG-PiZ and C57BL/6-PiZ transgenic mouse models. These mice express the human SERPINA1 gene with the Z-mutation. Subcutaneous administration of GalNAc-conjugated RNA editing oligonucleotides resulted in >90% editing of SERPINA1 transcript in the NSG-PiZ mouse model following dosing at 10 mg/kg every other day for a total of three doses, with results observed one week (seven days) post first dose. This demonstrates the high efficiency and consistency of the GalNAc-conjugated approach across two independent AATD mouse models.

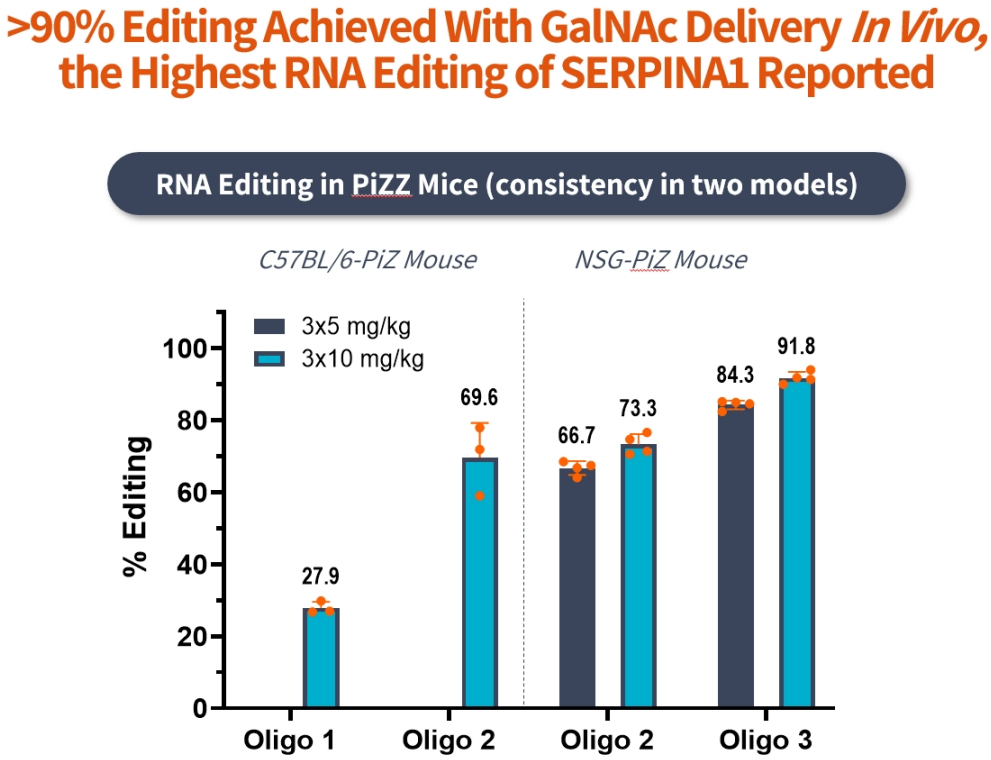


Figure 17. AATD GalNAC RNA editing in C57BL/6-PiZ and NSG-PiZ mouse models

Termination of REWRITE Clinical Program

In November 2025, we announced that our first-generation AATD program, KRRO-110, our proprietary RNA editing oligonucleotide with an LNP delivery system, did not reach projected levels of functional protein following a single administration. We pivoted to GalNAc delivery for AATD and have terminated our REWRITE clinical program investigating KRRO-110 as a treatment for AATD.

AATD GalNAc Program Next Steps

We expect to nominate a development candidate for our AATD GalNAc program in the second quarter of 2026. We are continuing to design and screen additional oligonucleotides to optimize editing efficiency and drug-like properties for GalNAc-conjugated subcutaneous delivery. However, this program is in preclinical development and there is no guarantee that it will be successful.

Our Longevity and Liver Health Program: AMPKγ1 Activation

The longevity space has attracted approximately $8 billion in biotech investment. We've seen combinations of GLP-1 agonists, SGLT2 inhibitors, and PCSK9 inhibitors contributing to meaningful increases in lifespan. Rising U.S. health spending on chronic conditions underscores both the challenge and the opportunity. Top aging experts are pointing to four FDA-approved drugs that hold promise for extending life including GLP-1 agonists. Rather than treating late-stage disease, we are focused on extending organ healthspan and going after three fundamental reasons as to why organs age: metabolic dysfunction, oxidative stress, and inflammation accumulation.

When activated, AMPK inhibits anabolic pathways like lipogenesis and protein synthesis, activates catabolic pathways including fatty acid oxidation and autophagy, and regulates glucose homeostasis by enhancing insulin sensitivity. The γ1 subunit—AMPKγ1—represents the optimal liver therapeutic target because of its hepatocyte enrichment. AMPK activation provides direct metabolic reprogramming—increasing fatty acid oxidation, decreasing lipogenesis, boosting mitochondrial biogenesis, and increasing glucose uptake in an insulin-independent manner, all with minimal central appetite effects. It is hepatocyte-restricted rather than systemically exposed. GLP-1 agonism, by contrast, works primarily through appetite suppression—central satiety signaling, delayed gastric emptying, increased insulin secretion, and decreased glucagon release. These are complementary mechanisms.

We are developing proprietary oligonucleotides designed to activate AMPKγ1, with the goal of restoring metabolic status and improving liver function. We enable the activation by creating a single amino acid change on the native AMPK protein, specifically in the liver, such that it stays in a hyper-phosphorylated state, creating an allosteric modulator. This program utilizes GalNAc-conjugated delivery for subcutaneous administration targeting the liver, thus avoiding activating AMPK in the rest of the body. Prior programs have not moved forward due to the systemic exposure, and the lack of specificity of the AMPK isoform.

RNA Editing Potentially Solves the AMPK Drug Development Problem

Challenge	Small Molecules	RNA Editing
Isoform Selectivity	❌ Pan-AMPK	✅ γ1-selective
Tissue Targeting	❌ Systemic	✅ Liver (GalNAc)
Cardiac Toxicity Risk	❌ High (PXL770)	✅ Low (avoids γ2)
Dosing Frequency	❌ Daily oral	✅ Monthly/Quarterly SC

Validates the need for tissue-specific, durable AMPK activation

We are in early preclinical development for this program. We have demonstrated oligonucleotide-mediated editing in mouse hepatocytes with 60% at 100 nM and 40% at 10 nM editing resulting in two-fold increases in phospho-ACC to total ACC

ratio in vivo in wild type mice, demonstrating in vivo functional downstream signaling. We are promoting allosteric activation of the γ1 subunit to enable sustained activation, what we believe is needed for durable therapeutic benefit.

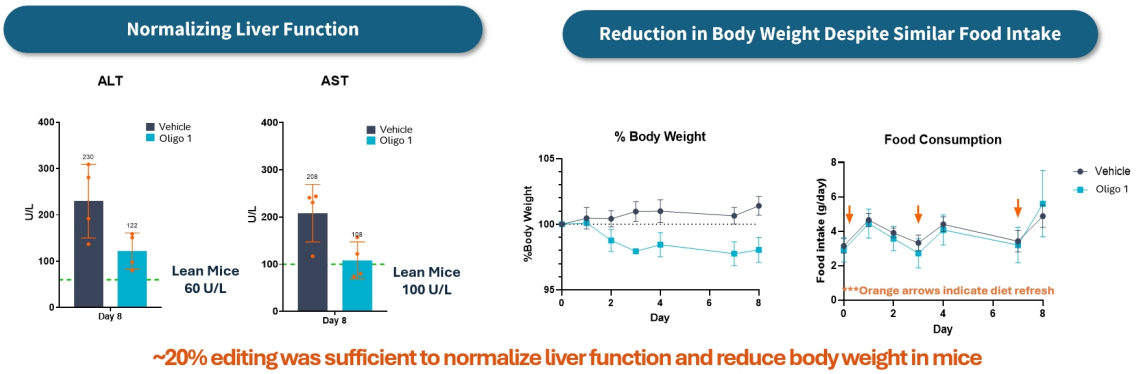


Figure 18. Hepatic AMPKγ1 activation improved liver function in obese mice

Our GalNAc-conjugated oligonucleotides enable liver-specific targeting. In diet-induced obesity mice, we dosed once daily for five days at 10 mg/kg. We achieved 23.9% editing in liver with ALT dropping from 230 to 122 U/L (back toward the lean mouse range of 60) and AST improving from 208 to 108 (approaching the lean mouse level of 100). Liver function was improved and metabolic signaling restored without affecting food intake. The body weight curves were essentially identical, and food consumption was unchanged, highlighting a direct metabolic reprogramming, not appetite suppression. Our GalNAc-conjugated oligonucleotide is fundamentally different from GLP-1s, which we believe potentially makes it an ideal combination partner.

Next Steps

We are continuing to design and screen additional oligonucleotides to identify proprietary oligonucleotides for further evaluation. Furthermore, we are identifying and characterizing metabolic dysfunction-associated steatohepatitis, or MASH, and liver fibrosis models and patient cell lines, to test the efficacy of *de novo* AMPK γ1 protein in disease models. We anticipate progressing this program towards achieving a development candidate.

Our Amyotrophic Lateral Sclerosis Program: Disrupting Protein Aggregation

We are developing proprietary oligonucleotides targeting the mRNA for TAR DNA binding protein 43, or TDP-43, a protein associated with the etiology of ALS.

Amyotrophic Lateral Sclerosis

ALS is an adult-onset, progressive, and fatal neurodegenerative disorder that causes muscle weakness, paralysis, and ultimately death. The majority of ALS patients die from respiratory failure within three to five years after symptom appearance, with a small percentage of patients surviving beyond 10 years. Despite being classified as a rare disease by the FDA and the European Medicines Agency, or EMA, ALS is considered one of the more common neurodegenerative diseases worldwide. Prevalence estimates vary, but it is widely accepted that there are approximately 30,000 ALS patients in the United States. There is currently no cure for ALS, and currently approved therapies either only provide symptomatic relief or slow the overall progression of the disease.

Our Differentiated Approach and Results

Our approach is to selectively modulate TDP-43, an RNA/DNA-binding protein, which carries out a variety of important functions in healthy neurons, including initiation of transcription, pre-mRNA splicing and miRNA processing. Hyper-phosphorylated and ubiquitinated TDP-43 deposits form inclusion bodies in the brain and spinal cord of patients with ALS and frontotemporal dementia, or FTD. The majority of ALS and FTD cases are sporadic, and more than 90% and 45% of ALS and FTD patients, respectively, have TDP-43 aggregations in neurons. Less than 10% of ALS cases are familial, and mutations in *TARDBP*, the gene encoding TDP-43, are responsible for approximately 4% of familial ALS. Given the importance of the role of TDP-43 in maintaining healthy neurons, the generation of a protein variant with the desired non-aggregating property could potentially have therapeutic benefit for the majority of ALS and FTD patients. We believe that by leveraging the ability of RNA

editing to affect a single base edit in *TARDBP*, we can lead to the synthesis of a TDP-43 protein variant that does not aggregate, thereby restoring normal function.

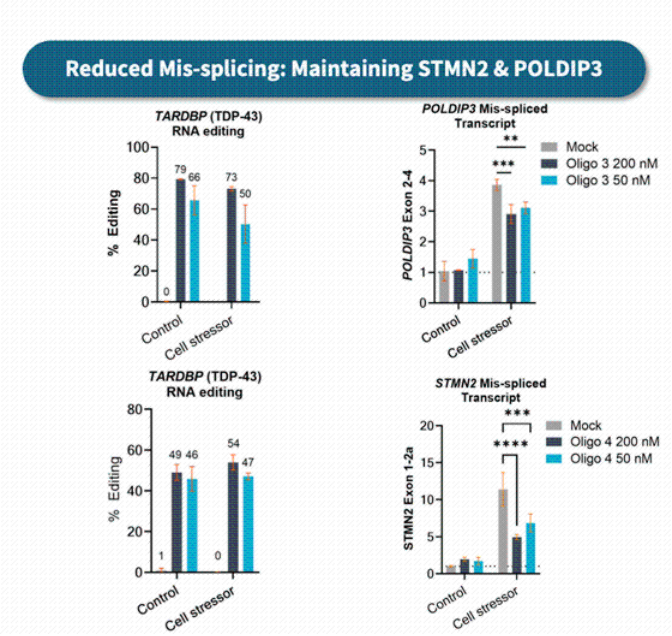


Figure 19. Continued splicing of factors downstream of TDP-43

We have created a series of TDP-43 variants that contain single amino acid changes designed to alter post-translational modification by phosphorylation, ubiquitination, acetylation or cleavage with the intent of reducing the ability to aggregate while maintaining function in RNA metabolism. We believe that modulating TDP-43 through the introduction of specific amino acid changes into TDP-43 mRNA sequence is preferable to other approaches that try to address protein aggregates after they form, to non-specifically prevent stress granule formation, or to target a single TDP-43 downstream target. In preclinical studies, our TDP-43 variant demonstrated reduced mis-splicing of critical genes (maintaining STMN2 and POLDIP3 expression) and decreased cytosolic mis-localization of TDP-43 protein in iPSC-derived motor neurons under cell stress conditions. These results support the potential of our approach to reduce pathogenic aggregation of TDP-43 while preserving its normal cellular functions.

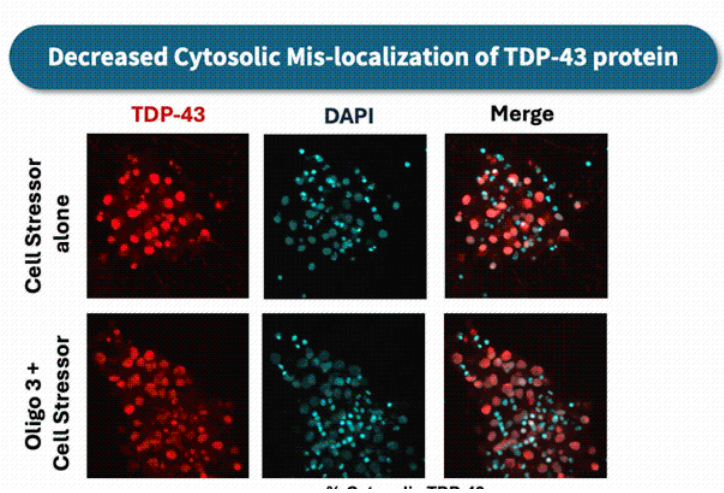


Figure 20. Re-localization of the TDP43 protein inside the nucleus

Next Steps

We are continuing to design and screen additional oligonucleotides to identify proprietary oligonucleotides for further evaluation. Furthermore, we are identifying and characterizing ALS cell lines including genetic-induced models and patient cell lines, to test the efficacy of TDP-43 protein variants in disease models.

Pioneering RNA Editing to Deliver the Future of Medicine

Each of our programs demonstrate the versatility of the ADAR-mediated RNA editing approach. Importantly, we are able to not only address classes of diseases caused by deleterious effects of misfolded or misdirected proteins, but we can also potentially utilize genetics to identify highly prevalent diseases where therapeutic benefit can be generated through alteration of protein function or expression. We will continue to selectively identify and pursue additional targets and indications based on a range of technical, clinical, and commercial factors to build a robust and differentiated pipeline. However, RNA editing is a novel technology that is not yet clinically validated for human therapeutic use. The approaches we take to discover and develop novel therapeutics are unproven and may never lead to marketable products. While limited clinical data for RNA editing therapies has been generated to date, we are not aware of any clinical trials for safety or efficacy having been completed by any third party using RNA editing and nor are we aware of any RNA editing therapeutic product that has been approved in the United States or Europe. It will be many years before we commercialize an approved product, if ever.

Collaborations

We believe the versatility of our OPERA platform has the potential to create transformative genetic medicines for both rare and highly prevalent diseases. To fully realize this potential, we have established and plan to continue to actively seek out innovative collaborations, licenses, and strategic alliances with clinical leaders, academic medical centers of excellence, patient advocacy groups, and pioneering companies. Given the versatility and broad potential of our OPERA platform across therapeutic areas, especially in diseases with high prevalence, we may enter into additional strategic partnerships with external parties that have complementary capabilities to broaden and accelerate access to our RNA editing therapies.

Novo Nordisk

In September 2024, we entered into a research collaboration and license agreement with Novo Nordisk, pursuant to which we granted Novo Nordisk an exclusive worldwide license under certain intellectual property rights to research, develop, manufacture, commercialize or otherwise exploit certain licensed compounds and licensed products for an initial target in the cardiometabolic field and for a second target (to be nominated by Novo Nordisk within a specified time period as set forth in the agreement). Under the agreement, we are responsible for certain research and development activities with respect to licensed compounds and licensed products directed against the initial target and the second target (if nominated by Novo Nordisk), and we are eligible to receive cost reimbursement from Novo Nordisk for our performance of such research and development activities under the agreement with respect to such target(s). Novo Nordisk may undertake subsequent worldwide development, manufacturing, marketing and commercialization of the licensed products directed against the initial target and the second target (if applicable). In November 2025, the collaboration entered a 12-month pause. For additional information relating to the financial terms of such agreement, see Note 12 to our audited consolidated financial statements included elsewhere in this Annual Report on Form 10-K.

Manufacturing and Supply Arrangements

We currently have no commercial manufacturing capabilities. For our initial wave of clinical programs, we intend to use qualified third-party CMOs with relevant manufacturing experience in genetic medicines. We plan to partner with suppliers and CMOs to produce or process critical raw materials, bulk compounds, formulated compounds, viral vectors or engineered cells for investigational new drug, or IND, -supporting activities and early-stage clinical trials. At the appropriate time in the product development process, we will determine whether to establish in-house good manufacturing practice capabilities for some core technologies or continue to rely on third parties to manufacture commercial quantities for any products that we may successfully develop.

We also in-license technology for our fit-for-purpose delivery systems, including LNP delivery systems. For example, in March 2023, we entered into a collaboration and license agreement with Genevant, a well established leader in the LNP space, to provide access to clinically validated LNP technology to optimize delivery of our now terminated REWRITE clinical program investigating KRRO-110 as a treatment for AATD. For additional information relating to the financial terms of such agreement, see Note 12 to our audited consolidated financial statements included elsewhere in this Annual Report on Form 10-K.

Competition

The pharmaceutical and biotechnology industries, including the gene therapy and gene editing fields, are characterized by rapidly advancing technologies, intense competition, and a strong emphasis on intellectual property. While we believe that our differentiated technology, scientific expertise, and intellectual property position provide us with competitive advantages, we face potential competition from a variety of companies in these fields. There are several companies using synthetic oligonucleotide or base editing technology, including AIRNA, Beam Therapeutics, Prime Medicine, ProQR, Tessera Therapeutics, Verve Therapeutics, Wave Life Sciences, and YolTech Therapeutics. Several additional companies utilize other editing technologies, including Edigene and Shape Therapeutics. In addition, we face competition from companies utilizing gene therapy, oligonucleotides, and DNA editing technologies such as base and prime editing.

Any development candidates that we successfully develop and commercialize will compete with existing therapies and new therapies that may become available in the future that are approved to treat the same diseases for which we may obtain approval for our development candidates. This may include other types of therapies, such as small molecule, antibody, and/or protein therapies.

In addition, many of our current or potential competitors, either alone or with their collaboration partners, have significantly greater financial resources and expertise in research and development, manufacturing, preclinical testing, conducting clinical trials and approved products than we do today. Mergers and acquisitions in the pharmaceutical, biotechnology and gene therapy 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. We also compete with these companies in recruiting, hiring and retaining qualified scientific and management talent, establishing clinical trial sites and patient registration for clinical trials, obtaining manufacturing slots at contract manufacturing organizations, and in acquiring technologies complementary to, or necessary for, our programs. Our commercial opportunity could be reduced or eliminated if our competitors develop and commercialize products that are safer, more effective, particularly if they represent cures, have fewer or less severe side effects, are more convenient, or are less expensive than any products that we may develop. Our competitors also may obtain FDA or other 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. The key competitive factors affecting the success of all of our programs are likely to be their efficacy, safety, convenience, and availability of reimbursement.

Intellectual Property

Overview

We strive to protect the proprietary technology that we believe is important to our business, including seeking and maintaining patent protection in the United States and internationally for our current and future lead candidates and development candidates. We also rely on trademarks, copyrights, trade secrets, confidentiality procedures, employee disclosure, invention assignment agreements, know-how, continuing technological innovation and in-licensing opportunities to develop and maintain our proprietary position.

We seek to obtain domestic and international patent protection, and endeavor to promptly file patent applications for new commercially valuable inventions. We also rely on trade secrets to protect aspects of our business that are not amenable to, or that we do not consider appropriate for, patent protection.

We plan to continue to expand our intellectual property estate by filing patent applications directed to platform technologies and pipeline programs, including composition of matter, pharmaceutical compositions, methods of treatment, and methods of manufacture. Our success will depend on our ability to obtain and maintain patent and other proprietary protection for commercially important technologies, inventions and know-how related to our business, defend and enforce any patents that we may obtain, preserve the confidentiality of our trade secrets and operate without infringing the valid and enforceable patents and proprietary rights of third parties.

The patent positions of companies like us are generally uncertain and involve complex legal, scientific and factual questions. In addition, the coverage claimed in a patent may be challenged in courts after issuance. Moreover, many jurisdictions permit third parties to challenge issued patents in administrative proceedings, which may result in further narrowing or even cancellation of patent claims. We cannot guarantee that our pending patent applications, or any patent applications that we may in the future file or license from third parties, will result in the issuance of patents. We cannot predict whether the patent applications we are currently pursuing will issue as patents in any particular jurisdiction or at all, whether the claims of any patent applications, should they issue, will cover our lead candidates and development candidates, or whether the claims of any issued patents will provide sufficient protection from competitors or otherwise provide any competitive advantage. We cannot predict

the scope of claims that may be allowed or enforced in our patents. In addition, the coverage claimed in a patent application can be significantly reduced before the patent is issued, and its scope can be reinterpreted after issuance. Consequently, we may not obtain or maintain adequate patent protection for any of our lead candidates and development candidates.

Because patent applications in the United States and certain other jurisdictions are maintained in secrecy for 18 months or potentially even longer, and because publication of discoveries in the scientific or patent literature often lags behind actual discoveries and patent application filings, we cannot be certain of the priority of inventions covered by pending patent applications. Accordingly, we may not have been the first to invent the subject matter disclosed in some of our patent applications or the first to file patent applications covering such subject matter, and we may have to participate in derivation proceedings declared by the U.S. Patent and Trademark Office, or USPTO, to determine priority of invention. Further, periodic maintenance fees, renewal fees, annuity fees and various other government fees on patents and/or applications will be due to be paid to the USPTO and various government patent agencies outside of the United States over the lifetime of our patents and patent applications. For more information regarding the risks related to our intellectual property, see Item 1A "*Risk Factors—Risks Related to Our Business—Risks Related to Intellectual Property*."

Patent Portfolio

We strive to protect our proprietary RNA editing platform, OPERA, and related technologies, and our lead candidates and development candidates, including seeking and maintaining patent protection intended to cover various target-specific editing strategies, the composition of matter of our lead candidate and development candidates, their methods of use, related delivery technologies, and other inventions. The intellectual property that is available to us is critical to our business, and we strive to protect it, including by obtaining, maintaining, defending, and enforcing patent protection in the United States and internationally. As of December 31, 2025, our patent portfolio in total consisted of 42 patent families, with six U.S. patents and five patents in foreign jurisdictions (e.g., Australia, Japan and Taiwan), including pending U.S. provisional patent applications, pending Patent Cooperation Treaty, or PCT, applications, and various pending non-provisional applications world-wide (e.g., United States, Australia, Canada, China, Europe, South Korea, and Japan).

Our patent portfolio relates to our RNA editing platform OPERA, as well as numerous disease programs listed below. Patents and pending applications in the portfolio are directed to various oligonucleotide formats, nucleotide compositions, oligonucleotide chemistries, modifications, specific linkage chemistries, oligonucleotides having a specific structures, methods of deaminating an adenosine using such oligonucleotides, methods of oligonucleotide delivery, and methods of treating disease by administering such oligonucleotides.

We have three patent families with pending applications directed to specific oligonucleotide structures useful in ADAR editing oligonucleotides. Each of these three families have pending applications in Australia, Canada, China, Europe, Japan, South Korea and the United States. Absent any term extensions available via patent term extension or patent term adjustment, patents in these families will expire in 2040. These patent families include three granted U.S. patents: U.S. Patent No. 11,479,575 directed to specific oligonucleotide structures and expires in 2040; U.S. Patent No. 11,453,878 directed to methods of deamination of an adenosine in an mRNA using oligonucleotide with specific structures and also expires in 2040; and U.S. Patent No. 12,031,131 directed to specific oligonucleotide structures and expires in 2040.

In addition to the patent families described above, we also have other patent families directed to additional target-specific editing strategies, oligonucleotide compositions and their methods of use, related delivery technologies, and other inventions related to early-stage research and development efforts not reflected in our pipeline. Patents issued from or issuing from applications in these families will expire between 2041 and 2046, absent any available additional term for patent term extension or patent term adjustment.

In addition to platform and non-target specific patent families, we also have patent families pending that are directed to specific target programs.

Our patent portfolio that relates to our hyperammonia program includes two patent families directed to specific target sites and oligonucleotides that edit the target. The first patent family consists of PCT patent and issued patents in this family would expire in 2045, absent any available additional term for patent term extension or patent term adjustment. The second patent family is directed to oligonucleotides that direct editing of the target. This second patent family consists of two provisional patent applications, and if re-filed as PCT or non-provisional applications, and issued, patents in this family would expire in 2046.

Our patent portfolio that relates to our AATD program includes one patent family with a pending U.S. provisional patent application. This patent family has been filed as a provisional patent application and if refiled as PCT or non-provisional applications, and issued, patents in this family would expire in 2046, absent any available additional term for patent term extension or patent term adjustment.

Our patent portfolio that relates to our longevity and liver health program includes two patent families. The first patent family is directed to specific target sites. This first patent family consists of one PCT patent application, and issued patents in this family would expire in 2046, absent any available additional term for patent term extension or patent term adjustment. The second patent family is directed to oligonucleotides that direct editing of AMPKγ1. This second patent family consists of one provisional patent application, and if re-filed as PCT or non-provisional applications, and issued, patents in this family would expire in 2046.

Our patent portfolio that relates to our ALS program includes two patent families directed to specific target sites and oligonucleotides that direct edit TDP-43. The first patent family consists of one PCT issued patents in this family would expire in 2045, absent any available additional term for patent term extension or patent term adjustment. The second patent family is directed to oligonucleotides that direct editing of TDP-43. This second patent family consists of one provisional patent application, and if re-filed as PCT or non-provisional applications, and issued, patents in this family would expire in 2046.

Patent Term

The term of individual patents depends upon the legal term of the patents in the countries in which they are obtained. In most countries in which we file, including the United States, the base term is 20 years from the filing date of the earliest-filed non-provisional patent application from which the patent claims priority. The term of a U.S. patent can be lengthened by patent term adjustment, which compensates the owner of the patent for administrative delays at the USPTO. In some cases, the term of a U.S. patent is shortened by terminal disclaimer that reduces its term to that of an earlier-expiring patent. The term of a U.S. patent may be eligible for patent term extension under the Drug Price Competition and Patent Term Restoration Act of 1984, referred to as the Hatch-Waxman Act, to account for at least some of the time the drug is under development and regulatory review after the patent is granted. With regard to a drug for which FDA approval is the first permitted marketing of the active ingredient, the Hatch-Waxman Act allows for extension of the term of one U.S. patent that complies with applicable FDA or other requirements at any time with respect to product development, clinical testing, approval or any other regulatory requirements relating to product manufacture, processing, handling, storage, quality control, safety, marketing, advertising, promotion, packaging, labeling, export, import, distribution, or sale.

We may become subject to administrative or judicial sanctions or other legal consequences. These sanctions or consequences could include, among other things, the FDA's refusal to approve pending FDA applications, issuance of clinical holds for ongoing studies, suspension or revocation of approved at least one claim covering the composition of matter of such an FDA-approved drug, an FDA-approved method of treatment using the drug and/or a method of manufacturing the FDA-approved drug. The extended patent term cannot exceed the shorter of five years beyond the non-extended expiration of the patent or 14 years from the date of the FDA approval of the drug, and a patent cannot be extended more than once or for more than a single product. During the period of extension, if granted, the scope of exclusivity is limited to the approved product for approved uses. Some foreign jurisdictions, including Europe and Japan, have analogous patent term extension provisions, which allow for extension of the term of a patent that covers a drug approved by the applicable foreign regulatory agency.

In the future, if and when our development candidates receive FDA approval, we expect to apply, if appropriate, for patent term extension on patents directed to those development candidates, their methods of use and/or methods of manufacture. However, there is no guarantee that the applicable authorities, including the FDA in the United States, will agree with our assessment of whether such extensions should be granted, and if granted, the length of such extensions. For more information regarding the risks related to our intellectual property, see Item 1A "*Risk Factors—Risks Related to Our Business —Risks Related to Intellectual Property*."

Reservation of Rights by the U.S. Government

Our in-licensed patent rights may be subject to a reservation of rights by one or more third parties, including the U.S. government. Pursuant to the Bayh-Dole Act of 1980, the U.S. government has certain rights in inventions developed with government funding. These U.S. government rights include a non-exclusive, non-transferable, irrevocable worldwide license to use inventions for any governmental purpose. When new technologies are developed with government funding, in order to secure ownership of patent rights related to the technologies, the recipient of such funding is required to comply with certain government regulations, including timely disclosing the inventions claimed in such patent rights to the U.S. government and timely electing title to such inventions. A failure to meet these obligations may lead to a loss of rights or the unenforceability of relevant patents or patent applications. In addition, the U.S. government has the right, under certain limited circumstances, to require the licensor to grant exclusive, partially exclusive, or non-exclusive licenses to any of these inventions to a third party if it determines that: (1) adequate steps have not been taken to commercialize the invention; (2) government action is necessary to meet public health or safety needs; or (3) government action is necessary to meet requirements for public use under federal regulations (also referred to

as “march-in rights”). While the U.S. government has not successfully exercised its march-in rights to date, recent developments in regulatory pharmaceutical product pricing schemes indicate that these march-in rights could be exercised to affect pricing.

If the U.S. government exercised its march-in rights in our future intellectual property rights that are generated through the use of U.S. government funding or grants, we could be forced to license or sublicense intellectual property that we license on terms unfavorable to us, and there can be no assurance that we would receive compensation from the U.S. government for the exercise of such rights. If the U.S. government decides to exercise these march-in rights, it is not required to engage us as its contractor in connection with doing so. The U.S. government’s rights may also permit it to disclose the funded inventions and technology, which may include our confidential information, to third parties and to exercise march-in rights to use or allow third parties to use the technology that was developed using U.S. government funding. Intellectual property generated under a government funded program is also subject to certain reporting requirements, compliance with which may require us to expend substantial resources. In addition, the U.S. government requires that any products embodying any of these inventions or produced through the use of any of these inventions be manufactured substantially in the United States. This preference for U.S. industry may be waived by the federal agency that provided the funding if the owner or assignee of the intellectual property can show that reasonable but unsuccessful efforts have been made to grant licenses on similar terms to potential licensees that would be likely to manufacture substantially in the United States or that under the circumstances domestic manufacture is not commercially feasible. This preference for U.S. industry may limit our ability to contract with non-U.S. product manufacturers for products covered by such intellectual property. For more information regarding the risks related to our intellectual property, see Item 1A “*Risk Factors—Risks Related to Our Business—Risks Related to Intellectual Property*.”

Trade Secrets

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

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. For more information regarding the risks related to our intellectual property, see Item 1A “*Risk Factors—Risks Related to Our Business—Risks Related to Intellectual Property*.”

Governmental Regulation

The FDA and other regulatory authorities at federal, state and local levels, as well as in foreign countries, extensively regulate, among other things, the research, development, clinical trial, testing, manufacture, quality control, import, export, safety, efficacy, labeling, packaging, storage, distribution, recordkeeping, approval, distribution, advertising, promotion, marketing, post-approval monitoring and post-approval reporting of drugs. We, along with our vendors, contract research organizations, or CROs, clinical investigators and CMOs will be required to navigate the various preclinical, clinical, manufacturing and commercial approval requirements of the governing regulatory agencies of the countries in which we wish to conduct studies or seek approval of our development candidates. The process of obtaining regulatory approvals of drugs and ensuring subsequent compliance with appropriate federal, state, local and foreign statutes and regulations requires the expenditure of substantial time and financial resources.

Overview of U.S. Drugs Development Process

In the United States, the FDA regulates drug products under the Federal Food, Drug and Cosmetic Act, or FD&C Act, and its implementing regulations. Drugs are also subject to other federal, state and local statutes and regulations. If we fail to comply with applicable FDA or other requirements at any time with respect to product development, clinical testing, approval or any other legal requirements relating to product manufacture, processing, handling, storage, quality control, safety, marketing, advertising, promotion, packaging, labeling, export, import, distribution, or sale, we may become subject to administrative or

judicial sanctions or other legal consequences. These sanctions or consequences could include, among other things, the FDA's refusal to approve pending applications, warning or untitled letters, product withdrawals or recalls, product seizures, relabeling or repackaging, total or partial suspensions of manufacturing or distribution, injunctions, fines, civil penalties or criminal prosecution.

Our development candidates must be approved for therapeutic indications by the FDA before they may be marketed in the United States. For drug development candidates regulated under the FD&C Act, FDA must approve a New Drug Application, or an NDA. The process generally involves the following:

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

Preclinical Studies and Clinical Trials for Drugs

Before testing any drug in humans, the development candidate must undergo rigorous preclinical testing. Preclinical studies include laboratory evaluations of product chemistry, formulation and stability, as well as *in vitro* and animal studies to assess safety and in some cases to establish the rationale for therapeutic use. The conduct of preclinical studies is subject to federal and state regulation and requirements, including GLP requirements for safety/toxicology studies. The results of the preclinical studies, together with manufacturing information and analytical data, must be submitted to the FDA as part of an IND.

An IND is a request for authorization from the FDA to administer an investigational product to humans and must become effective before clinical trials may begin. The central focus of an IND submission is on the general investigational plan and the protocol(s) for clinical trials. The IND also includes the results of animal and *in vitro* 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. Some long-term preclinical testing may continue after the IND is submitted. The IND automatically becomes effective 30 days after receipt by the FDA, unless the FDA, within the 30-day time period, raises concerns or questions about the conduct of the clinical trial, including concerns that human research subjects will be exposed to unreasonable health risks, and imposes a full or partial clinical hold. FDA must notify the sponsor of the grounds for the hold and any identified deficiencies must be resolved before the clinical trial can begin. Submission of an IND may result in the FDA not allowing clinical trials to commence or not allowing clinical trials to commence on the terms originally specified in the IND. A clinical hold can also be imposed once a trial has already begun, thereby halting the trial until the deficiencies articulated by FDA are corrected.

The clinical stage of development involves the administration of the development candidate to healthy volunteers or patients under the supervision of qualified investigators, who generally are physicians not employed by or under the trial sponsor's control, in accordance with GCP requirements, which include the requirements that all research subjects provide their informed consent for their participation in any clinical trial. Clinical trials are conducted under protocols detailing, among other things, the objectives of the clinical trial, dosing procedures, subject selection and exclusion criteria and the parameters and criteria to be used in monitoring safety and evaluating effectiveness. Each protocol, and any subsequent amendments to the protocol, must be submitted to the FDA as part of the IND. Furthermore, each clinical trial must be reviewed and approved by an IRB for each institution at which the clinical trial will be conducted to ensure that the risks to individuals participating in the clinical trials are minimized and are reasonable compared to the anticipated benefits. The IRB also approves the informed consent form that must be provided to each clinical trial subject or his or her legal representative and must monitor the clinical trial until completed. The FDA, the IRB, or the sponsor may suspend or discontinue a clinical trial at any time on various grounds, including a finding that the subjects are being exposed to an unacceptable health risk. There also are requirements governing the reporting of ongoing clinical trials and completed clinical trials to public registries. Information about clinical trials, including results for clinical trials other than Phase 1 investigations, must be submitted within specific timeframes for publication on www.ClinicalTrials.gov, a clinical trials database maintained by the National Institutes of Health.

Additionally, some clinical trials are overseen by an independent group of qualified experts organized by the trial sponsor, known as a data safety monitoring board or committee. This group provides authorization for whether or not a clinical trial may move forward at designated check points based on access that only the group maintains to available data from the trial and may recommend halting the clinical trial if it determines that the participants or patients are being exposed to an unacceptable health risk or other grounds, such as no demonstration of efficacy. Other reasons for suspension or termination may be made by us based on evolving business objectives and/or competitive climate.

A sponsor who wishes to conduct a clinical trial outside of the United States may, but need not, obtain FDA authorization to conduct the clinical trial under an IND. If a foreign clinical trial is not conducted under an IND, FDA will nevertheless accept the results of the study in support of an NDA if the study was well-designed and well-conducted in accordance with GCP requirements, including that the clinical trial was performed by a qualified investigator(s); the data are applicable to the U.S. population and U.S. medical practice; and the FDA is able to validate the data through an onsite inspection if deemed necessary.

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

- *Phase 1* – Phase 1 clinical trials involve initial introduction of the investigational product in a limited population of healthy human volunteers or patients with the target disease or condition. These studies are typically designed to test the safety, dosage tolerance, absorption, metabolism and distribution of the investigational product in humans, excretion the side effects associated with increasing doses, and, if possible, to gain early evidence of effectiveness.
- *Phase 2* – Phase 2 clinical trials typically involve administration of the investigational product to a limited patient population with a specified disease or condition to evaluate the drug's potential efficacy, to determine the optimal dosages and dosing schedule and to identify possible adverse side effects and safety risks.
- *Phase 3* – Phase 3 clinical trials typically involve administration of the investigational product to an expanded patient population to further evaluate dosage, to provide statistically significant evidence of clinical efficacy and to further test for safety, generally at multiple geographically dispersed clinical trial sites. These clinical trials are intended to establish the overall risk/benefit ratio of the investigational product and to provide an adequate basis for product approval and physician labeling. Generally, two adequate and well-controlled Phase 3 trials are required by the FDA for approval of an NDA.

Post-approval trials, sometimes referred to as Phase 4 clinical trials or post-marketing studies, may be conducted after initial marketing approval. These trials are used to gain additional experience from the treatment of patients in the intended therapeutic indication and are commonly intended to generate additional safety data regarding use of the product in a clinical setting. In certain instances, the FDA may mandate the performance of Phase 4 clinical trials as a condition of NDA approval.

Progress reports detailing the results of the clinical trials, among other information, must be submitted at least annually to the FDA. Written IND safety reports must be submitted to the FDA and the investigators fifteen days after the trial sponsor determines the information qualifies for reporting for serious and unexpected suspected adverse events, findings from other studies or animal or *in vitro* testing that suggest a significant risk for human volunteers and any clinically important increase in the rate of a serious suspected adverse reaction over that listed in the protocol or investigator brochure. The sponsor must also notify the FDA of any unexpected fatal or life-threatening suspected adverse reaction as soon as possible but in no case later than seven calendar days after the sponsor's initial receipt of the information. During the development of a new drug product, sponsors have the opportunity to meet with the FDA at certain points, including prior to submission of an IND, at the end of Phase 2 and

before submission of an NDA. These meetings can provide an opportunity for the sponsor to share information about the data gathered to date and for the FDA to provide advice on the next phase of development.

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

U.S. Review and Approval Process for Drugs

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

The FDA reviews all submitted NDAs to ensure they are sufficiently complete to permit substantive review before it accepts them for filing and may request additional information rather than accepting the NDA for filing. The FDA must make a decision on accepting an NDA for filing within 60 days of receipt, and such decision could include a refusal to file by the FDA. Once the submission is accepted for filing, the FDA begins an in-depth substantive review of the NDA. The FDA reviews an NDA to determine, among other things, whether the product is safe and effective for the indications sought and whether the facility in which it is manufactured, processed, packaged or held meets standards, including cGMP requirements, designed to assure and preserve the product's continued identity, strength, quality and purity. Under the goals and polices agreed to by the FDA under the Prescription Drug User Fee Act, or PDUFA, the FDA targets ten months, from the filing date, in which to complete its initial review of a new molecular entity NDA and respond to the applicant, and six months from the filing date of a new molecular entity NDA for priority review. The FDA does not always meet its PDUFA goal dates for standard or priority NDAs, and the review process is often extended by FDA requests for additional information or clarification.

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

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

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

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

After evaluating the NDA and all related information, including the advisory committee recommendation, if any, and inspection reports regarding the manufacturing facilities and clinical trial sites, the FDA may issue an approval letter, or, in some cases, a Complete Response Letter. A Complete Response Letter indicates that the review cycle of the application is complete and

the application is not ready for approval. A Complete Response Letter generally contains a statement of specific conditions that must be met in order to secure final approval of the NDA, 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 require additional clinical or preclinical testing or recommend other actions, such as requests for additional information or clarification, that the applicant might take in order for the FDA to reconsider the application. Even with submission of this additional information, the FDA ultimately may decide that the application does not satisfy the regulatory criteria for approval. If and when those conditions have been met to the FDA's satisfaction, the FDA will typically issue an approval letter. An approval letter authorizes commercial marketing of the product with specific prescribing information for specific indications.

Even if the FDA approves a product, depending on the specific risk(s) to be addressed it may limit the approved indications for use of the product, require that contraindications, warnings or precautions be included in the product labeling, require that post-approval studies, including Phase 4 clinical trials, be conducted to further assess a product's safety after approval, require testing and surveillance programs to monitor the product after commercialization, or impose other conditions, including distribution and use restrictions or other risk management mechanisms under a REMS, which can materially affect the potential market and profitability of the product. The FDA may prevent or limit further marketing of a product based on the results of post-marketing studies or surveillance programs. After approval, some types of changes to the approved product, such as adding new indications, manufacturing changes, and additional labeling claims, are subject to further testing requirements and FDA review and approval.

Orphan Drug Designation and Exclusivity

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

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

The FDA may further reevaluate its regulations and policies under the Orphan Drug Act. It is unclear as to how, if at all, the FDA may change the orphan drug regulations and policies in the future.

Expedited Development and Review Programs for Drugs

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

A new drug is eligible for Fast Track designation if it is intended to treat a serious or life-threatening disease or condition and demonstrates the potential to address unmet medical needs for such disease or condition. Fast track designation applies to the combination of the development candidate and the specific indication for which it is being studied. Fast Track designation provides increased opportunities for sponsor interactions with the FDA during preclinical and clinical development, in addition to the potential for rolling review once a marketing application is filed. Rolling review means that the FDA may review portions of the marketing application before the sponsor submits the complete application.

In addition, a new drug may be eligible for Breakthrough Therapy designation if it is intended to treat a serious or life-threatening disease or condition and preliminary clinical evidence indicates that the drug, alone or in combination with one or more other drugs, may demonstrate substantial improvement over existing therapies on one or more clinically significant endpoints, such as substantial treatment effects observed early in clinical development. Breakthrough Therapy designation provides all the features of Fast Track designation in addition to intensive guidance on an efficient product development program beginning as early as Phase 1, and FDA organizational commitment to expedited development, including involvement of senior managers and experienced review staff in a cross-disciplinary review, where appropriate.

Any product submitted to the FDA for approval, including a product with Fast Track or Breakthrough Therapy designation, may also be eligible for additional FDA programs intended to expedite the review and approval process, including Priority Review designation and Accelerated Approval. A product is eligible for Priority Review, once an NDA is submitted, if the product that is the subject of the marketing application has the potential to provide a significant improvement in safety or effectiveness in the treatment, diagnosis or prevention of a serious disease or condition. Under priority review, the FDA's goal date to take action on the marketing application is six months compared to ten months for a standard review.

Products are eligible for Accelerated Approval if they can be shown to have an effect on a surrogate endpoint that is reasonably likely to predict clinical benefit, or an effect on a clinical endpoint that can be measured earlier than an effect on irreversible morbidity or mortality, which is reasonably likely to predict an effect on irreversible morbidity or mortality or other clinical benefit, taking into account the severity, rarity, or prevalence of the condition and the availability or lack of alternative treatments. Accelerated Approval is usually contingent on a sponsor's agreement to conduct, in a diligent manner, adequate and well-controlled additional post-approval confirmatory studies to verify and describe the product's clinical benefit, and under the Food and Drug Omnibus Reform Act of 2022, or FDORA, the FDA may require, as appropriate, that such trials be underway prior to approval or within a specific time period after the date of approval for a product granted accelerated approval. Further, under FDORA, the FDA has increased authority for expedited procedures to withdraw approval of a product or an indication approved under Accelerated Approval if, for example, the confirmatory trial fails to verify the predicted clinical benefit of the product. In addition, for products being considered for Accelerated Approval, the FDA generally requires, unless otherwise informed by the agency, that all advertising and promotional materials intended for dissemination or publication within 120 days of marketing approval be submitted to the agency for review during the pre-approval review period. After the 120-day period has passed, all advertising and promotional materials must be submitted at least 30 days prior to the intended time of initial dissemination or publication.

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

U.S. Post-Approval Requirements for Drugs

Drugs manufactured or distributed pursuant to FDA approvals are subject to continuing regulation by the FDA, including, among other things, requirements relating to recordkeeping, periodic reporting, product sampling and distribution, reporting of adverse experiences with the product, complying with promotion and advertising requirements, which include restrictions on promoting products for unapproved uses or patient populations (known as "off-label use") and limitations on industry-sponsored scientific and educational activities.

Although physicians may prescribe approved products for off-label uses, manufacturers may not market or promote such uses. The FDA and other agencies actively enforce the laws and regulations prohibiting the promotion of off-label uses, including not only by company employees but also by agents of the company or those speaking on the company's behalf, and a company that is found to have improperly promoted off-label uses may be subject to significant liability, including investigation by federal and state authorities. Failure to comply with these requirements can result in, among other things, adverse publicity, warning letters, corrective advertising and potential civil and criminal penalties. Promotional materials for approved drugs must be submitted to the FDA in conjunction with their first use or first publication. Further, if there are any modifications to the drug,

including changes in indications, labeling or manufacturing processes or facilities, the applicant may be required to submit and obtain FDA approval of a new NDA or NDA supplement, which may require the development of additional data or preclinical studies and clinical trials.

The FDA may impose a number of post-approval requirements as a condition of approval of an NDA. For example, the FDA may require post-market testing, including Phase 4 clinical trials, and surveillance to further assess and monitor the product's safety and effectiveness after commercialization. In addition, manufacturers and their subcontractors involved in the manufacture and distribution of approved drugs and those supplying products, ingredients and components of them, are required to register their establishments with the FDA and certain state agencies and are subject to periodic unannounced inspections by the FDA and certain state agencies for compliance with ongoing regulatory requirements, including cGMPs, which impose certain procedural and documentation requirements on sponsors and their CMOs. Changes to the manufacturing process are strictly regulated, and, depending on the significance of the change, may require prior FDA approval before being implemented. FDA regulations also require investigation and correction of any deviations from cGMP and impose reporting requirements upon us and any third-party manufacturers that a sponsor may use. Additionally, manufacturers and other parties involved in the drug supply chain for prescription drugs must also comply with product tracking and tracing requirements and for notifying FDA of counterfeit, diverted, stolen and intentionally adulterated products or products that are otherwise unfit for distribution in the United States. Accordingly, manufacturers must continue to expend time money and effort in the area of production and quality control to maintain compliance with cGMP and other aspects of regulatory compliance. Failure to comply with statutory and regulatory requirements may subject a manufacturer to possible legal or regulatory action, such as warning letters, suspension of manufacturing, product seizures, injunctions, civil penalties or criminal prosecution. There is also a continuing, annual program user fee for any marketed product.

The FDA may withdraw approval of a product 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, requirements for post-market studies or clinical trials to assess new safety risks, or imposition of distribution or other restrictions under a REMS. Other potential consequences include, among other things:

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

U.S. Patent Term Restoration and Marketing Exclusivity

Depending upon the timing, duration and specifics of FDA approval of our future development candidates, some of our United States patents may be eligible for limited patent term extension under the Drug Price Competition and Patent Term Restoration Act of 1984, commonly referred to as the Hatch-Waxman Amendments. The Hatch-Waxman Amendments permit restoration of the patent term of up to five years as compensation for patent term lost during the FDA regulatory review process. Patent term restoration, however, cannot extend the remaining term of a patent beyond a total of 14 years from the product's approval date and only those claims covering such approved drug product, a method for using it or a method for manufacturing it may be extended. The patent term restoration period is generally one-half the time between the effective date of an IND and the submission date of an NDA plus the time between the submission date of an NDA and the approval of that application, except that the review period is reduced by any time during which the applicant failed to exercise due diligence. Only one patent applicable to an approved drug is eligible for the extension and the application for the extension must be submitted prior to the expiration of the patent. The USPTO, in consultation with the FDA, reviews and approves the application for any patent term

extension or restoration. In the future, we may apply for restoration of patent term for our currently owned or licensed patents to add patent life beyond a patent's current expiration date, depending on the expected length of the clinical trials and other factors involved in the filing of the relevant NDA.

Marketing exclusivity provisions under the FD&C Act also can delay the submission or the approval of certain drug product applications. The FD&C Act provides a five-year period of non-patent marketing exclusivity within the United States to the first applicant to gain approval of an NDA for a new chemical entity. A drug is a new chemical entity if the FDA has not previously approved any other new drug containing the same active moiety, which is the molecule or ion responsible for the action of the drug substance. During the exclusivity period, the FDA may not accept for review an Abbreviated New Drug Application, or ANDA, or a 505(b)(2) NDA submitted by another company for another version of such drug where the applicant does not own or have a legal right of reference to all the data required for approval. However, an application may be submitted after four years if it contains a certification of patent invalidity or non-infringement. The FD&C Act also provides three years of marketing exclusivity for an NDA, 505(b)(2) NDA or supplement to an existing NDA if new clinical investigations, other than bioavailability studies, that were conducted or sponsored by the applicant are deemed by the FDA to be essential to the approval of the application, for example, new indications, dosages or strengths of an existing drug. This three-year exclusivity covers only the conditions of use associated with the new clinical investigations and does not prohibit the FDA from approving ANDAs for drugs containing the original active agent. Five-year and three-year exclusivity will not delay the submission or approval of a full NDA. However, an applicant submitting a full NDA would be required to conduct or obtain a right of reference to all of the preclinical studies and adequate and well-controlled clinical trials necessary to demonstrate safety and effectiveness.

Privacy and Cybersecurity

Our operations entail the collection, use, disclosure, transfer, and processing of sensitive and personal information. These operations subject us to privacy and data security laws and regulations in the United States, Europe and internationally. Our operations extend to commercial partnerships and third-party processors, each of which may be governed by their distinct privacy regulations and data security laws. These laws are constantly evolving and subject to varying interpretations, requiring us to periodically update our policies and measures to maintain compliance.

With respect to Europe, we are subject to the European data protection laws where we collect and use personal information relating to Europe in certain circumstances, including to conduct and enroll subjects in clinical trials in the United Kingdom, or the UK, European Union, or the EU, or the European Economic Area, or the EEA. This includes the EU General Data Protection Regulation, or EU GDPR, the UK General Data Protection Regulation, or UK GDPR, as well as applicable data protection laws in effect in the Member States of the EEA and in the UK (including the UK Data Protection Act 2018) that govern the processing of personal information (known as "personal data" under the GDPR) in connection with the offering goods or services to individuals in the EEA and UK; monitoring the behavior of individuals in the EEA and UK; or the activities of an establishment in the EEA and UK. The UK's data protection regime is independent from but aligned to the EU's data protection regime. In this Annual Report on Form 10-K, "GDPR" refers to both the EU GDPR and the UK GDPR, unless specified otherwise. The GDPR is wide-ranging in scope and imposes numerous obligations on companies that process personal information, including (i) stringent requirements on the processing of health and other sensitive data, (ii) providing information to individuals regarding data processing activities; (iii) ensuring a legal basis or condition applies to the processing of personal data and, where applicable, obtaining consent from individuals to whom the data processing relates; (iv) responding to data subject requests; (v) imposing requirements to notify the competent national data protection authorities and data subjects of personal data breaches; (vi) implementing safeguards in connection with the security and confidentiality of the personal data; (vii) accountability requirements; and (viii) taking certain measures when engaging third-party processors. The GDPR's definition of personal data includes coded data, and it requires changes to informed consent practices and detailed notices for clinical trial subjects and investigators. The GDPR also imposes strict rules on the transfer of personal data to countries outside of the EEA and the UK that do not ensure an adequate level of protection, including the United States in certain circumstances, unless derogation exists or a valid GDPR transfer mechanism (for example, the European Commission approved Standard Contractual Clauses, or the SCCs, and the UK International Data Transfer Agreement or Addendum, or the UK IDTA, have been put in place. Where relying on the SCCs or the UK IDTA for data transfers, transfer impact assessments are required to assess whether the recipient is subject to local laws which allow public authority access to personal data. Failure to implement valid mechanisms for personal data transfers from Europe may result in increased exposure to regulatory actions, substantial fines and injunctions against processing personal data from Europe. Inability to export personal data may also: (i) restrict our activities outside Europe; (ii) limit the ability to collaborate with partners as well as other service providers, contractors and other companies outside of Europe; and/or (iii) require us to increase our processing capabilities within Europe at significant expense or otherwise cause us to change the geographical location or segregation of our relevant systems and operations – any or all of which could adversely affect our operations or financial results.

The GDPR provides that EU member states or the UK may make their own further laws and regulations limiting the processing of personal data, including genetic, biometric, or health data. In addition, following the UK's exit from the EU, or Brexit, there is increasing scope for divergence in application, interpretation and enforcement of the data protection laws between these territories. For example, the UK has recently introduced a new Data (Use and Access) Bill. This development could reshape the UK's data protection landscape, distancing it from the EU's data protection regime and threaten the UK adequacy decision from the EU Commission allowing the free flow of personal data from the UK to the EEA, which may lead to additional compliance costs and could increase our overall risk. This lack of clarity on future UK laws and regulations and their interaction with those of the EU could add legal risk, uncertainty, complexity, and cost; and any resulting divergence in laws could increase our risk profile and necessitate further compliance measures.

Failure to comply with the GDPR can result in significant practical, legal, and financial repercussions, including the destruction of improperly gathered or used personal data, substantial fines of up to €20 million (£17.5 million for the UK) or 4% of the company's global annual turnover, mandatory audits, orders to cease or modify data use, and a private right of action enabling data subjects and consumer associations to lodge complaints with supervisory authorities, seek judicial remedies, and obtain compensation for damages resulting from violations of the GDPR.

In the United States, privacy and security of personal information are regulated by various federal and state laws, such as health information privacy laws, comprehensive state privacy laws, security breach notification laws, and consumer protection laws. At the state level, numerous states now have comprehensive privacy laws in effect, adding complexity, variation in requirements, restrictions and potential legal risk requiring additional investment of resources in compliance programs. These laws impose certain obligations on covered businesses, including obligations to provide specific disclosures in privacy notices and affording individuals certain rights concerning their personal data. While existing state comprehensive privacy laws exempt some data processed in the context of clinical trials, these developments may further complicate compliance efforts, and increase legal risk and compliance costs for us and the third parties upon whom we rely.

Federal and state legislators and regulators in the United States are also imposing new and heightened protections for health and other sensitive information that could impact our business. For example, the Federal Trade Commission, or the FTC, has imposed stringent requirements on the collection and disclosure of sensitive categories of personal information, including health information, and has expanded the application of its Health Breach Notification Rule. Through executive and legislative action, the federal government has also taken steps to restrict data transactions involving certain sensitive data categories – including health data, genetic data, and biospecimens – with persons affiliated with China, Russia, and other countries of concern. Additionally, a small number of states have passed or are considering laws governing the privacy of consumer health data. Washington's My Health My Data Act, which went into effect in March 2024, requires regulated entities to obtain consent to collect health information, grants consumers certain rights, including to request deletion, and provides for robust enforcement mechanisms, including enforcement by the state attorney-general and by litigants through a private right of action for consumer claims. These current and future data privacy laws and regulations may require us to modify our data collection or processing practices and policies, incur substantial costs and expenses in an effort to comply and increase our potential exposure to regulatory enforcement, reputational damage, and/or litigation.

Further, regulators and legislators in the United States are increasingly scrutinizing and restricting certain personal data transfers and transactions involving foreign countries. For example, the Department of Justice's January 8, 2025, rule on "Preventing Access to U.S. Sensitive Personal Data and Government-Related Data by Countries of Concern or Covered Persons," prohibits data brokerage transactions involving certain sensitive personal data categories, including health data, genetic data, and biospecimens, to countries of concern, including China. The regulations also restrict certain investment agreements, employment agreements and vendor agreements involving such data and countries of concern, absent specified cybersecurity controls. Actual or alleged violations of these regulations may be punishable by criminal and/or civil sanctions, and may result in exclusion from participation in federal and state programs.

There is a further risk that we may not be able to adequately protect our information systems from cyberattacks. Such security breaches, incidents and compromises could result in the disclosure of confidential, protected, or personal information, damage our reputation, and expose us to significant financial and legal exposure, including potential civil fines and penalties, litigation, and regulatory investigations or enforcement actions under laws such as HIPAA and the GDPR. Further, all 50 states in the United States have laws including obligations to provide notification of unauthorized acquisition of personal information to affected individuals, state officers and others. Some laws may also impose physical and electronic security requirements regarding the safeguarding of personal information. In order to comply with privacy and information security laws, we have confidentiality and information security standards and procedures in place for our business activities.

Compliance with these multifaceted privacy and data security laws can be time-consuming, and failure to comply with any of these regulations could lead to significant fines and penalties (potentially including criminal prosecution), adversely affecting our reputation, business, financial condition, and operational results. Changes in statutes, regulations, or interpretations of existing

regulations could impose additional requirements on our operations, such as modifications to data processing arrangements, changes to privacy policies, recall or discontinuation of certain data processing methods, or additional recordkeeping requirements. These changes could adversely affect the operation of our business.

In addition to the risks outlined above, the legal or regulatory actions may also divert our management from their primary operations. Prohibitions, restrictions, or allegations of violations of these laws could materially and adversely affect our business. Hence, ensuring consistent compliance with privacy and data security laws and regulations remains a critical operational imperative for us.

Other Regulatory Matters

Manufacturing, labeling, packaging, distribution, sales, promotion and other activities of development candidates following product approval, where applicable, or commercialization are also potentially subject to federal and state consumer protection and unfair competition laws, among other requirements to which we may be subject. Additionally, the activities associated with the commercialization of development candidates are subject to regulation by numerous regulatory authorities in the United States in addition to the FDA, which may include the Centers for Medicare and Medicaid Services, or CMS, other divisions of the U.S. Department of Health and Human Services, the Department of Justice, the Drug Enforcement Administration, the Consumer Product Safety Commission, the Federal Trade Commission, the Occupational Safety & Health Administration, the Environmental Protection Agency and state and local governments and governmental agencies.

The distribution of pharmaceutical drugs is subject to additional requirements and regulations, including extensive recordkeeping, licensing, storage and security requirements intended to prevent the unauthorized sale of such pharmaceutical products.

The failure to comply with any of these laws or regulatory requirements may subject firms to legal or regulatory action. Depending on the circumstances, failure to meet applicable regulatory requirements can result in criminal prosecution, fines or other penalties, injunctions, exclusion from federal healthcare programs, requests for recall, seizure of products, total or partial suspension of production, denial or withdrawal of product approvals, relabeling or repackaging, or refusal to allow a firm to enter into supply contracts, including government contracts. Any claim or action against us for violation of these laws, even if we successfully defend against it, could cause us to incur significant legal expenses and divert our management's attention from the operation of our business. Prohibitions or restrictions on marketing, sales or withdrawal of future products marketed by us could materially affect our business in an adverse way.

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

Regulation Outside of the United States

In addition to regulations in the United States, we are subject to a variety of regulations in other jurisdictions governing clinical studies, commercial sales, and distribution of our products. Most countries outside of the United States require that clinical trial applications be submitted to and approved by the local regulatory authority for each clinical study. Whether or not we obtain FDA approval for a product, we must obtain approval of a product by the comparable regulatory authorities of countries outside the United States before we can commence marketing of the product in those countries. The approval process and requirements vary from country to country, so the number and type of nonclinical, clinical, and manufacturing studies needed may differ, and the time may be longer or shorter than that required for FDA approval.

Regulatory Framework in the EU and United Kingdom

In the EU an application must be submitted to the national competent authority and an independent ethics committee in each country in which we intend to conduct clinical trials, much like the FDA and IRB, respectively. Under the new CTR (EU) No 536/2014, which replaced the Clinical Trials Directive 2001/20/EC on January 31, 2022, a single application is now made through the Clinical Trials Information System, or CTIS, for clinical trial authorization in up to 30 EU/EEA countries at the same time and with a single set of documentation.

The assessment of applications for clinical trials is divided into two parts (Part I contains scientific and medicinal product documentation and Part II contains the national and patient-level documentation). Part I is assessed by a coordinated review by the competent authorities of all EU Member States in which an application for authorization of a clinical trial has been submitted, or Member States concerned of a draft report prepared by a Reference Member State. Part II is assessed separately by each

Member State concerned. The role of the relevant ethics committees in the assessment procedure will continue to be governed by the national law of the Member State concerned, however overall related timelines are defined by the CTR. The new CTR also provides for simplified reporting procedures for clinical trial sponsors.

To obtain regulatory approval of our medicinal products under the EU's regulatory system, we are required to submit a marketing authorization application, or MAA, to be assessed in the centralized procedure. The centralized procedure allows applicants to obtain a marketing authorization, or MA, that is valid throughout the EU, and the additional Member States of the European Economic Area (Iceland, Liechtenstein and Norway), or EEA. It is compulsory for medicinal products manufactured using biotechnological processes, orphan medicinal products, advanced therapy medicinal products (gene-therapy, somatic cell-EU and which is intended for the treatment of HIV, AIDS, cancer, neurodegenerative disorders, auto-immune and other immune dysfunctions, viral diseases or diabetes). The centralized procedure is optional for any other products containing new active substances not authorized in the EU or for products which constitute a significant therapeutic, scientific, or technical innovation or for which a centralized authorization is in the interests of patients at EU level. When a company wishes to place on the market a medicinal product that is eligible for the centralized procedure, it sends an application directly to the European Medicines Agency, or EMA, to be assessed by the Committee for Medicinal Products for Human Use, or CHMP. The CHMP is responsible for conducting the assessment of whether a medicine meets the required quality, safety, and efficacy requirements, and whether the product has a positive risk/benefit profile. Once the CHMP has completed its assessment, the CHMP will give a favorable or unfavorable opinion as to whether to grant the authorization. The time limit for the evaluation procedure is 210 days (excluding clock stops, when additional written or oral information is to be provided by the applicant in response to questions asked by the CHMP). The EMA then has fifteen days to forward its opinion to the European Commission, which will make a binding decision on the grant of an MA within 67 days of the receipt of the CHMP opinion.

The criteria for designating an "orphan medicinal product" in the EU are similar in principle to those in the United States. Under Article 3 of Regulation (EC) 141/2000, a medicinal product may be designated as an orphan medicinal product if it is intended for the diagnosis, prevention, or treatment of a life-threatening or chronically debilitating condition that affects no more than five in 10,000 persons in the EU when the application is made. In addition, orphan designation can be granted if the product is intended for a life threatening, seriously debilitating, or serious and chronic condition in the EU and when, without incentives, it is unlikely that sales of the product in the EU would be sufficient to justify the necessary investment in its development. Orphan designation is only available if there is no other satisfactory method approved in the EU of diagnosing, preventing, or treating the applicable orphan condition, or if such a method exists, the proposed orphan medicinal product will be of significant benefit to patients affected by such condition, as defined in Regulation (EC) 847/2000.

Orphan designation provides opportunities for fee reductions, protocol assistance, and access to the centralized procedure. In addition, if a product which has an orphan designation subsequently receives a centralized MA for the indication for which it has such designation, the product is entitled to orphan market exclusivity, which means the EMA may not approve any other application to market a similar medicinal product for the same indication for a period of ten years. A "similar medicinal product" is defined as a medicinal product containing a similar active substance or substances as contained in an authorized orphan medicinal product, and which is intended for the same therapeutic indication. The exclusivity period may be reduced to six years if, at the end of the fifth year, it is shown that the designation criteria are no longer met, including where it is shown that the product is sufficiently profitable not to justify maintenance of market exclusivity. Additionally, an MA may be granted to a similar medicinal product for the same indication at any time if:

- the second applicant can establish that its product, although similar to the authorized product, is safer, more effective or otherwise clinically superior;
- the MA holder of the authorized product consents to a second orphan medicinal product application; or
- the MA holder of the authorized product cannot supply enough orphan medicinal product.

A pediatric investigation plan, or PIP, in the European Union is aimed at ensuring that the necessary data are obtained to support the authorization of a medicine for children, through studies in children. All applications for MAs for new medicines have to include the results of studies as described in an agreed PIP, unless the medicine is exempt because of a deferral or waiver. This requirement also applies when an MA holder wants to add a new indication, pharmaceutical form, or route of administration for a medicine that is already authorized and covered by intellectual property rights. Several rewards and incentives for the development of pediatric medicines for children are available in the EU. Medicines authorized across the EU with the results of studies from a PIP included in the product information are eligible for an extension of their supplementary protection certificate, or SPC, by six months (provided an application for such extension is made at the same time as filing the SPC application for the product, or at any point up to two years before the SPC expires). This is the case even when the studies' results are negative. For orphan medicinal products, the incentive is an additional two years of market exclusivity. Scientific advice and protocol assistance at the EMA are free of charge for questions relating to the development of pediatric medicines.

In March 2016, the EMA launched an initiative, the Priority Medicines scheme, or the PRIME scheme, to facilitate development of development candidates in indications, often rare, for which few or no therapies currently exist. The PRIME scheme is intended to encourage development of products in areas of unmet medical need and provides accelerated assessment of products representing substantial innovation reviewed under the centralized procedure. Products from small- and medium-sized enterprises may qualify for earlier entry into the PRIME scheme than larger companies on the basis of compelling non-clinical data and tolerability data from initial clinical trials. Many benefits accrue to sponsors of development 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. Importantly, once a candidate medicine has been selected for the PRIME scheme, a dedicated contact and rapporteur from the CHMP or from the Committee for Advanced Therapies, or CAT, are appointed early in the PRIME scheme facilitating increased understanding of the product at EMA's committee level. An initial meeting with the CHMP/CAT rapporteur initiates these relationships and includes a team of multidisciplinary experts at the EMA to provide guidance on the overall development and regulatory strategies. PRIME eligibility does not change the standards for product approval, and there is no assurance that any such designation or eligibility will result in expedited review or approval. The aforementioned EU rules are generally applicable in the EEA. The United Kingdom left the EU on January 31, 2020.

The United Kingdom have concluded a trade and cooperation agreement, or TCA, which was provisionally applicable since January 1, 2021 and has been formally applicable since May 1, 2021. The TCA includes specific provisions concerning pharmaceuticals, which include the mutual recognition of GMP, inspections of manufacturing facilities for medicinal products and GMP documents issued, but does not provide for wholesale mutual recognition of United Kingdom and EU pharmaceutical regulations. At present, Great Britain has implemented EU legislation on the marketing, promotion and sale of medicinal products through the Human Medicines Regulations 2012 (as amended). Except in respect of the new EU Clinical Trials Regulation, the regulatory regime in Great Britain therefore largely aligns with current EU medicines regulations, however it is possible that these regimes will diverge more significantly in future now that Great Britain's regulatory system is independent from the EU and the TCA does not provide for mutual recognition of United Kingdom and EU pharmaceutical legislation. However, notwithstanding that there is no wholesale recognition of EU pharmaceutical legislation under the TCA, under a new framework which will be put in place by the Medicines and Healthcare products Regulatory Agency, or MHRA, the United Kingdom's medicines regulator, from January 1, 2024, the MHRA will take into account decisions on the approval of MAs from the EMA (and certain other regulators) when considering an application for a Great Britain MA.

On February 27, 2023, the United Kingdom government and the European Commission announced a political agreement in principle to replace the Northern Ireland Protocol with a new set of arrangements, known as the "Windsor Framework". This new framework fundamentally changes the existing system under the Northern Ireland Protocol, including with respect to the regulation of medicinal products in the United Kingdom. In particular, the MHRA will be responsible for approving all medicinal products destined for the United Kingdom market (i.e., Great Britain and Northern Ireland), and the EMA will no longer have any role in approving medicinal products destined for Northern Ireland. A single United Kingdom-wide MA will be granted by the MHRA for all medicinal products to be sold in the United Kingdom, enabling products to be sold in a single pack and under a single authorization throughout the United Kingdom. On June 9, 2023, the MHRA announced that the medicines aspects of the Windsor Framework will apply after January 1, 2025.

There is now no pre-MA orphan designation in Great Britain. Instead, the MHRA reviews applications for orphan designation in parallel to the corresponding MAA. The criteria are essentially the same, but have been tailored for the Great Britain market, i.e., the prevalence of the condition in Great Britain (rather than the EU) must not be more than five in 10,000. Should an orphan designation be granted, the period or market exclusivity will be set from the date of first approval of the product in Great Britain or the EU, wherever is earliest.

Regulatory Framework in Australia

We conducted the REWRITE Phase 1/2a trial in Australia and may, in the future, conduct additional clinical trials in Australia. The Therapeutic Goods Administration, or TGA, and the National Health and Medical Research Council set the legislative, regulatory and good clinical practice requirements for conducting clinical research in Australia, and compliance with these laws and codes is mandatory. Australia has also adopted international codes, such as those promulgated by the International Council for Harmonization of Technical Requirements for Registration of Pharmaceuticals for Human Use, or ICH. The ICH guidelines, as annotated by teh TGA, must be complied with across all fields of clinical research, including those related to pharmaceutical quality, nonclinical and clinical data requirements and trial designs. The basic requirements for preclinical data to support a first-in-human trial under ICH guidelines are applicable in Australia, and will form part of the Common Technical Document for the registration of medicines. Requirements related to adverse event reporting in Australia are similar to those required in other major jurisdictions.

The Therapeutic Goods Act 1989 and related regulations establish and maintain the national system of controls relating to the efficacy, quality, safety and timely availability of drugs and medical devices in Australia. The TGA is the Australian regulatory authority for therapeutic goods. The TGA describes its remit as being to safeguard and enhance the health of the Australian community through effective and timely regulation of therapeutic goods. The TGA administers two pathways for clinical trials, the Clinical Trials Notification, or CTN, and Clinical Trials Approval, or CTA, schemes. These provide an avenue through which 'unapproved' therapeutic goods may be lawfully supplied for use solely for experimental purposes in humans. The choice of which route to use (CTN or CTA) lies firstly with the Australian clinical trial sponsor and then with the Human Research Ethics Committee, or HREC, that approves the protocol. The CTA pathway, requiring prior regulatory approval, is generally designed for high-risk or novel treatments where there is no or limited knowledge of safety.

Clinical trials of medicines and biologicals typically proceed through 'phases' of development, which generally follow: Phase 1 (human pharmacology), Phase 2 (therapeutic exploratory), and Phase 3 (therapeutic confirmatory). Phase 4 may be conducted for post-marketing surveillance or resolution of treatment uncertainties. Clinical development pathways are becoming less rigid with respect to phase and seamless adaptive trial designs and other cross-phase studies exist.The use of therapeutic goods in any clinical trial must be in accordance with the Guideline for Good Clinical Practice, the National Statement on Ethical Conduct in Human Research and the protocol approved by the HREC responsible for monitoring the conduct of the trial. The trial sponsor must also comply with the requirements of any other Commonwealth and/or state and territory legislation in relation to clinical trials and the supply of therapeutic goods.

Approval for inclusion in the Australian Register of Therapeutic Goods, or ARTG, is required before a pharmaceutical product that is not otherwise the subject of a relevant exemption or exclusion may be marketed (or imported, exported, manufactured or supplied) in Australia. In order to obtain registration of the product on the ARTG, it is required that:

- adequate and well-controlled clinical trials demonstrate the quality, safety and efficacy of the therapeutic product;
- evidence is compiled which demonstrates that the manufacture of the therapeutic product complies with the principles of cGMP;
- manufacturing and clinical data is derived to submit to the relevant independent advisory committee to the TGA, which makes recommendations as to whether or not to grant approval to include the therapeutic product in the ARTG; for example, the Advisory Committee on Medicines; and
- an ultimate decision is made by the Secretary of the Department of Health and Aged Care, via the TGA, whether to include the therapeutic product in the ARTG.

Therapeutic goods need to be entered on the ARTG before they can be supplied in Australia, unless a relevant exemption or exclusion applies. However, aside from use during an approved clinical trial, there are a limited ways that patients may gain access to such products or indications that have not been approved for use in Australia, for example:

- the Special Access Scheme allows a health practitioner to access an unapproved therapeutic good for an individual patient on a case-by-case basis;
- medical professionals can apply to the TGA to become an Authorised Prescriber of a specific unapproved good to specific patients with a particular medical condition. In some instances, doctors also need to have their application approved by a human research ethics committee or endorsed by a specialist college.

Pharmaceutical Coverage and Reimbursement

Patients in the United States and markets in other countries generally rely on third-party payors to cover and reimburse all or part of the costs associated with their treatment, including the cost of drugs. Adequate coverage and reimbursement from governmental healthcare programs, such as Medicare and Medicaid, and commercial payors is critical to new product acceptance for any product that we may commercialize. Our ability to successfully commercialize our development candidates will depend in part on the extent to which coverage and adequate reimbursement for these products and related treatments will be available from government health administration authorities, private health insurers and other organizations.

Additionally, the process for determining whether a third-party payor will provide coverage for a product may be separate from the process for setting the price or reimbursement rate that the payor will pay for the product once coverage is approved. Government authorities and other third-party payors, such as private health insurers and health maintenance organizations, decide which products they will pay for and establish reimbursement levels. Third-party payors are increasingly challenging the prices charged, examining the medical necessity, and reviewing the cost-effectiveness of medical products and services and imposing controls to manage costs (for example, formularies, prior authorization, step therapy, quantity limits, and site-of-care restrictions,

among other). Third-party payors may limit coverage for a product for narrower patient subpopulations or might not include all of the approved products for a particular indication. Net prices for products may also be reduced by mandatory discounts or rebates required by government healthcare programs or private payors and by any future relaxation of laws that presently restrict imports of products from countries where they may be sold at lower prices than in the United States. Increasingly, third-party payors are requiring that pharmaceutical companies provide them with predetermined discounts from list prices and are challenging the prices charged for medical products. 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 products to each payor separately, with no assurance that coverage and adequate reimbursement will be obtained. Even if coverage is provided, the approved reimbursement amount may not be high enough to allow us to establish or maintain pricing sufficient to realize a sufficient return on our investment.

There is also significant uncertainty related to the insurance coverage and reimbursement of newly approved products and coverage may be more limited than the purposes for which the medicine is approved by the FDA or comparable foreign regulatory authorities. In the United States, the principal decisions about reimbursement for new medicines are typically made by CMS. CMS decides whether and to what extent a new medicine will be covered and reimbursed under Medicare and private payors tend to follow CMS to a substantial degree.

We currently expect that any drugs we develop may need to be administered under the supervision of a physician on an outpatient basis. Under currently applicable U.S. law, certain drugs that are not usually self-administered (such as most injectable drugs) may be eligible for coverage under the Medicare Part B program if:

- they are incident to a physician's services;
- they are reasonable and necessary for the diagnosis or treatment of the illness or injury for which they are administered according to accepted standards of medical practice; and
- they have been approved by the FDA and meet other requirements of the statute.

Pharmaceutical companies whose products are reimbursed under Medicare Part B must calculate and report certain price reporting metrics to the government, such as average sales price, and best price. Penalties may apply in some cases when such metrics are not submitted accurately and timely. Further, these prices for development candidates may be reduced by mandatory discounts or rebates required by government healthcare programs.

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

Other Healthcare Laws

Pharmaceutical companies are subject to additional healthcare regulation and enforcement by the federal government and by authorities in the states and foreign jurisdictions in which they conduct their business that may constrain the financial arrangements and relationships through which we research, as well as sell, market and distribute any products for which we obtain marketing authorization. Such laws include, without limitation, (i) fraud and abuse laws, such as the federal Anti-Kickback Statute and federal and state false claims and related laws (including the False Claims Act and Civil Monetary Penalties Law); (ii) healthcare fraud and false statement statutes; (iii) privacy and security requirements for health information under HIPAA, as amended by HITECH, and analogous state and foreign data protection laws; (iv) transparency and reporting requirements, including the federal Physician Payments Sunshine Act and state equivalents; (v) federal and state drug price reporting and disclosure laws; and (vi) anti-corruption laws, including the Foreign Corrupt Practices Act and similar foreign requirements. Many state and foreign laws are broader than their federal counterparts, may apply regardless of payor, and may impose additional or different obligations. If our operations are found to be in violation of any of such laws or any other governmental

regulations that apply, we may be subject to penalties, including, without limitation, administrative, civil and criminal penalties, damages, fines, disgorgement, the curtailment or restructuring of operations, integrity oversight and reporting obligations, exclusion from participation in federal and state healthcare programs and responsible individuals may be subject to imprisonment.

Healthcare Reform Measures

Payors, whether domestic or foreign, or governmental or private, are developing increasingly sophisticated methods of controlling healthcare costs and those methods are not always specifically adapted for new technologies such as gene therapy and therapies addressing rare diseases such as those we are developing. In both the United States and certain foreign jurisdictions, there have been a number of legislative and regulatory changes to the health care system that could impact our ability to sell our products profitably. In particular, in 2010, the ACA was enacted, which, among other things, addressed a new methodology by which rebates owed by manufacturers under the Medicaid Drug Rebate Program are calculated for drugs that are inhaled, infused, instilled, implanted or injected; increased the minimum Medicaid rebates owed by most manufacturers under the Medicaid Drug Rebate Program; extended the Medicaid Drug Rebate program to utilization of prescriptions of individuals enrolled in Medicaid managed care organizations; subjected manufacturers to new annual fees and taxes for certain branded prescription drugs; created a Medicare Part D coverage gap discount program, in which manufacturers were required to agree to offer 70% point-of-sale discounts off negotiated prices of applicable brand drugs to eligible beneficiaries during their coverage gap period, as a condition for the manufacturer's outpatient drugs to be covered under Medicare Part D (later replaced under the Inflation Reduction Act with the Manufacturer Discount Program); and provided incentives to programs that increase the federal government's comparative effectiveness research.

Since its enactment, there have been numerous judicial, administrative, and executive, challenges to certain aspects of the ACA. In addition, other legislative changes have been proposed and adopted in the United States since the ACA was enacted. For example, the American Rescue Plan Act of 2021 eliminated 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, effective January 1, 2024. Further, the Budget Control Act of 2011 and subsequent legislation, among other things, created measures for spending reductions by Congress that include aggregate reductions of Medicare payments to providers of 2% per fiscal year, which remain in effect through fiscal year 2032.

The U.S. American Taxpayer Relief Act of 2012 also further reduced Medicare payments to several types of providers and increased the statute of limitations period for the government to recover overpayments to providers from three to five years.

The Inflation Reduction Act of 2022, or IRA, includes several provisions that may impact our business to varying degrees, including provisions that reduce the out-of-pocket cap for Medicare Part D beneficiaries to $2,000 starting in 2025; impose new manufacturer financial liability on certain drugs under Medicare Part D; allow the U.S. government to negotiate Medicare Part B and Part D price caps for certain high-cost drugs without generic competition; require companies to pay rebates to Medicare for certain drug prices that increase faster than inflation; and delay until January 1, 2032 the rebate rule that would limit the fees that pharmacy benefit managers can charge. Further, under the IRA, orphan drugs are exempted from the Medicare drug price negotiation program, but only if they have one or more orphan designations and for which the only approved indication or indications are for a rare disease or condition. Further, judicial challenges to the IRA may have an impact on the implementation of the IRA's provisions; and the overall effects of the IRA on our business and the healthcare industry in general is not yet known.

Recently, there has been heightened governmental scrutiny over the manner in which manufacturers set prices for their marketed products. Such scrutiny has resulted in several recent U.S. Congressional inquiries and proposed and enacted federal and state legislation designed to, among other things, bring more transparency to drug pricing, review the relationship between pricing and manufacturer patient programs, reduce the cost of drugs under Medicare, and reform government program reimbursement methodologies for pharmaceutical products. The costs of drugs have also been the subject of considerable discussion in the United States. To date, there have been several recent U.S. congressional inquiries, as well as proposed and enacted federal and state legislation designed to, among other things, bring more transparency to drug pricing, review the relationship between pricing and manufacturer patient programs, reduce the costs of drugs under Medicare and reform government program reimbursement methodologies for drug products. The current U.S. administration has issued executive orders and supported proposed regulatory initiatives in 2025 that could have a significant impact on the prices that we, or any collaborators, may receive for any approved development candidates.

Individual states in the United States have also become increasingly active in passing legislation and implementing regulations designed to control pharmaceutical and biological product pricing, including price or patient reimbursement constraints, discounts, restrictions on certain drug access and marketing cost disclosure and transparency measures, and 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, financial condition, results of operations 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 drugs or put pressure on our drug pricing, which could negatively affect our business, financial condition, results of operations and prospects.

These laws and regulations may result in additional reductions in Medicare and other healthcare funding and otherwise affect the prices we may obtain for any development candidates for which we may obtain regulatory approval or the frequency with which any such development candidate is prescribed or used.

Other U.S. Environmental, Health and Safety Laws and Regulations

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

We maintain workers' compensation insurance to cover costs and expenses we may incur due to injuries to our employees as well as insurance for environmental liability, but this insurance may not provide adequate coverage against potential liabilities. However, we do not maintain insurance for toxic tort claims that may be asserted against us.

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

Employees and Human Capital Resources

As of December 31, 2025, we had 58 full-time employees, including 44 who hold Ph.D. degrees or other advanced degrees; 39 employees are engaged in research and development and 19 employees are engaged in management or general and administrative activities. 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. We also employ consultants from time to time.

Our human capital objectives include, as applicable, identifying, recruiting, retaining, incentivizing and integrating our existing and additional employees. The principal purposes of our equity incentive plans are to attract, retain and motivate selected employees, consultants and directors through the granting of stock-based compensation awards and cash-based performance bonus awards.

Corporate Information

We were incorporated as a Delaware corporation, on November 13, 2014 under the name "Frequency Therapeutics, Inc.". On November 3, 2023, we completed a business combination and changed our name to Korro Bio, Inc. Our principal executive office is located at 60 First Street, 2nd Floor, Suite 250, Cambridge, MA 02141, and our telephone number is 617-468-1999. Our website address is https://www.korrobio.com/. The information contained on, or that can be accessed through, our website is not incorporated by reference into this Annual Report on Form 10-K or in any other report or document we have filed or may file with the Securities and Exchange Commission, or SEC, and any reference to our website address is intended to be an inactive textual reference only. We will make available on our website, free of charge, our Annual Report on Form 10-K, Quarterly Reports on Form 10-Q, Current Reports on Form 8-K and any amendments to those reports filed or furnished pursuant to Section 13(a) or 15(d) of the Exchange Act, as soon as reasonably practicable after we electronically file such material with, or furnish it to, the SEC. The SEC maintains an Internet site, http://www.sec.gov, containing reports, proxy and information statements, and other information regarding issuers that file electronically with the SEC.

Item 1A. Risk Factors.

You should consider carefully the risks and uncertainties described below, together with all of the other information in this Annual Report on Form 10-K and in our other filings with the Securities and Exchange Commission, or SEC. We operate in a dynamic and rapidly changing industry that involves numerous risks and uncertainties. The risks and uncertainties described below are not the only ones we face. Other risks and uncertainties, including those that we do not currently consider material, may impair our business. If any of the risks discussed below actually occur, our business, financial condition, operating results or cash flows could be materially adversely affected. This Annual Report on Form 10-K also contains forward-looking statements that involve risks and uncertainties. Our actual results could differ materially from those anticipated in these forward-looking statements as a result of certain factors, including the risks we face as described below and elsewhere in this Annual Report on Form 10-K. See "Cautionary Statement Regarding Forward Looking Statements.".

Risks Related to Our Business

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

Since inception, we have incurred significant operating losses. Our net loss was $117.3 million and $83.6 million for the years ended December 31, 2025 and 2024, respectively. As of December 31, 2025, we had an accumulated deficit of $383.8 million. We have financed our operations primarily through private placements of our convertible preferred stock and more recently, common stock in our November 2023, April 2024 and March 2026 private placements, and sales under our at-the-market offering program. Substantially all of our losses have resulted from expenses incurred in connection with our research and development and from general and administrative costs associated with our operations, and most recently, a $30.9 million impairment charge in the fourth quarter of 2025 related to our operating lease right-of-use asset and fixed assets. We expect to continue to incur significant expenses, increasing operating losses, and negative operating cash flows for the foreseeable future. The net losses we incur may fluctuate significantly from quarter to quarter. We anticipate that our expenses will increase substantially if and as we:

- progress our development candidates, including KRRO-121, through clinical development;
- continue current research programs and preclinical and clinical development of any lead candidates or development candidates we may identify;
- seek to identify additional research programs and lead candidates and nominate development candidates;
- further develop OPERA, our RNA editing platform;
- maintain, expand, enforce, defend and protect our intellectual property portfolio;
- seek marketing approvals for any development candidates that successfully complete clinical trials;
- develop, maintain and enhance a sustainable, scalable, reproducible and transferable manufacturing process for the candidates we may develop;
- ultimately establish a sales, marketing and distribution infrastructure to commercialize any products for which we may obtain marketing approval;
- hire additional personnel as we grow our business;
- acquire or in-license lead candidates, development candidates, intellectual property and technologies;
- establish and maintain collaborations;
- should we decide to do so, build and maintain a commercial-scale current good manufacturing practices, or cGMP, manufacturing facility; and
- operate as a public company.

We expect that it will be many years, if ever, before we have a RNA editing product ready for commercialization. To become and remain profitable, we must develop and, either directly or through collaborators, eventually commercialize a product or products with market potential. This will require us to be successful in a range of challenging activities, including identifying lead candidates, completing preclinical studies and clinical trials of development candidates, obtaining marketing approval for

these development candidates, manufacturing, marketing and selling those products for which we may obtain marketing approval and satisfying any post-marketing requirements. We may never succeed in these activities and, even if we are, may never generate revenues that are significant or large enough to achieve profitability.

In November 2025, we announced that we did not reach projected levels of protein in patients in our Phase 1/2a REWRITE clinical trial of KRRO-110 for AATD and our other programs are in early stages of development. In addition, we undertook workforce reductions in May 2025 and November 2025, and in the fourth quarter of 2025, as result of identified indicators of impairment for our long-lived assets, primarily including our operating lease right-of-use, or ROU, asset, and property and equipment, we recognized a non-cash, long-lived asset impairment charge of $30.9 million. Because of the numerous risks and uncertainties associated with developing lead candidates and development candidates, and the risks associated with conducting preclinical studies and clinical trials, we are unable to predict the extent of any future losses or when we will become profitable, if at all. 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 business or continue our operations. A decline in our value could also cause you to lose all or part of your investment. Further, we may not even experience the expected benefits of our May 2025 and November 2025 workforce reductions or our decision to discontinue clinical development of KRRO-110. Further, the long-lived asset impairment charges recognized may affect how investors, analysts, and counterparties assess our financial position and prospects, potentially making it more difficult or expensive to raise capital or enter into collaborations on favorable terms.

We have never generated revenue from product sales and may never become profitable.

Our ability to generate revenue from product sales and achieve profitability depends on our ability, alone or with collaborative partners, to successfully complete the development of, and obtain the regulatory approvals necessary to commercialize, candidates we may identify for development. We do not anticipate generating revenues from product sales for many years, if ever. Our ability to generate future revenues from product sales depends heavily on our, or our collaborators', ability to successfully:

- identify lead candidates and successfully complete research and development of such lead candidates;
- seek and obtain regulatory and marketing approvals for any development candidates for which we complete clinical trials;
- launch and commercialize any development candidates for which we may obtain regulatory and marketing approval by establishing a sales force, marketing and distribution infrastructure, or alternatively, collaborating with a commercialization partner;
- qualify for adequate coverage and reimbursement by government and third-party payors for any development candidates for which we may obtain regulatory and marketing approval;
- establish and maintain supply and manufacturing relationships with third parties that can provide adequate, in both amount and quality, products and services to support clinical development and the market demand for any development candidates for which we obtain regulatory and marketing approval;
- develop, maintain and enhance a sustainable, scalable, reproducible and transferable manufacturing process for the development candidates we may develop;
- address competing technological and market developments;
- negotiate favorable terms in any existing or future collaboration, licensing or other arrangements and perform our obligations in such collaborations;
- receive market acceptance by physicians, patients, healthcare payors, and others in the medical community;
- maintain, protect, enforce, defend and expand our portfolio of intellectual property and other proprietary rights, including patents, trade secrets and know-how;
- defend against third party intellectual property claims of infringement, misappropriation or other violation; and
- attract top talent and retain qualified personnel.

Our expenses could increase beyond expectations if we are required by the FDA, the EMA, HREC, or TGA, or other regulatory authorities to perform clinical and other studies in addition to those that we currently anticipate. Even if one or more of

the candidates we may develop are approved for commercial sale, we anticipate incurring significant costs associated with commercializing any approved development candidate. Additionally, such products may become subject to unfavorable pricing regulations, third-party reimbursement practices or healthcare reform initiatives. Even if we are able to generate revenues from the sale of any approved development candidates, we may not become profitable and may need to obtain additional funding to continue operations.

We will need substantial additional funding. If we are unable to raise capital when needed, we will be forced to delay, reduce, eliminate or prioritize among our research and development programs or future commercialization efforts.

We expect our expenses to continue to increase in connection with our ongoing activities, particularly as we identify, continue the research and development of, initiate preclinical studies and clinical trials of, and seek marketing approval for, our lead candidates and development candidates. Because we have limited financial and managerial resources, we have prioritized our research programs and oligonucleotide optimization efforts in specific indications among many potential options. Specifically, our initial development programs target liver and central nervous systems indications, amongst others. As a result of this prioritization, we may forego or delay pursuit of opportunities with other lead candidates or development candidates or for other indications that later prove to have greater clinical or commercial potential and we may need to reprioritize our focus in the future. Our resource allocation decisions may cause us to fail to capitalize on viable commercial products or profitable market opportunities. For example, KRRO-110, which used an LNP delivery system, did not reach projected levels of protein in patients in our Phase 1/2a REWRITE clinical trial for AATD and we have since transitioned to a GalNAc-conjugated delivery system for our AATD program. Our spending on current and future research and development programs, lead candidates and development candidates for specific indications may not yield any commercially viable products.

In addition, if we obtain marketing approval for any candidates we may develop, we expect to incur significant commercialization expenses related to product sales, marketing, manufacturing and distribution to the extent that such sales, marketing, manufacturing and distribution are not the responsibility of a collaborator. Furthermore, we expect to continue to incur additional costs associated with operating as a public company. Accordingly, we will need to obtain substantial additional funding in connection with our continuing operations. If we are unable to raise capital when needed or on attractive terms, we would be forced to delay, reduce or eliminate our research and product development programs or future commercialization efforts.

As of December 31, 2025, our cash, cash equivalents and marketable securities were $85.2 million, excluding restricted cash, or $88.6 million, including restricted cash. We believe our existing cash, cash equivalents and marketable securities, together with the net proceeds raised under sales under our at-the-market offering program and March 2026 private placement, will be sufficient to fund our operating expenses and capital expenditure requirements through several value-creating milestones and into the second half of 2028. However, our operating plan may change as a result of factors currently unknown, and expectations regarding our cash runway and ability to reach data inflection points are based on numerous assumptions that may prove to be untrue. As a result, we may be required to raise capital sooner than anticipated and our exposure to certain contingent liabilities and contractual obligations may be greater than anticipated. Our future capital requirements will depend on many other factors, including those discussed in the risk factor entitled *"We have incurred significant losses since inception. We expect to incur losses for the foreseeable future and may never achieve or maintain profitability."*

Any additional fundraising efforts may divert our management from their day-to-day activities, which may adversely affect our ability to develop and commercialize any development candidates we may develop. We cannot be certain that additional funding will be available on acceptable terms or at all. Although we have an effective shelf registration statement and an at-the-market offering program, we have not sold any shares under the program and we have no committed source of additional capital. 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 any development candidates or other research and development initiatives. We could be required to seek collaborators for potential lead candidates earlier than we would otherwise plan or on terms that are less favorable than might otherwise be available. We could also be required to relinquish or license our rights to lead candidates on unfavorable terms in certain markets where we otherwise would seek to pursue development or commercialization ourselves.

We did not reach projected levels of protein in patients in our Phase 1/2a REWRITE clinical trial of KRRO-110 for AATD and have transitioned to GalNAc-conjugated delivery for our AATD program, and may experience delays in developing a potential treatment for AATD. We have not completed any clinical trials nor reported any clinical trial results for any of our proposed delivery methods or RNA editing approaches. Any favorable results we may have from our earlier preclinical studies may not be predictive of results that may be observed in later preclinical studies or clinical trials.

The scientific evidence to support the feasibility of developing development candidates using our proprietary RNA editing technology is both preliminary and limited. We dosed very few participants in our Phase 1/2a REWRITE clinical trial

of KRRO-110 for AATD. Although we observed functional protein in AATD patients following a single administration of KRRO-110, we did not reach projected levels of protein in patients as of the data cut off date. We have not completed any clinical trials for any of our proposed delivery methods or RNA editing approaches, and we have transitioned from LNP to GalNAc-conjugated delivery for our AATD program. Accordingly, we may experience delays in developing a potential treatment for AATD. In the future, we may use other delivery modalities to deliver our other lead candidates. While LNPs have been validated clinically to deliver oligonucleotides, such as siRNA, they were not clinically proven to deliver oligonucleotides for RNA editing, such as KRRO-110 and our other lead candidates. Similarly, while GalNAc-conjugated delivery has been validated in multiple FDA-approved oligonucleotide therapeutics, there are no FDA-approved GalNAc-conjugated RNA editing oligonucleotide therapeutics. Both of our most advanced programs, KRRO-121 and our AATD program, utilize GalNAc-conjugated delivery. If GalNAc-conjugated delivery fails to effectively deliver our RNA editing oligonucleotides, multiple programs in our pipeline could be adversely affected.

In addition, our proprietary RNA editing technology itself may lead to other issues, such as inability to deliver the desired efficacy or safety-related consequences as it is tested in clinical trials. The design of a clinical trial can determine whether its results will support approval of a development candidate and flaws in the design of a clinical trial may not become apparent until the clinical trial is well advanced. Furthermore, preclinical and clinical data are often susceptible to varying interpretations and analyses, and many companies that have believed their development candidates performed satisfactorily in preclinical studies and clinical trials have nonetheless failed to obtain marketing approval of their development candidates. Many lead candidates that initially showed promise in early stage testing for treating a variety of diseases have later been found to lack efficacy or to cause side effects that prevented further clinical development. Accordingly, any favorable results we may have from our earlier preclinical studies may not be predictive of results that may be observed in further preclinical studies or clinical trials.

If preclinical studies or clinical trials of any lead candidate or development candidate we may identify fail to demonstrate safety and efficacy to the satisfaction of regulatory authorities or do not otherwise produce positive results, we may incur additional costs or experience delays in completing, or ultimately be unable to complete, the development and commercialization of such development candidate.

Before obtaining marketing approval from regulatory authorities for the sale of any development candidates we may identify and develop, we must complete preclinical development and then conduct extensive clinical trials to demonstrate safety and efficacy in humans. Clinical testing is expensive, difficult to design and implement, can take many years to complete, and the outcome is uncertain. A failure of one or more clinical trials can occur at any stage of development. The outcome of preclinical testing and early clinical trials may not be predictive of the success of later clinical trials, and interim results of a clinical trial do not necessarily predict final results.

Moreover, preclinical and clinical data are often susceptible to varying interpretations and analyses. Many companies that have believed their lead candidates or development candidates performed satisfactorily in preclinical studies and clinical trials have nonetheless failed, preventing marketing approval of their development candidates. For example, despite our preclinical data, we did not reach projected levels of protein in AATD patients in our REWRITE Phase 1/2a clinical trial.

We and our collaborators, if any, may experience numerous unforeseen events during, or as a result of, clinical trials that could delay or prevent our ability to receive marketing approval or commercialize any development candidates we may identify and develop, including:

- delays in reaching a consensus with regulators on trial design;
- regulators, institutional review boards, or IRBs, or independent ethics committees may not authorize us or our investigators to commence a clinical trial or conduct a clinical trial at a prospective trial site;
- delays in reaching or failing to reach agreement on acceptable clinical trial contracts or clinical trial protocols with prospective CROs and clinical trial sites;
- clinical trials of any development candidates we may develop may produce negative or inconclusive results, and we may decide, or regulators may require us, to conduct additional clinical trials or abandon product development or research programs;
- difficulty in designing well-controlled clinical trials due to ethical considerations that may render it inappropriate to conduct a trial with a control arm that can be effectively compared to a treatment arm;
- difficulty in designing clinical trials and selecting endpoints for diseases that have not been well-studied and for which the natural history and course of the disease is poorly understood;

- the number of patients required for clinical trials may be larger than we anticipate; enrollment of suitable participants in these clinical trials, which may be particularly challenging for some of the rare genetically defined diseases such as UCD, may be delayed or slower than we anticipate; or patients may drop out of these clinical trials at a higher rate than we anticipate;
- our third-party contractors may fail to comply with regulatory requirements or meet their contractual obligations to us in a timely manner, or at all;
- regulators, IRBs, or independent ethics committees may require that we or our investigators suspend or terminate clinical research or clinical trials of any development candidates we may develop for various reasons, including noncompliance with regulatory requirements, a finding of undesirable side effects or other unexpected characteristics, or that the participants are being exposed to unacceptable health risks or after an inspection of our clinical trial operations or trial sites;
- the cost of clinical trials of any development candidates may be greater than we anticipate;
- the supply or quality of any development candidates or other materials necessary to conduct clinical trials of any development candidates may be insufficient or inadequate, including as a result of delays in the testing, validation, manufacturing, and delivery of any development candidates to the clinical sites by us or by third parties with whom we have contracted to perform certain of those functions;
- delays in having patients complete participation in a trial or return for post-treatment follow-up;
- clinical trial sites dropping out of a trial;
- selection of clinical endpoints that require prolonged periods of clinical observation or analysis of the resulting data;
- occurrence of serious adverse events associated with any development candidates that are viewed to outweigh their potential benefits;
- occurrence of serious adverse events in trials of the same class of agents conducted by other sponsors; and
- changes in regulatory requirements and guidance that require amending or submitting new clinical protocols.

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

- be delayed in obtaining marketing approval for any such development candidates or not obtain marketing approval at all;
- choose to, or be required to, revise or transition strategy for our development candidates or protocols;
- obtain approval for indications or patient populations that are not as broad as intended or desired;
- obtain approval with labeling that includes significant use or distribution restrictions or safety warnings, including boxed warnings;
- be subject to changes in the way the product is administered;
- be required to perform additional clinical trials to support approval or be subject to additional post-marketing testing requirements;
- have regulatory authorities withdraw, or suspend, their approval of the product or impose restrictions on our distribution in the form of a REMS or through modification to an existing REMS;
- be sued; or
- experience damage to our reputation.

Product development costs will also increase if we or our collaborators experience delays in clinical trials or other testing or in obtaining marketing approvals. We do not know whether any 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 any development candidates we may develop, could allow our competitors to bring

products to market before we do, and could impair our ability to successfully commercialize any development candidates we may develop, any of which may harm our business, financial condition, results of operations, and prospects.

Our business is substantially dependent on the success of KRRO-121, our lead development candidate, and if KRRO-121 fails to advance successfully, our business would be materially and adversely affected.

We have concentrated a significant portion of our current resources and efforts on the advancement of KRRO-121, our lead development candidate for the treatment of hyperammonemia, including UCD and HE. KRRO-121 is in preclinical development and has not been tested in humans. KRRO-121 utilizes GalNAc-conjugated delivery and is designed to generate a stabilized, *de novo* variant of GS with enhanced ammonia clearance capacity. We anticipate submitting a regulatory filing to enable commencement of a first-in-human clinical trial in the second half of 2026. However, there can be no assurance that KRRO-121 will demonstrate safety or efficacy in humans, that our regulatory filing will be accepted, or that we will be able to initiate or complete clinical trials on our anticipated timeline. If KRRO-121 fails to demonstrate safety or efficacy, or if we experience significant delays in its regulatory filing or clinical development, our business, financial condition, results of operations and prospects would be materially and adversely affected. Following the termination of our REWRITE clinical program investigating KRRO-110 for AATD, KRRO-121 is our only nominated development candidate, which increases the concentration of risk in a single program. Our other programs, including our AATD GalNAc-conjugated program, our longevity and liver health program targeting AMPKγ1, and our ALS program targeting TDP-43, are in earlier stages of preclinical development and may not advance to clinical development on a timely basis, or at all.

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

Clinical trials of a new development candidate require the enrollment of a sufficient number of patients, including patients who are suffering from the disease the development candidate is intended to treat and who meet other eligibility criteria. Rates of patient enrollment are affected by many factors, including the stage and severity of disease, the nature and requirements of the protocol, the proximity of patients to clinical sites, the availability of effective treatments for the relevant disease, and the eligibility criteria for the clinical trial, possible adverse effects from treatments, the existence of competing clinical trials, the involvement of patient advocacy groups, the availability of new or alternative treatments, lack of efficacy, personnel issues and ease of participation in our clinical trials, among others. Clinical trials can also be impacted by other events unrelated to our business, such as geopolitical events and unrest, such as recent hostilities involving Iran, global pandemics (e.g., COVID-19), or economic uncertainty, including imposition of tariffs that impact the supply chain, or disruptions due to government shutdowns, which can impact regulatory reviews. In April 2025, the United States imposed tariffs on imports on its trading partners and tariff policy (and trading partners subject to such tariffs) has continued to evolve. Historically, tariffs have led to increased costs, political and trade tensions, which negatively affect global supply chains. These types of events can disrupt clinical trial sites and delay patient enrollment, all of which would have a negative impact on our business and ability to obtain regulatory approval. Delays or difficulties in patient enrollment or difficulties retaining trial participants, including as a result of the availability of existing or other investigational treatments, can result in increased costs, longer development times or termination of a clinical trial.

Risks Related to Discovery, Development and Commercialization

The gene editing field and RNA editing in particular is relatively new and is evolving rapidly. We are very early in our development efforts and may not be successful in identifying and developing any candidates. It will be many years before we or our collaborators commercialize a development candidate or generate any revenues, if ever. Additionally, other genetic medicine technologies may be discovered that provide significant advantages over RNA editing, which could materially harm our business.

The success of our business depends primarily upon our ability to identify, develop and commercialize development candidates. We are very early in our development efforts and have focused our research and development efforts to date on developing OPERA, our RNA editing platform, and identifying our initial targeted disease indications. We currently only have one nominated development candidate in our pipeline, KRRO-121 as terminated further development of KRRO-110 after it failed to reach projected levels of protein in our first in-human clinical trial. Although we believe we can demonstrate many of the key advantages of RNA editing, because we are very early in our development efforts, we are not yet certain of the results we may achieve, which may be important for registration and commercialization of any candidates we successfully develop. Such uncertainties include, but are not limited to, the level of editing efficiency needed in a target tissue type to achieve a clinical benefit, and associated safety of our edits in humans. We have also not yet shown that preclinical editing activity can result in

clinically important effects, nor that the data generated by our preclinical studies can translate into positive results in clinical trials.

All of our product development programs are still in the research or preclinical stage of development. Our research methodology may be unsuccessful in identifying lead candidates, our development candidates may be shown to have harmful side effects in preclinical *in vitro* experiments or animal model studies, they may not show promising signals of therapeutic effect in such experiments or studies or they may have other characteristics that may make the development candidates impractical to manufacture, unmarketable, or unlikely to receive marketing approval.

The pharmacological properties ascribed to the lead candidates we are testing in preclinical studies may not be positively demonstrated in clinical trials in patients, and they may interact with human biological systems in unforeseen, ineffective or harmful ways (such as we experienced in our REWRITE Phase 1/2a clinical trial). If our development candidates prove to be ineffective, unsafe or commercially unviable, OPERA and our pipeline would have little, if any, value, which would substantially harm our business, financial condition, results of operations and prospects. In addition, our approach, which focuses on using oligonucleotides for drug development, as opposed to multiple or other, more advanced proven technologies, and new products and technologies that may enter the market, may expose us to additional financial risks and make it more difficult to raise additional capital if we are not successful in developing one or more development candidates that receive regulatory approval. Our ability to generate product revenue, which we do not expect will occur for many years, if ever, will depend heavily on the successful development and eventual commercialization of any development candidates we may discover, which may never occur. We currently generate no revenue from sales of any product, and we may never be able to develop or commercialize a marketable product.

In addition, although we believe OPERA, our RNA editing platform, will position us to expand our portfolio of development candidates beyond the initial candidates we may develop, we have not yet successfully developed any candidate and our ability to expand our portfolio may never materialize.

RNA editing is a novel technology with limited clinical validation for human therapeutic use. The approaches we take to discover and develop novel therapeutics are unproven and may never lead to marketable products.

We are focused on developing products based on RNA editing. Although there have been significant advances in the field of gene editing in recent years, RNA editing technologies are new and largely unproven. The technologies that we have developed have not yet completed clinical development. The scientific evidence to support the feasibility of developing development candidates based on these technologies is both preliminary and limited. Successful development of development candidates by us will require solving a number of issues, including optimizing the efficiency and specificity of such development candidates, and ensuring the therapeutic selectivity of such development candidates. There can be no assurance we will be successful in solving any or all of these issues.

We have concentrated our research efforts to date on preclinical work to bring therapeutics to the clinic for our initial indications, and our future success is highly dependent on the successful development of OPERA, our RNA editing platform, as well as cellular delivery methods and therapeutic applications of that technology. While some of the existing, non-RNA editing, gene editing technologies developed by third parties have progressed to clinical trials, they continue to suffer from various limitations, and such limitations may affect our future success. While a number of clinical trials for oligonucleotide products conducted by other companies have not been successful, some have received regulatory approval. The pharmacological properties ascribed to the development candidates we are testing or will test in the future may not be positively demonstrated in clinical trials in patients, and they may interact with human biological systems in unforeseen, ineffective or harmful ways. If our development candidates prove to be ineffective, unsafe or commercially unviable, our OPERA platform and our pipeline would have little, if any, value, which would substantially harm our business, financial condition, results of operations and prospects. We may decide to alter or abandon our initial programs as new data becomes available and we gain experience in developing base editing therapeutics. We cannot be sure that our technologies will yield satisfactory products that are safe and effective, scalable or profitable in our initial indications or any other indication we pursue.

Development activities in the field of RNA editing are currently subject to a number of risks related to the ownership and use of certain intellectual property rights that are subject to patent reexamination and inter partes proceedings in the United States and opposition proceedings in Europe. For additional information regarding the risks that may apply to our and our licensors' intellectual property rights, see *"—Risks Related to Intellectual Property*."

We are very early in our development efforts, and our preclinical studies and clinical trials may not be successful. If we are unable to commercialize our development candidates or experience significant delays in doing so, our business will be materially harmed.

We are very early in our development of development candidates and have focused our efforts to date primarily on platform development, discovery, research, and preclinical development and had only dosed a small number of participants in our terminated Phase 1/2a REWRITE clinical trial of KRRO-110 for AATD. Our development candidate, KRRO-121, is advancing toward a regulatory filing anticipated in the second half of 2026. All of our other programs are still in the research or preclinical stage of development. Our ability to generate product revenues, which we do not expect will occur for many years, if ever, will depend heavily on the successful development, marketing approval and eventual commercialization of our development candidates, which may never occur. We have not yet generated revenue from product sales or otherwise, and we may never be able to develop or commercialize a marketable product.

Commencing clinical trials in the United States is subject to acceptance by the FDA of an IND and finalizing the trial design based on discussions with the FDA and other regulatory authorities. In the event that the FDA requires us to complete additional preclinical studies or we are required to satisfy other FDA requests prior to commencing clinical trials, the start of our first clinical trials may be delayed or we may be unsuccessful obtaining clearance to proceed into clinical development. Even after we receive and incorporate guidance from these regulatory authorities, the FDA or other regulatory authorities could disagree that we have satisfied their requirements to commence any clinical trial or change their position on the acceptability of our trial designs or the clinical endpoints selected, which may require us to complete additional preclinical studies or clinical trials, delay the enrollment of our clinical trials, abandon our clinical development plans or meet stricter approval conditions than we currently expect. There are equivalent processes and risks applicable to clinical trial applications, or CTAs, in other countries, including countries in the European Union, United Kingdom and Australia.

Even if we complete the necessary clinical trials, we cannot predict when, or if, we will obtain regulatory approval to commercialize any development candidates in the United States or any other jurisdiction, and any such approval may be for a narrower indication than we seek. In addition, clinical trials conducted in one country may not be accepted by regulatory authorities in other countries, and regulatory approval in one country does not guarantee regulatory approval in any other country. We may in the future decide to conduct other clinical trials with one or more trial sites that are located outside the United States. Although the FDA may accept data from clinical trials conducted outside the United States, acceptance of these data is subject to conditions imposed by the FDA, and there can be no assurance that the FDA will accept data from any clinical trials conducted outside of the United States. If the FDA does not accept the data from any clinical trial that we conduct outside the United States, it would likely result in the need for additional trials, which would be costly and time-consuming and could delay or permanently halt our development of the applicable development candidates. Similarly, marketing approval by the FDA in the United States, if obtained, does not ensure approval by regulatory authorities in other countries or jurisdictions. Approval processes vary among countries and can involve additional development candidate testing and validation and additional administrative review periods.

Commercialization of any development candidates we may develop will require preclinical and clinical development; regulatory and marketing approval in multiple jurisdictions, including by the FDA, the EMA, HREC and TGA; manufacturing supply, capacity and expertise; a commercial organization; and significant marketing efforts. The success of our development candidates will depend on many factors, including the following:

- timely and successful completion of preclinical studies, including toxicology studies, biodistribution studies and minimally efficacious dose studies in animals, where applicable;
- effective INDs or comparable foreign applications that allow commencement of our planned clinical trials or future clinical trials for any development candidates we may develop;
- successful enrollment and completion of clinical trials, including under the FDA's current GCPs, current GLPs, and any additional regulatory requirements from foreign regulatory authorities;
- positive results from our future clinical trials that support a finding of safety and effectiveness and an acceptable risk-benefit profile in the intended populations;
- receipt of marketing approvals from applicable regulatory authorities;
- establishment of arrangements through our own facilities or with third-party manufacturers for clinical supply and, where applicable, commercial manufacturing capabilities;
- establishment, maintenance, defense and enforcement of patent, trademark, trade secret and other intellectual property protection or regulatory exclusivity for any development candidates we may develop;

- commercial launch of any development candidates we may develop, if approved, whether alone or in collaboration with others;
- acceptance of the benefits and use of the development candidates we may develop, including method of administration, if and when approved, by patients, the medical community and third-party payors;
- effective competition with other products;
- maintenance of a continued acceptable safety, tolerability and efficacy profile of any development candidates we may develop following approval; and
- establishment and maintenance of healthcare coverage and adequate reimbursement by payors.

If we do not succeed in one or more of these factors in a timely manner or at all, we could experience significant delays or an inability to successfully commercialize any development candidates we may develop, which would materially harm our business.

Any development candidates we develop may fail in preclinical or clinical development or be delayed to a point where they do not become commercially viable.

Before obtaining regulatory approval for the commercial distribution of any of our development candidates, we must conduct, at our own expense, extensive preclinical studies and clinical trials to demonstrate the safety and efficacy in humans of our development candidates. Preclinical and clinical testing are expensive, difficult to design and implement, can take many years to complete, are uncertain as to outcome, and the historical failure rate for drugs in preclinical and clinical development is high. For example, we depend on the availability of NHPs to conduct certain preclinical studies. Over the past several years there has been an increasing global shortage of NHPs available for drug development that has matured into an acute global supply chain issue. The supply of these NHPs is currently constrained due to factors such as their limited worldwide availability, domestic regulatory restrictions and trade relations. If we are unable to obtain access to a sufficient supply of these NHPs in a timely manner or at all, our timelines and our ability to complete preclinical testing and submit IND or CTA applications may be adversely affected.

The development of one or more of our development candidates can fail at any stage of testing. We may experience numerous unforeseen events during, or as a result of, preclinical studies and clinical trials that could delay or prevent regulatory approval or our ability to commercialize our development candidates, including:

- our preclinical studies or clinical trials may produce negative or inconclusive results, including results that may not meet the level of significance or clinical benefit required by the FDA, the EMA, HREC, TGA or other regulators, and we may decide, or regulators may require us, to conduct additional preclinical studies or clinical trials, or we may abandon projects that we had expected to be promising;
- delays in filing INDs or comparable foreign applications or delays or failure in obtaining the necessary approvals from regulators or IRBs in order to commence a clinical trial at a prospective trial site, or their suspension or termination of a clinical trial once commenced;
- conditions imposed on us by the FDA, the EMA, HREC, TGA or comparable foreign authorities regarding the scope or design of our clinical trials;
- divergent views between FDA and other homologue regulatory authorities as to the objectives and/or design of the clinical trials required in support of marketing registration;
- problems in obtaining or maintaining IRB approval of trials;
- delays in enrolling patients or volunteers into clinical trials, and variability in the number and types of patients eligible for clinical trials;
- an inability to open study sites, or enroll, treat, and monitor patients due to local restrictions, including as a result of any pandemic or endemic or other geopolitical events that can disrupt supply chains, such as announced tariffs, hostilities in Iran, or other evolving economic policies;
- high drop-out rates for patients in clinical trials and substantial missing data;
- negative or inconclusive results from our clinical trials or the clinical trials of others for development candidates similar to ours;

- failure of future clinical trials to confirm positive results, if any, from earlier preclinical studies and clinical trials;
- inability to consistently manufacture, inadequate supply, or unacceptable quality of development candidate materials or other materials necessary for the conduct of our clinical trials;
- greater than anticipated clinical trial costs;
- serious and unexpected side effects that may or may not be related to the development candidate being tested that are experienced by participants in our clinical trials or by individuals using drugs similar to our development candidates;
- poor or disappointing effectiveness of our development candidates during clinical trials;
- unfavorable outcome of FDA, EMA, HREC, TGA or other regulatory agency inspection and review of a manufacturing or clinical trial site or other records relating to the clinical investigation;
- failure of our third-party contractors, investigators, or collaboration partners to comply with regulatory requirements or otherwise meet their contractual obligations in a timely manner, or at all;
- governmental or regulatory delays and changes in regulatory requirements, policy and guidelines, including the imposition of additional regulatory oversight around manufacturing, preclinical, or clinical testing generally or with respect to our development candidates class, in particular; or
- varying interpretations of data by the FDA and similar foreign regulatory agencies.

If we do not successfully conduct clinical development, we will not be able to market and sell products derived from our development candidates or generate product revenues. Even if we do successfully complete clinical trials, those results are not necessarily predictive of results of additional trials that may be needed before we can submit an application for regulatory approval to the FDA or foreign regulatory agencies. If the development of any of our development candidates fails or is delayed to a point where such development candidate is no longer commercially viable, our business may be materially harmed.

We may not be able to conduct clinical trials successfully due to various process-related factors that could negatively impact our business plans.

The successful initiation and completion of any of our clinical trials within timeframes consistent with our business plans, is dependent on various factors, which include, but are not limited to, our ability to:

- retain and recruit employees, contractors or consultants with the required level of knowledge and experience;
- retain and recruit, in a timely manner, a sufficient number of patients necessary to conduct a clinical trial;
- manufacture and maintain a sufficient amount of clinical material, internally or through third parties;
- ensure adherence to trial designs and protocols agreed upon and approved by regulatory authorities and applicable regulatory and legal guidelines;
- apply the appropriate pharmacovigilance measures in case of adverse effects emerging during a clinical trial;
- execute clinical trial designs and protocols approved by regulatory authorities without deficiencies;
- timely and effectively contract with (under reasonable terms), manage and work with investigators, institutions, hospitals and the CROs involved in the clinical trial;
- negotiate contracts and other related documents with clinical trial parties and IRBs, CRO agreements and site agreements, which can be subject to extensive negotiations that could cause significant delays in the clinical trial process, with terms possibly varying significantly among different trial sites and CROs and possibly subjecting us to various risks; and
- conduct clinical trials in a cost-effective manner, including management of foreign currency risk in clinical trials conducted in foreign jurisdictions and cost increases due to unforeseen or unexpected complications such as enrollment delays, or needing to outsource certain functions during the clinical trial.

If we are not able to manage the clinical trial process successfully, our business plans could be delayed or be rendered unfeasible for us to execute within our planned or required time frames, or at all.

If we cannot successfully manufacture our development candidates for our research and development and preclinical activities, or manufacture sufficient amounts of our development candidates to meet our clinical requirements and timelines, our business may be materially harmed.

In order to develop our development candidates, apply for regulatory approvals and commercialize our development candidates, we will need to develop, contract for, or otherwise arrange for the necessary manufacturing and supply capabilities. In addition to the oligonucleotides that we manufacture internally, we may utilize CMOs to manufacture the oligonucleotides required for our preclinical studies and clinical trials. There are a limited number of manufacturers that supply oligonucleotides. There are risks inherent in pharmaceutical manufacturing that could affect our ability or the ability of our CMOs to meet delivery time requirements or provide adequate amounts of material to meet our clinical trial demands on our projected timelines. Included in these risks are potential synthesis and purification failures and/or contamination during the manufacturing process, as well as other issues with our facility or the CMOs' facilities and ability to comply with the applicable manufacturing requirements and quality standards, which could result in unusable product and cause delays in our manufacturing timelines and ultimately delay our clinical trials, as well as result in additional expense. To manufacture our oligonucleotides, we rely on third parties to supply the required raw materials. We will likely need to secure alternative suppliers for these raw materials, and such alternative suppliers are limited and may not be readily available, or we may be unable to enter into agreements with them on reasonable terms and in a timely manner. For example, we source certain materials used in the manufacture of our products from China and other countries outside of the United States; supply chain disruptions (including as a result of announced tariffs, other geopolitical events or global health pandemics) could impact our business. Additionally, our cost of goods development is at an early stage. The actual cost to manufacture and process our development candidates could be greater than expected and could materially and adversely affect the commercial viability of our development candidates.

The process of manufacturing oligonucleotides is complex and we may encounter difficulties in production, particularly with respect to process development or scaling-up of our manufacturing capabilities.

The process of manufacturing oligonucleotides is complex, highly-regulated and subject to multiple risks. The complex processes associated with the manufacture of our development candidates expose us to various manufacturing challenges and risks, which may include delays in manufacturing adequate supply of our development candidates, limits on our ability to increase manufacturing capacity, and the potential for product failure and product variation in quality that may interfere with preclinical studies and clinical trials, along with additional costs. We may also make changes to our manufacturing process or the delivery system we use at various points during development, and even after commercialization, for various reasons, such as optimizing costs, achieving scale, decreasing processing time, increasing manufacturing success rate, or other reasons. Such changes carry the risk that they will not achieve their intended objectives, and any of these changes could cause our development candidates to perform differently and affect the results of current or future clinical trials, or the performance of the product, once commercialized. In some circumstances, changes in the manufacturing or delivery system may require us to perform ex vivo comparability studies, and/or conduct animal studies, and to collect additional data from patients prior to undertaking more advanced clinical trials. For instance, changes in our manufacturing process during the course of clinical development may require us to show the comparability of the product used in earlier clinical trials or at earlier portions of a trial to the product used in later clinical trials or later portions of the trial. We may also make further changes to our manufacturing or delivery system before or after commercialization, and such changes may require us to show the comparability of the resulting product to the product produced via earlier manufacturing processes and supplied or delivery system used in clinical studies. We may be required to collect additional preclinical and/or clinical data from any modified process prior to obtaining marketing approval for the development candidate produced with such modified process. If preclinical and/or clinical data are not ultimately comparable to those seen in the earlier trials, we may be required to make further changes to our process and/or undertake additional clinical testing, either of which could significantly delay the clinical development or commercialization of the associated development candidate.

Although we continue to build on our experience in manufacturing oligonucleotides, we have limited experience as a company manufacturing development candidates for commercial supply. We may never be successful in manufacturing development candidates in sufficient quantities or with sufficient quality for commercial use. Our manufacturing capabilities could be affected by cost-overruns, unexpected delays, equipment failures, labor shortages, operator error, natural disasters, unavailability of qualified personnel, difficulties with logistics and shipping, problems regarding yields or stability of product, contamination or other quality control issues, power failures, and numerous other factors that could prevent us from realizing the intended benefits of our manufacturing strategy and have a material adverse effect on our business.

Furthermore, compliance with cGMP requirements and other quality issues may arise during any internal efforts to scale-up manufacturing, and with our current or any future CMOs. If contaminants are discovered in our supply of our development candidates or in the manufacturing facilities of our CMOs, such manufacturing facilities may need to be closed for an extended

period of time to investigate and remedy the contamination. We cannot assure you that any stability failures or other issues relating to the manufacture of our development candidates will not occur in the future. Additionally, our CMOs may experience manufacturing difficulties due to resource constraints or as a result of labor disputes or unstable political environments. If our CMOs were to encounter any of these difficulties, our ability to provide our development candidate to patients in clinical trials, or to provide product for treatment of patients once approved, would be jeopardized.

We may expend our limited resources to pursue a particular development candidate or indication and fail to capitalize on development candidates or indications that may be more profitable or for which there is a greater likelihood of success.

Because we have limited financial resources, we intend to focus on developing development candidates for specific indications that we identify as most likely to succeed, in terms of both regulatory approval and commercialization. As a result, we may forego or delay pursuit of opportunities with other development candidates or for other indications that may prove to have greater commercial potential. Our resource allocation decisions may cause us to fail to capitalize on viable commercial products or profitable market opportunities. Our spending on current and future research and development programs and development candidates for specific indications may not yield any commercially viable products. If we do not accurately evaluate the commercial potential or target market for a particular development candidate, we may relinquish valuable rights to that development candidate through collaboration, licensing or other royalty arrangements in cases in which we would have been more advantageous for us to retain sole development and commercialization rights to such development candidate.

Our development candidates may cause undesirable and unforeseen side effects or be perceived by the public as unsafe, which could delay or prevent their advancement into clinical trials or regulatory approval, limit the commercial potential or result in significant negative consequences.

We have dosed very few participants with our development candidates in human clinical trials. Moreover, there have been only a limited number of clinical trials involving the use of genetic medicine technologies and RNA editing technology similar to our technology. It is impossible to predict when, or if, any development candidates we may develop will prove safe in humans. In the genetic medicine field, there have been several significant adverse events from gene therapy treatments in the past, including reported cases of leukemia and death. There can be no assurance that RNA editing technologies will not cause undesirable side effects, such as lymphoma, leukemia, or other cancers, or other aberrantly functioning cells.

If any such adverse events occur, our future clinical trials could be suspended or terminated. If we are unable to demonstrate that any adverse events were caused by the administration process or related procedures, the FDA, the EMA, HREC, TGA or other regulatory authorities could order us to cease further development of, or deny approval of, any development candidates for any or all targeted indications. Even if we can demonstrate that all future serious adverse events are not product-related, such occurrences could affect patient recruitment or the ability of enrolled patients to complete any future trial. Moreover, if we elect, or are required, to not initiate, delay, suspend or terminate any future clinical trial of any of our development candidates, the commercial prospects of such development candidates may be harmed and our ability to generate product revenues from any of these development candidates may be delayed or eliminated. Any of these occurrences may harm our ability to develop other development candidates, and may adversely affect our business, financial condition, results of operations and prospects significantly.

Additionally, if any of our development candidates receives marketing approval, the FDA could require us to adopt a REMS to ensure that the benefits of the product outweigh its risks, which may include, for example, a Medication Guide outlining the risks of the product for distribution to patients and a communication plan to health care practitioners, or other elements to assure safe use of the product. Furthermore, if we or others later identify undesirable side effects caused by any of our development candidates, several potentially significant negative consequences could result, including:

- regulatory authorities may suspend or withdraw approvals of such development candidate;
- we may be required to change the way a development candidate is administered or conduct additional clinical trials;
- we could be sued and held liable for harm caused to patients; and
- our reputation may suffer.

Any of these occurrences may harm our business, financial condition, results of operations and prospects significantly.

If we are unable to successfully identify patients who are likely to benefit from therapy with any development candidates we develop, or experience significant delays in doing so, we may not realize the full commercial potential of any products we may develop.

Our success may depend, in part, on our ability to identify patients who are likely to benefit from therapy with any products we may develop, which may require those potential patients to have their DNA analyzed for the presence or absence of a particular sequence. If we, or any third parties that we engage to assist us, are unable to successfully identify such patients, or experience delays in doing so, then:

- our ability to develop any development candidates may be adversely affected if we are unable to appropriately select patients for enrollment in our clinical trials; and
- we may not realize the full commercial potential of any development candidates we develop that receive marketing approval if, among other reasons, we are unable to appropriately select patients who are likely to benefit from therapy with our products.

As a result of these factors, we may be unable to successfully develop and realize the commercial potential of any development candidates we may identify and develop, and our business, financial condition, results of operations, and prospects would be materially adversely affected.

If we are unable to establish sales and marketing capabilities or enter into agreements with third parties to market and sell any development candidates, we may be unable to generate any revenues.

We currently do not have an organization for the sales, marketing and distribution of any development candidates and the cost of establishing and maintaining such an organization may exceed the cost-effectiveness of doing so. To market any products that may be approved, we must build our sales, marketing, managerial and other non-technical capabilities or make arrangements with third parties to perform these services. With respect to certain of our current programs as well as future programs, we may rely completely on an alliance partner for sales and marketing. In addition, although we intend to establish a sales organization if we are able to obtain approval to market any development candidates, we may enter into strategic alliances with third parties to develop and commercialize any development candidates, including in markets outside of the United States or for other large markets that are beyond our resources. This will reduce the revenue generated from the sales of these products.

Any future strategic alliance partners may not dedicate sufficient resources to the commercialization of our development candidates or may otherwise fail in their commercialization due to factors beyond our control. If we are unable to establish effective alliances to enable the sale of our development candidates to healthcare professionals and in geographical regions, including the United States, that will not be covered by our own marketing and sales force, or if our potential future strategic alliance partners do not successfully commercialize the development candidates, our ability to generate revenues from product sales will be adversely affected.

If we are unable to establish adequate sales, marketing and distribution capabilities, whether independently or with third parties, we may not be able to generate sufficient product revenue and may not become profitable. We will be competing with many companies that currently have extensive and well-funded marketing and sales operations. Without an internal team or the support of a third party to perform marketing and sales functions, we may be unable to compete successfully against these more established companies.

Even if we receive regulatory approval to market our development candidates, the market may not be receptive to our development candidates upon their commercial introduction, which will prevent us from becoming profitable.

Our development candidates are based upon new discoveries, technologies and therapeutic approaches. Key participants in pharmaceutical marketplaces, such as physicians, third-party payors and consumers, may not adopt a product intended to improve therapeutic results that is based on the technology employed by oligonucleotides. As a result, it may be more difficult for us to convince the medical community and third-party payors to accept and use our product, or to provide favorable reimbursement.

Other factors that we believe will materially affect market acceptance of our development candidates include:

- the timing of our receipt of any regulatory approvals, the terms of any approvals and the countries in which approvals are obtained;
- the ability to consistently manufacture our products within acceptable quality standards;

- the safety and efficacy of our development candidates, as demonstrated in clinical trials and as compared with alternative treatments, if any;
- the incidence, seriousness and severity of any side effects;
- the relative convenience and ease of administration of our development candidates;
- the willingness of patients to accept potentially new routes of administration and their risk tolerance as it relates to potentially serious side effects;
- the success of our physician education programs;
- the availability of government and third-party payor coverage and adequate reimbursement;
- the pricing of our products, particularly as compared to alternative treatments; and
- the availability of alternative effective treatments for the diseases that development candidates we develop are intended to treat and the relative risks, benefits and costs of those treatments.

In addition, our estimates regarding the potential market size may be materially different from what we currently expect by the time we commence commercialization, which could result in significant changes in our business plan and may significantly harm our results of operations and financial condition.

The pharmaceutical industry is intensely competitive. If we are unable to compete effectively with existing drugs, new treatment methods and new technologies, we may be unable to commercialize successfully any drugs that we develop.

The pharmaceutical industry is intensely competitive and rapidly changing. Many large pharmaceutical and biotechnology companies, academic institutions, governmental agencies and other public and private research organizations are pursuing the development of novel drugs for the same diseases that we are targeting or expect to target, including UCD, HE and AATD. Many of our competitors have:

- much greater financial, technical and human resources than we have at every stage of the discovery, development, manufacture and commercialization of products;
- more extensive experience in designing and conducting preclinical studies and clinical trials, obtaining regulatory approvals, and manufacturing, marketing and selling pharmaceutical products;
- development candidates that are based on previously tested or accepted technologies;
- products that have been approved or are in late stages of development; and
- collaborative arrangements in our target markets with leading companies and research institutions.

We will face intense competition from drugs that have already been approved and accepted by the medical community for the treatment of the conditions for which we may develop products. We also expect to face competition from new drugs that enter the market. We believe a significant number of drugs are currently under development, and may become commercially available in the future, for the treatment of conditions that our current or future development candidates are or may be designed to treat. These drugs may be more effective, safer, less expensive, or marketed and sold more effectively, than any products we develop. Following our transition to GalNAc-conjugated delivery for our AATD program, we may be further behind in our development efforts than our competitors, which could negatively impact our ability to develop a commercially viable product for such indication.

Our competitors may develop or commercialize products with significant advantages over any products we are able to develop and commercialize based on many different factors, including:

- the safety and effectiveness of our products relative to alternative products, if any;
- the ease with which our products can be administered and the extent to which patients accept relatively new routes of administration;
- the timing and scope of regulatory approvals for these products;
- the availability and cost of manufacturing, marketing and sales capabilities;
- price;

- more extensive coverage and higher levels of reimbursement; and
- patent position.

Our competitors may therefore be more successful in commercializing their products than we are, which could adversely affect our competitive position and business. Competitive products may make any products we develop obsolete or noncompetitive before we can recover the expenses of developing and commercializing our development candidates. Such competitors could also recruit our employees, which could negatively impact our level of expertise and our ability to execute on our business plan.

Healthcare legislative or regulatory reform measures may have a negative impact on our business and results of operations.

In the United States and some foreign jurisdictions, there have been, and continue to be, several legislative and regulatory changes and proposed changes regarding the healthcare system that could prevent or delay marketing approval of development candidates, restrict or regulate post-approval activities, and affect our ability to profitably sell any development candidates for which we obtain marketing approval. Payors, whether domestic or foreign, or governmental or private, are developing increasingly sophisticated methods of controlling healthcare costs. Recent and proposed healthcare reform measures in the United States have focused in particular on prescription drug pricing, reimbursement, and manufacturer financial obligations under government healthcare programs. These measures include statutory changes, executive actions, and proposed regulations that may affect pricing, coverage, reimbursement methodologies, and market access for pharmaceutical and biological products. For a more complete discussion of healthcare reform and regulatory developments that may affect our business, see Item 1, *"Business—Government Regulation—Healthcare Reform Measures."*

There has been increasing legislative, regulatory, and enforcement interest in the United States with respect to prescription drug pricing practices. Specifically, 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. Congressional inquiries and proposed and enacted federal and state legislation designed to, among other things, bring more transparency to drug pricing, reduce the cost of prescription drugs under Medicare, and review the relationship between pricing and manufacturer patient programs.

The continuing efforts of the government, insurance companies, managed care organizations and other payers of healthcare services to contain or reduce costs of healthcare may adversely affect:

- the demand for any of our development candidates, if approved;
- the ability to set a price that we believe is fair for any of our development candidates, if approved;
- our ability to generate revenues and achieve or maintain profitability;
- the level of taxes that we are required to pay; and
- the availability of capital.

We expect that additional healthcare reform measures will be adopted in the future, any of which could result in reduced demand for our development candidates or additional pricing pressures. These cost containment measures (be it federal or state regulations, or regional bidding processes, or most-favored-nation pricing practices, or otherwise) could reduce the ultimate demand for any approved development candidates and or put pressure on our pricing, which could negatively affect our business, financial condition, results of operations and prospects.

In addition, a 2024 U.S. Supreme Court decision may increase regulatory uncertainty and litigation risk and could delay or complicate FDA regulatory review, policymaking, or implementation of regulatory initiatives. We cannot predict the full impact of this decision, future judicial challenges brought against the FDA, or the nature or extent of government regulation that may arise from future legislation or administrative action. Any such challenges, if successful, could have an impact on our business, and any such impact could be material. In addition to potential changes to regulations and agency guidance as a result of legal challenges, these decisions may result in increased regulatory uncertainty and delays in and other impacts to the agency rulemaking process, any of which could adversely impact our business and operations.

If the market opportunities for any development candidates we may develop are smaller than we believe they are, our potential revenues may be adversely affected, and our business may suffer.

Our projections of both the number of people who have these diseases, as well as the subset of people with these diseases who have the potential to benefit from treatment with development candidates we may develop, are based on estimates. These estimates may prove to be incorrect and new studies may change the estimated incidence or prevalence of these diseases. Additionally, our estimates regarding the potential market size may be materially different from what we currently expect by the time we commence commercialization. The number of patients in the United States, Europe, and elsewhere may turn out to be lower than expected, and patients may not be amenable to treatment with our development candidates, or may become increasingly difficult to identify or gain access to, all of which would adversely affect our business, financial condition, results of operations, and prospects.

While we intend to seek designations for our development candidates with the FDA and comparable foreign regulatory authorities that are intended to confer benefits such as a faster development process or an accelerated regulatory pathway, there can be no assurance that we will successfully obtain such designations. In addition, even if one or more of our development candidates are granted such designations, we may not be able to realize the intended benefits of such designations.

The FDA and comparable foreign regulatory authorities offer certain designations for development candidates that are designed to encourage the research and development of development candidates that are intended to address conditions with significant unmet medical need. These designations include fast track, or breakthrough therapy, among others, and may confer benefits such as additional interaction with regulatory authorities, a potentially accelerated regulatory pathway and priority review. However, there can be no assurance that we will successfully obtain such designations for any development candidates. See Item 1 "*Business—Government Regulation—Expedited Development and Review Programs for Drugs*" for more information regarding these designations. While such designations could expedite the development or approval process, they generally do not change the standards for approval. Even if we obtain such designations for one or more of our development candidates, there can be no assurance that we will realize their intended benefits.

In the future, we may also seek approval of development candidates under the FDA's accelerated approval pathway or request priority review. There can be no assurance that FDA would allow any of the development candidates we may develop to proceed on an accelerated approval pathway or grant priority review, and even if FDA did allow such pathway, there can be no assurance that such submission or application will be accepted or that any expedited development, review or approval will be granted on a timely basis, or at all. Moreover, even if we received accelerated approval, any post-approval studies required to confirm and verify clinical benefit may not show such benefit, which could lead to withdrawal of any approvals we have obtained. Receiving accelerated approval does not assure that the product's accelerated approval will eventually be converted to a traditional approval.

In addition, in the European Union, we may seek to participate in The PRIority MEdicines, or PRIME, scheme for our development candidates. The PRIME scheme is intended to encourage drug development in areas of unmet medical need and provides accelerated assessment of products representing substantial innovation, where the marketing authorization application will be made through the centralized procedure in the European Union. There is no guarantee, however, that our development candidates would be deemed eligible for the PRIME scheme and even if we do participate in the PRIME scheme, where during the course of development a medicine no longer meets the eligibility criteria, support under the PRIME scheme may be withdrawn. PRIME eligibility does not change the standards for product approval, and there is no assurance that any such designation or eligibility will result in expedited review or approval. For more information regarding PRIME and the EU regulatory framework, see Item 1 "*Business—Government Regulation—Regulation Outside of the United States*."

Risks Related to Regulatory, Legal, and Clinical Trials

Because we are developing oligonucleotides, which are considered a relatively new class of drugs, there is increased risk that the outcome of our clinical trials will not be sufficient to obtain regulatory approval.

The FDA and comparable ex-U.S. regulatory agencies have relatively limited experience with oligonucleotides, which may increase the complexity, uncertainty and length of the regulatory review process for any development candidates. Even though the FDA issued two draft guidance documents in December 2021 relating to IND submissions for individualized antisense oligonucleotide drugs for severely debilitating or life-threatening genetic diseases, one with clinical focus, the other with chemistry manufacturing and controls focus, and in June 2024 final guidance on clinical pharmacology considerations for the development of oligonucleotide therapeutics, the FDA and its foreign counterparts have not yet established any definitive policies, practices or guidelines in relation to overall development considerations for RNA editing oligonucleotide therapies. The general lack of policies, practices or guidelines specific to oligonucleotides may hinder or slow review by the FDA or other

foreign regulatory agencies of any regulatory filings that we may submit. Moreover, the FDA or other foreign regulatory agencies may respond to these submissions by defining requirements we may not have anticipated. Addressing such requirements could lead to significant delays in the development of our development candidates. In addition, because there may be approved treatments for some of the diseases for which we may seek approval, in order to receive regulatory approval, we may need to demonstrate through clinical trials that the development candidates we develop to treat these diseases, if any, are not only safe and effective, but safer or more effective than existing products. Furthermore, in recent years, there has been increased public and political pressure on the FDA with respect to the approval process for new drugs. As a result of the foregoing factors, we may never receive regulatory approval to market and commercialize any development candidate. Even if we obtain regulatory approval, the approval may be for disease indications or patient populations that are not as broad as we intended or desired or may require labeling that includes significant use or distribution restrictions or safety warnings. We may be required to perform additional or unanticipated clinical trials to obtain regulatory approval or be subject to additional post-marketing studies or other requirements to maintain such approval. As a result, we may never succeed in developing a marketable product, we may not become profitable and the value of our common stock could decline.

Because we are developing development candidates in the field of genetic medicines in which there is little clinical experience, there is increased risk that the FDA, the EMA, HREC, TGA or other regulatory authorities may not consider the endpoints of our clinical trials to provide clinically meaningful results and that these results may be difficult to analyze.

In order to proceed into clinical development of any development candidates we identify, we will need to submit INDs or comparable foreign applications to regulatory authorities and obtain regulatory clearance to commence clinical development. Because the development candidates we identify are based on novel gene-editing technology, we may be unsuccessful in obtaining clearance from regulatory authorities to proceed into clinical development. In order to commence clinical development, we will need to identify success criteria and endpoints such that the FDA, the EMA or other regulatory authorities will be able to determine the clinical efficacy and safety profile of any development candidates we may develop. As we are initially seeking to identify and develop development candidates to treat diseases in which there is little clinical experience using new technologies, and while we may have opportunities to discuss our clinical development plans with regulatory authorities prior to commencing clinical development, there is heightened risk that the FDA, the EMA, HREC, TGA or other regulatory authorities may not consider the clinical trial endpoints that we propose to provide clinically meaningful results (reflecting a tangible benefit to patients). In addition, the resulting clinical data and results may be difficult to analyze.

Even if the FDA does find our success criteria to be sufficiently validated and clinically meaningful, we may not achieve the pre-specified endpoints to a degree of statistical significance. Furthermore, even if we do achieve the pre-specified criteria, we may produce results that are unpredictable or inconsistent with the results of the non-primary endpoints or other relevant data. The FDA also weighs the benefits of a product against its risks, and the FDA may view the efficacy results in the context of safety as not being supportive of regulatory approval. Other regulatory authorities in the European Union and other countries may make similar comments with respect to these endpoints and data. Any development candidates we may develop will be based on a novel technology that makes it difficult to predict the time and cost of development and of subsequently obtaining regulatory approval. No RNA editing therapeutic product has been approved in the United States or in Europe. Within the broader genome product field, only a limited number of gene therapy products have received marketing authorization or marketing approval from the European Commission or the FDA. Some of these products have taken years to register and have had to deal with significant issues in their post-marketing experience.

Even if we complete the necessary preclinical studies and clinical trials, we cannot predict when, or if, we will obtain regulatory approval to commercialize a development candidate and the approval may be for a narrower indication than we seek.

Prior to commercialization, any of our development candidates must be approved by the FDA pursuant to a new drug application, or NDA, in the United States and pursuant to similar marketing applications by the EMA and similar regulatory authorities outside the United States. The process of obtaining marketing approvals, both in the United States and abroad, is expensive and takes many years, if approval is obtained at all, and can vary substantially based upon a variety of factors, including the type, complexity and novelty of the development candidates involved. Failure to obtain marketing approval for a development candidate will prevent us from commercializing the development candidates. We have not received approval to market any of our development candidates from regulatory authorities in any jurisdiction. We have no experience in submitting and supporting the applications necessary to gain marketing approvals, and, in the event regulatory authorities indicate that we may submit such applications, we may be unable to do so as quickly and efficiently as desired.

Securing marketing approval requires the submission of extensive preclinical and clinical data and supporting information to regulatory authorities for each therapeutic indication to establish the development candidate’s safety and efficacy. Securing

marketing approval also requires the submission of information about the product manufacturing process to, and inspection of manufacturing facilities by, the regulatory authorities. Our development candidates may not be effective, may be only moderately effective or may prove to have undesirable or unintended side effects, toxicities or other characteristics that may preclude us from obtaining marketing approval or prevent or limit commercial use. Regulatory authorities have substantial discretion in the approval process and may refuse to accept or file any application or may decide that our data is insufficient for approval and require additional preclinical, clinical or other studies. In addition, varying interpretations of the data obtained from preclinical and clinical testing could delay, limit or prevent marketing approval of a development candidate.

Approval of any of our development candidates may be delayed or refused for many reasons, including:

- 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 our development candidates are safe and effective for any of their proposed indications;
- the results of clinical trials may not meet the level of statistical significance required by the FDA or comparable foreign regulatory authorities for approval;
- We may be unable to demonstrate that our development candidates' clinical and other benefits outweigh their safety risks;
- the FDA or comparable foreign regulatory authorities may disagree with our interpretation of data from preclinical programs or clinical trials;
- the data collected from clinical trials of our development candidates may not be sufficient to support the submission of an NDA or other comparable submission in foreign jurisdictions or to obtain regulatory approval in the United States or elsewhere;
- the facilities of third-party manufacturers with which we contract or procure certain service or raw materials, may not be adequate to support approval of our development candidates; and
- the approval policies or regulations of the FDA or comparable foreign regulatory authorities may significantly change in a manner rendering our clinical data insufficient for approval.

Even if our development candidates meet their safety and efficacy endpoints in clinical trials, the regulatory authorities may not complete their review processes in a timely manner, or we may not be able to obtain regulatory approval. Additional delays may result if an FDA Advisory Committee or other regulatory authority recommends non-approval or restrictions on approval. In addition, we may experience delays or rejections based upon additional government regulation from future legislation or administrative action, or changes in regulatory authority policy during the period of product development, clinical trials and the review process.

Regulatory authorities also may approve a development candidate for more limited indications than requested or they may impose significant limitations in the form of narrow indications, warnings or REMS. These regulatory authorities may require precautions or contra-indications with respect to conditions of use or they may grant approval subject to the performance of costly post-marketing clinical trials. In addition, regulatory authorities may not approve the labeling claims that are necessary or desirable for the successful commercialization of our development candidates. Any of the foregoing scenarios could materially harm the commercial prospects for our development candidates and adversely affect our business, financial condition, results of operations and prospects.

We may be unable to obtain regulatory approval in the United States or foreign jurisdictions and, as a result, be unable to commercialize our development candidates and our ability to generate revenue will be materially impaired.

Our development candidates are subject to extensive governmental regulations relating to, among other things, research, testing, development, manufacturing, quality, safety, efficacy, approval, recordkeeping, reporting, labeling, storage, packaging, advertising and promotion, pricing, marketing and distribution of drugs. Rigorous preclinical studies and clinical trials, and an extensive regulatory approval process are required to be successfully completed in the United States and in many foreign jurisdictions before a new drug can be marketed. Satisfaction of these and other regulatory requirements is costly, time consuming, uncertain, and subject to a continuously evolving regulatory environment and unanticipated delays. It is possible that none of the development candidates we may develop will obtain the regulatory approvals necessary for us or our collaborators to begin selling them.

The time required to obtain FDA and other approvals is unpredictable but typically takes many years following the commencement of clinical trials, depending upon the type, complexity and novelty of the development candidate. The standards that the FDA and its foreign counterparts use when regulating companies such as ours are not always applied predictably or uniformly and can change. Any analysis we perform of data from chemistry, manufacturing and controls, preclinical and clinical activities is subject to confirmation and interpretation by regulatory authorities, which could delay, limit or prevent regulatory approval. We may also encounter unexpected delays or increased costs due to new government regulations, for example, from future legislation or administrative action, or from changes in FDA policy during the period of product development, clinical trials and FDA regulatory review. It is impossible to predict whether legislative changes will be enacted, or whether FDA or foreign regulations, guidance or interpretations will be changed, or what the impact of such changes, if any, may be.

Any delay or failure in obtaining required approvals could adversely affect our ability to generate revenues from the particular development candidates for which we are seeking approval. Furthermore, any regulatory approval to market a product may be subject to limitations on the approved uses for which we may market the product or the labeling or other restrictions. In addition, the FDA has the authority to require a REMS as a condition of approval, which may impose further requirements or restrictions on the distribution or safe use of an approved drug, such as limiting prescribing rights to certain physicians or medical centers that have undergone specialized training, limiting treatment to patients as specially defined by the indication statement or who meet certain safe-use criteria, and requiring treated patients to enroll in a registry, among other requirements. These limitations and restrictions may limit the size of the market for the product and affect reimbursement by third-party payors.

We are also subject to numerous foreign regulatory requirements governing, among other things, the conduct of clinical trials, manufacturing and marketing authorization, pricing and payment. The foreign regulatory approval process varies among countries and may include all of the risks associated with FDA approval described above, as well as risks attributable to the satisfaction of local regulations in foreign jurisdictions. Approval by the FDA does not ensure approval by comparable regulatory authorities outside of the United States and vice versa.

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

Our development candidates and the activities associated with their development and potential commercialization, including their testing, manufacturing, recordkeeping, labeling, storage, approval, advertising, promotion, sale and distribution, are subject to comprehensive regulation by the FDA and other U.S. and international regulatory authorities. These requirements include submissions of safety and other post-marketing information and reports, registration and listing requirements, requirements relating to manufacturing, including cGMPs, quality control, quality assurance and corresponding maintenance of records and documents, including periodic inspections by the FDA and other regulatory authorities and requirements regarding the distribution of samples to providers and recordkeeping.

The FDA may also impose requirements for costly post-marketing studies or clinical trials and surveillance to monitor the safety or efficacy of any approved product. The FDA closely regulates the post-approval marketing and promotion of drugs to ensure drugs are marketed only for the approved indications and in accordance with the provisions of the approved labeling. The FDA imposes stringent restrictions on manufacturers' communications regarding use of their products. If we promote our development candidates in a manner inconsistent with FDA-approved labeling or otherwise not in compliance with FDA regulations, we may be subject to enforcement action. Violations of the Federal Food, Drug, and Cosmetic Act relating to the promotion of prescription drugs may lead to investigations alleging violations of federal and state healthcare fraud and abuse laws, as well as state consumer protection laws and similar laws in international jurisdictions.

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

- restrictions on such development candidates, manufacturers or manufacturing processes;
- restrictions on the labeling or marketing of a product;
- restrictions on product distribution or use;
- requirements to conduct post-marketing studies or clinical trials;
- warning or untitled letters;

- withdrawal of any approved product from the market;
- refusal to approve pending applications or supplements to approved applications that we may submit;
- recall of development candidates;
- fines, restitution or disgorgement of profits or revenues;
- suspension or withdrawal of marketing approvals;
- refusal to permit the import or export of our development candidates;
- product seizure; or
- injunctions or the imposition of civil or criminal penalties.

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

Even if we obtain regulatory approvals, our marketed drugs will be subject to ongoing regulatory oversight. If we fail to comply with continuing U.S. and foreign requirements, our approvals, if obtained, could be limited or withdrawn, we could be subject to other penalties, and our business would be seriously harmed.

Following any initial regulatory approval of any drugs we may develop, we will also be subject to continuing regulatory oversight, including the review of adverse drug experiences and safety data that are reported after our drug products are made commercially available. This would include results from any post-marketing studies or surveillance to monitor the safety and efficacy of the drug product required as a condition of approval or agreed to by us. Any regulatory approvals that we receive for our development candidates may also be subject to limitations on the approved uses for which the product may be marketed. Other ongoing regulatory requirements include, among other things, submissions of safety and other post-marketing information and reports, registration and listing, as well as continued maintenance of our marketing application, compliance with cGMP requirements and quality oversight, compliance with post-marketing commitments, applicable product tracking and tracing requirements and compliance with GCP for any clinical trials that we conduct post-approval. Failure to comply with these requirements could result in warning or untitled letters, criminal or civil penalties, recalls, or product withdrawals. In addition, we intend to seek approval to market our development candidates in jurisdictions outside of the United States, and therefore will be subject to, and must comply with, regulatory requirements in those jurisdictions.

The FDA has significant post-market authority, including, for example, the authority to require labeling changes based on new safety information and to require post-market studies or clinical trials for a variety of reasons. The FDA also has the authority to require a REMS plan after approval, which may impose further requirements or restrictions on the distribution or use of an approved drug.

We, our CMOs, and the manufacturing facilities we use to make our development candidates will also be subject to ongoing assessment of product quality, compliance with cGMP, and periodic inspection by the FDA and potentially other regulatory agencies. We or our CMOs may not be able to comply with applicable cGMP regulations or similar regulatory requirements outside of the United States. Our failure, or the failure of our CMOs, to comply with applicable regulations could result in regulatory actions, such as the issuance of FDA Form 483 notices of observations, warning letters or sanctions being imposed on us, including clinical holds, fines, injunctions, civil penalties, delays, suspension or withdrawal of approvals, license revocation, seizures or recalls of development candidates or drugs, operating restrictions and criminal prosecutions, any of which could significantly and adversely affect supplies of our products. We may not have the ability or capacity to manufacture material at a broader commercial scale in the future. We and our CMOs currently manufacture a limited supply of clinical trial materials. Reliance on CMOs entails risks to which we would not be subject if we manufactured all of the material ourselves, including reliance on the CMO for regulatory compliance. Our product promotion and advertising will also be subject to regulatory requirements and continuing regulatory review.

If we or our collaborators, manufacturers or service providers fail to comply with applicable continuing regulatory requirements in the United States or foreign jurisdictions in which we may seek to market our products, we or they may be subject to, among other things, fines, warning letters, holds on clinical trials, refusal by the FDA or comparable foreign regulatory authorities to approve pending applications or supplements to approved applications, suspension or withdrawal of regulatory approval, product recalls and seizures, refusal to permit the import or export of products, operating restrictions, injunction, consent decree, civil penalties and criminal prosecution.

The insurance coverage and reimbursement status of newly-approved products is uncertain. Failure to obtain or maintain adequate coverage and reimbursement for our development candidates could limit our product revenues.

Because our development candidates represent new approaches to the treatment of genetic-based diseases, we cannot be sure that coverage and reimbursement will be available for, or accurately estimate the potential revenue from, our development candidates or assure that coverage and reimbursement will be available for any product that we may develop. The regulations that govern marketing approvals, pricing and reimbursement for new drugs vary widely from country to country. Some countries require approval of the sale price of a drug before it can be marketed. In many countries, the pricing review period begins after marketing or product licensing approval is granted. In some foreign markets, prescription pharmaceutical pricing remains subject to continuing governmental control even after initial approval is granted. We are monitoring these regulations as several of our programs move into later stages of development; however, many of our programs are currently in the earlier stages of development and we will not be able to assess the impact of price regulations for a number of years. As a result, we might obtain regulatory approval for a product in a particular country, but then be subject to price regulations that could delay our commercial launch of the product and negatively impact any potential revenues we may be able to generate from the sale of the product in that country and potentially in other countries due to reference pricing. For more information, see Item 1 "*Business – Government Regulation – Pharmaceutical Coverage and Reimbursement."*

Our ability to commercialize any products successfully will also depend in part on the extent to which coverage and adequate reimbursement/payment for these products and related treatments will be available from government health administration authorities, private health insurers and other organizations. Even if we succeed in bringing one or more products to the market, these products may not be considered medically necessary and/or cost-effective, and the amount reimbursed for any products may be insufficient to allow us to sell our products on a competitive basis. At this time, we are unable to determine their cost effectiveness or the likely level or method of reimbursement for our development candidates. Increasingly, third-party payors, such as government and private insurance plans, are requiring that drug companies provide them with predetermined discounts from list prices, and are seeking to reduce the prices charged or the amounts paid for pharmaceutical products. If the price we are able to charge for any products we develop, or the payments provided for such products, is inadequate in light of our development and other costs, our return on investment could be adversely affected.

There may be significant delays in obtaining coverage for newly-approved drugs, and coverage may be more limited than the indications for which the drug is approved by the FDA or comparable foreign regulatory authorities. Patients who are prescribed medications for the treatment of their conditions, and their prescribing physicians, generally rely on third-party payors to pay all or part of the costs associated with their prescription drugs. Patients are unlikely to use our products unless coverage is provided and payment is adequate to cover all or a significant portion of the cost of our products. Therefore, coverage and adequate payment is critical to new product acceptance. Coverage decisions may depend upon clinical and economic standards that disfavor new drug products when more established or lower cost therapeutic alternatives are already available or subsequently become available. Moreover, eligibility for coverage does not imply that any drug will be paid for in all cases or at a rate that covers our costs, including research, development, manufacture, sale and distribution. Interim payments for new drugs, if applicable, may also not be sufficient to cover our costs and may not be made permanent. Reimbursement may be based on payments allowed for lower-cost drugs that are already reimbursed, may be incorporated into existing payments for other services and may reflect budgetary constraints or imperfections in Medicare data. Net prices for drugs may be reduced by mandatory discounts or rebates required by government healthcare programs or private payors and by any future relaxation of laws that presently restrict imports of drugs from countries where they may be sold at lower prices than in the United States. Third-party payors often rely upon Medicare coverage policy and payment limitations in setting their own reimbursement rates. However, no uniform policy requirement for coverage and reimbursement for drug products exists among third-party payors in the United States. Therefore, coverage and reimbursement for drug products can differ significantly from payor to payor. 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 products to each payor separately, with no assurance that coverage and adequate reimbursement will be applied consistently or obtained in the first instance. Our inability to promptly obtain coverage and adequate reimbursement rates from both government-funded and private payors for new drugs that we develop and for which we obtain regulatory approval could adversely affect our operating results, our ability to raise capital needed to commercialize products, and our overall financial condition.

We believe that the efforts of governments and third-party payors to contain or reduce the cost of healthcare and legislative and regulatory proposals to broaden the availability of healthcare will continue to affect the business and financial condition of pharmaceutical and biopharmaceutical companies.

We may not be able to obtain orphan drug exclusivity for one or more of our development candidates, and even if we do, that exclusivity may not prevent the FDA or the EMA from approving other competing products.

Under the Orphan Drug Act, the FDA may designate a development candidate as an orphan drug if it is a drug intended to treat a rare disease or condition. A similar regulatory scheme governs approval of orphan development candidates by the EMA in the European Union. Generally, if a product with an orphan drug designation subsequently receives the first marketing approval for the indication for which it has such designation, the product is entitled to a period of marketing exclusivity, which precludes the FDA or the EMA from approving another marketing application for another development candidates for the same orphan therapeutic indication for that time period. The applicable period is seven years in the United States and ten years in the European Union. The exclusivity period in the European Union can be reduced to six years if a product no longer meets the criteria for orphan designation, in particular if the product is sufficiently profitable so that market exclusivity is no longer justified.

The FDA's standards for granting orphan drug exclusivity in the gene therapy context are unclear and evolving. In order for the FDA to grant orphan drug exclusivity to one of our development candidates, the agency must find that the development candidates is indicated for the treatment of a condition or disease that affects fewer than 200,000 individuals in the United States or that affects more than 200,000 individuals in the United States and for which there is no reasonable expectation that the cost of developing and making the development candidate available for the disease or condition will be recovered from sales of the product in the United States. The FDA may conclude that the condition or disease for which we seek orphan drug exclusivity does not meet this standard. Even if we obtain orphan drug exclusivity for a development candidate, that exclusivity may not effectively protect the development candidates from competition because different development candidates can be approved for the same approved use or condition. In addition, even after an orphan drug is approved, the FDA can subsequently approve the same development candidates for the same approved use or condition if the FDA concludes that the later development candidates is clinically superior in that it is shown to be safer, more effective or makes a major contribution to patient care compared with the product that has orphan exclusivity. Orphan drug exclusivity may also be lost if the FDA or EMA determines that the request for designation was materially defective or if the manufacturer is unable to assure sufficient quantity of the product to meet the needs of the patients with the rare disease or condition.

In August 2017, the Congress passed the FDA Reauthorization Act of 2017, or FDARA. FDARA, among other things, codified the FDA's pre-existing regulatory interpretation, to require that a drug sponsor demonstrate the clinical superiority of an orphan drug that is otherwise the same as a previously approved drug for the same rare disease in order to receive orphan drug exclusivity. The law reverses prior precedent holding that the Orphan Drug Act unambiguously requires that the FDA recognize the orphan exclusivity period regardless of a showing of clinical superiority. Moreover, in the Consolidated Appropriations Act of 2021, Congress did not further change this interpretation when it clarified that the interpretation codified in FDARA would apply in cases where FDA issued an orphan designation before the enactment of FDARA but where product approval came after the enactment of FDARA. The FDA may further reevaluate the Orphan Drug Act and its regulations and policies. We do not know if, when, or how the FDA may change the orphan drug regulations and policies in the future, and it is uncertain how any changes might affect our business. Depending on what changes the FDA may make to its orphan drug regulations and policies, our business could be adversely impacted.

If we do not comply with laws regulating the protection of the environment and health and human safety, our business could be adversely affected.

Our research, development and manufacturing processes involve the use of hazardous materials. We maintain quantities of various flammable and toxic chemicals in our facilities that are required for our research, development and manufacturing activities. We are subject to federal, state and local laws and regulations governing the use, manufacture, storage, handling and disposal of these hazardous materials. Our procedures for storing, handling and disposing of these materials are reviewed against the relevant guidelines and laws of the jurisdictions in which our facilities are located on a regular basis. Although we believe that our safety procedures for handling and disposing of these materials sufficiently mitigate the risk of accidental contamination or injury from these materials, the risk cannot be completely eliminated. If an accident occurs, we could be held liable for resulting damages, which could be substantial. We are also subject to numerous environmental, health and workplace safety laws and regulations, including those governing laboratory procedures, exposure to blood-borne pathogens and the handling of biohazardous materials. 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 these materials, this insurance may not provide adequate coverage

against potential liabilities. We do not maintain insurance for environmental liability or toxic tort claims that may be asserted against us in connection with our storage or disposal of biological or hazardous materials. Additional federal, state and local laws and regulations affecting our operations may become applicable in the future. We may incur substantial costs to comply with, and substantial fines or penalties if we violate any of, these laws or regulations.

If we or our collaborators, manufacturers, service providers or other third parties fail to comply with applicable healthcare laws and regulations, we could be subject to enforcement actions, which could affect our ability to develop, market and sell our products and may harm our reputation.

We are currently, and may in the future be, subject to extensive federal, state, local, and comparable foreign healthcare laws and regulations, including those relating to fraud and abuse, anti-kickback restrictions, false claims, transparency and reporting, patient privacy and data protection, and anti-bribery and related requirements, which may constrain the business or financial arrangements and relationships through which we conduct our operations, including how we research, develop, market, sell, and distribute our products for which we obtain marketing approval. The scope and enforcement of these laws is uncertain, subject to rapid change, and dependent on evolving government and industry interpretations, and authorities have increased scrutiny of interactions between healthcare companies and healthcare providers and third-party payors. If our operations are found to be in violation of applicable requirements, we may be subject to penalties and other sanctions, which may include civil or criminal penalties, criminal prosecution, monetary damages, disgorgement, contractual damages, reputational harm, curtailment or restructuring of our operations, exclusion from participation in federal and state healthcare programs (including Medicare and Medicaid), the imposition of a corporate integrity agreement, suspension or withdrawal of product approvals, restrictions or prohibitions on marketing, and other enforcement actions. Any investigation or enforcement action, even if ultimately resolved favorably, could cause us to incur significant legal and compliance expenses, divert management attention, and adversely affect our business, financial condition, results of operations, and prospects. We intend to develop and implement a comprehensive corporate compliance program prior to commercialization; however, compliance programs can mitigate but cannot eliminate the risk of noncompliance and related enforcement. For more information, see Item 1, *"Business—Governmental Regulation—Other Healthcare Laws."*

Efforts to ensure that our business arrangements with third parties will comply with applicable healthcare laws and regulations will involve substantial costs. Given the breadth of the laws and regulations, limited guidance for certain laws and regulations and evolving government interpretations of the laws and regulations, governmental authorities may possibly conclude that our business practices may not comply with healthcare laws and regulations. The scope and enforcement of each of these laws is uncertain and subject to rapid change in the current environment of healthcare reform. Federal and state enforcement bodies have recently increased their scrutiny of interactions between healthcare companies and healthcare providers, which has led to a number of investigations, prosecutions, convictions and settlements in the healthcare industry. Moreover, federal, state or foreign laws or regulations are subject to change, and while we, our collaborators, manufacturers and/or service providers currently may be compliant, that could change due to changes in interpretation, prevailing industry standards or other reasons.

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

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

Our employees, consultants and collaborators may engage in misconduct or other improper activities, including noncompliance with regulatory standards and requirements.

We are exposed to the risk of fraud and other misconduct by our employees, consultants and collaborators. Such misconduct could include intentional failures to comply with FDA and other foreign agency regulations, provide accurate information to the FDA, comply with manufacturing standards required by the FDA or us, comply with federal and state healthcare fraud and abuse laws and regulations, report financial information or data accurately or disclose unauthorized activities to us. In particular, sales, marketing and business arrangements in the healthcare industry are subject to extensive laws and regulations intended to prevent fraud, kickbacks, self-dealing and other abusive practices. These laws and regulations may restrict

or prohibit a wide range of pricing, discounting, marketing and promotion, sales commission, customer incentive programs and other business arrangements. Such misconduct could also involve the improper use of information obtained in the course of clinical trials, which could result in regulatory sanctions and serious harm to our reputation. It is not always possible to identify and deter such misconduct, 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 be in compliance with such laws or regulations. If any such actions are instituted against us, and we are not successful in defending ourselves or asserting our rights, those actions could have a significant impact on our business, including the imposition of significant fines or other sanctions.

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

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

- decreased demand for any products that we may develop;
- injury to our reputation and significant negative media attention;
- withdrawal of clinical trial participants;
- significant time and costs to defend the related litigation;
- substantial monetary awards to trial participants or patients;
- loss of revenue; and
- the inability to commercialize any medicines that we may develop.

We anticipate that we will need to increase our insurance coverage when we begin clinical trials and if we successfully commercialize any product. Insurance coverage is increasingly expensive. We may not be able to maintain insurance coverage at a reasonable cost or in an amount adequate to satisfy any liability that may arise.

Our internal computer and information systems, or those used by our CROs, CMOs or other contractors or consultants, may fail or suffer security breaches, which could result in a material disruption of our development programs.

Despite the implementation of appropriate security measures, our internal computer and information systems and those of our current and any future CROs, CMOs and other contractors or consultants may become vulnerable to damage from computer viruses, unauthorized access, natural disasters, terrorism, war and telecommunication and electrical failures. If such an event were to occur and cause interruptions in our operations, it could result in a disruption of our development programs and our business operations, whether due to a loss of our trade secrets or other proprietary information or other similar disruptions. For example, the loss of data from completed or future preclinical studies or clinical trials could result in significant delays in our regulatory approval efforts and significantly increase our costs to recover or reproduce the data. To the extent that any disruption or security breach were to result in a loss of, or damage to, our data or applications, or inappropriate disclosure of confidential or proprietary information, we could incur liability, our competitive position could be harmed and the further development and commercialization of our development candidates could be significantly delayed.

We may be unable to adequately protect our information systems from cybersecurity incidents or data breaches, which could result in the disclosure of confidential information, damage our reputation, and subject us to significant financial and legal exposure.

We and the third parties upon which we rely face a variety of evolving threats, which could cause cybersecurity incidents or data breaches. Cybersecurity incidents and data breaches are increasing in their frequency, sophistication and intensity, and have become increasingly difficult to detect. Cybersecurity incidents and data breaches could include wrongful conduct by hostile foreign governments, industrial espionage, wrongful conduct by employees or vendors, human error, wire fraud and other forms of cyber fraud, the deployment of harmful malware or ransomware, denial-of-service attacks, social engineering fraud (including successful phishing attacks) or other means to threaten data confidentiality, integrity and availability. A cybersecurity incident or data breach could cause serious negative consequences for us, including, without limitation, the disruption of operations, the

misappropriation of confidential business information, including financial information, trade secrets, financial loss and the disclosure of corporate strategic plans.

Like other companies in our industry, we and our third party vendors, have experienced, or may experience, threats and cybersecurity incidents relating to our and our third-party vendors' information systems and infrastructure. Although we devote resources to protect our information systems, there can be no assurance that our efforts will prevent cybersecurity incidents or data breaches that could result in business, legal, financial or reputational harm to us, or would have a material adverse effect on our results of operations and financial condition. Attempts to disrupt or gain unauthorized access to our and our third-party vendors' information systems from malicious third parties or insider threats may incorporate widely varying and frequently changing tactics, which may be enhanced or facilitated by artificial intelligence. Further, 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 privacy and data security obligations. Although we maintain cyber liability insurance, this insurance may not provide adequate coverage against potential liabilities related to any experienced cybersecurity incident or breach. For additional information on our cybersecurity obligations as well as our cybersecurity program, see Item 1 "*Business—Government Regulation—Privacy and Cybersecurity*" and Item 1C "*Cybersecurity*."

Our failure to obtain regulatory approval in international jurisdictions would prevent us from marketing our development candidates outside the United States.

To market and sell our future development candidates in other jurisdictions, we must obtain separate marketing approvals and comply with numerous and varying regulatory requirements. The approval procedure varies among countries and can involve additional testing. The time required to obtain approval may differ substantially from that required to obtain FDA approval. The regulatory approval process outside the United States generally includes all of the risks associated with obtaining FDA approval. In addition, in many countries outside the United States, we must secure product reimbursement approvals before regulatory authorities will approve the product for sale in that country. Failure to obtain foreign regulatory approvals or non-compliance with foreign regulatory requirements could result in significant delays, difficulties and costs for us and could delay or prevent the introduction of our development candidates in certain countries.

If we fail to comply with the regulatory requirements in international markets and receive applicable marketing approvals, our target market will be reduced and our ability to realize the full market potential of our development candidates will be harmed and our business will be adversely affected. We may not obtain foreign regulatory approvals on a timely basis, if at all. Our failure to obtain approval of any of our development candidates by regulatory authorities in another country may significantly diminish the commercial prospects of that development candidates and our business prospects could decline.

Disruptions at the FDA, SEC and other government agencies caused by staffing cuts, funding shortages or global health concerns could hinder their ability to hire, retain or deploy key leadership and other personnel, or otherwise prevent new or modified products from being developed, approved, or commercialized in a timely manner or at all, which could negatively impact our business.

The ability of the FDA to review and approve new products can be affected by a variety of factors, including staffing, government budget and funding levels, statutory, regulatory, and policy changes, the FDA's ability to hire and retain key personnel and accept the payment of user fees, and other events that may otherwise affect the FDA's ability to perform routine functions. Average review times at the agency have fluctuated in recent years as a result. In addition, government funding of other government agencies that fund research and development activities is subject to the political process, which is inherently fluid and unpredictable. Without appropriation of funding to federal agencies, our business operations related to our product development activities for the U.S. market could be impacted.

Disruptions at the FDA and other federal agencies, including substantial leadership departures, personnel cuts, and policy changes, may also slow the time necessary for new drugs to be reviewed and/or approved, which would harm our business. Changes and cuts in FDA staffing also could result in delays in the FDA's responsiveness or in its ability to review regulatory submissions or applications, issue regulations or guidance, or implement or enforce regulatory requirements in a timely fashion or at all. For example, over the last several years, the U.S. government has shut down several times, including for a 43-day period that began on October 1, 2025, and certain regulatory agencies, such as the FDA, have had to furlough critical FDA employees and stop critical activities. If a prolonged government shutdown occurs, it could significantly impact the ability of the FDA and the SEC to timely review and process our submissions, which could have a material adverse effect on our business and our timelines.

In addition, government funding of other agencies on which our operations may rely, including those that fund research and development activities and clinical trials, is subject to the political process, which is inherently fluid and unpredictable. Changes to such agencies' budgets, may negatively impact our operations and ongoing clinical trials. Future shutdowns or other disruptions could also affect other government agencies such as the SEC, which may also impact our business by delaying review of our public filings, to the extent such review is necessary, and our ability to access the public markets.

With the change in the U.S. presidential administration in 2025, there is substantial uncertainty as to the extent and manner in which the U.S. government will seek to modify or revise the requirements and policies of the FDA and other regulatory agencies with jurisdiction over our development candidates and any products for which we obtain approval. This uncertainty could present new challenges and/or opportunities as we navigate development and approval of our development candidates. Additionally, the current administration could issue or promulgate executive orders, regulations, policies or guidance that adversely affect us or create a more challenging or costly environment to pursue the development of new therapeutic candidates. Also, state governments may seek to address or react to changes at the federal level with changes to their regulatory frameworks in a manner that could impact our operations.

We, our collaborators and our service providers may be subject to a variety of privacy and data security laws, regulations and contractual obligations, and our failure to comply with them could harm our business.

We maintain a large quantity of sensitive information, including confidential business and patient health information in connection with our preclinical studies, and are subject to laws and regulations governing the privacy and security of such information. In the United States, there are numerous federal and state privacy and data security laws and regulations governing the collection, use, disclosure and protection of personal information, including federal and state health information privacy laws, federal and state security breach notification laws, and federal and state consumer protection laws. Each of these laws is subject to varying interpretations and new laws continue to be proposed. Outside of the United States, many jurisdictions have enacted stringent privacy and data protection laws. The collection, use, disclosure, transfer or other processing of personal data originating from the European Economic Area, or EEA, and United Kingdom is governed by the General Data Protection Regulation, or EU GDPR, and the UK General Data Protection Regulation, or UK GDPR, which, together with the EU GDPR, is referred to as the GDPR. For additional information on these regimes, see Item 1 "*Business—Government Regulation—Privacy and Cybersecurity*". Compliance with these and any other applicable privacy and data security laws and regulations is a rigorous and time-intensive process, and we may be required to put in place additional mechanisms to ensure compliance, and despite those efforts, if we fail to comply with any such laws or regulations, we may face significant fines and penalties that could adversely affect our reputation, business, financial condition and results of operations.

The use of new and evolving technologies, such as artificial intelligence, or AI, in our offerings may result in spending material resources and presents risks and challenges that can impact our business including by posing security and other risks to our confidential information, proprietary information and personal information, and as a result we may be exposed to reputational harm and liability.

We may use and integrate AI into our business processes both in our own development and implementation of AI and through the adoption of commercially available tools. Use of this technology could pose cybersecurity, data privacy, IT, intellectual property, regulatory, legal, operational, competitive, reputational and other risks and challenges that could affect our business. Specifically, risks related to accuracy, bias, artificial intelligence hallucinations, discrimination, harmful content, misinformation, fraud, scams, targeted attacks (including model poisoning or data poisoning), surveillance, data leakage, inequality, environmental harms, and other harms may flow from our development, use, or deployment of AI technologies.

The use of certain AI technology can give rise to intellectual property risks, including by disclosing or otherwise compromising our confidential or proprietary intellectual property and intellectual property infringement, or by undermining our ability to assert or defend ownership rights in intellectual property created with the assistance of AI tools.

Additionally, we expect to see increasing government and supranational regulation related to AI use and ethics, which may also significantly increase the burden and cost of research, development and compliance in this area. For example, the European Union began implementing the Artificial Intelligence Act, or AI Act, with a significant part of the law scheduled to come into effect in August 2026. As currently enacted, the AI Act, which may be amended, imposes significant obligations on providers and deployers of high risk AI systems, and encourages providers and deployers of AI systems to account for EU ethical principles in their development and use of these systems.

In the United States, the AI regulatory environment is complex and uncertain. Over the past year, states have advanced, and in some cases passed, dozens of laws focusing on AI governance and regulation, including on deployment of AI in healthcare

settings. At the federal level, the current U.S. administration has endorsed a federal moratorium on the enforcement of state AI laws, including through a December 2025 executive order. So far, these efforts have not been successful at curtailing state action on AI regulation, contributing to a complicated legislative patchwork, which may be litigated in state and federal courts. If we develop or deploy AI systems that are governed by these laws or regulations, we will need to adopt higher standards of data quality, transparency, and human oversight, and adhere to specific and potentially burdensome and costly ethical, accountability, and administrative requirements. We may also be subject to significant enforcement or litigation in the event of any perceived non-compliance.

The rapid evolution of AI will require the application of significant resources to help ensure that AI is implemented in accordance with applicable law and regulation and in a socially responsible manner and to minimize any real or perceived unintended harmful impacts. If we enable or offer solutions that draw controversy due to perceived or actual negative societal impact, we may experience brand or reputational harm, competitive harm or legal liability. Our vendors may in turn incorporate AI tools into their own offerings, and the providers of these AI tools may not meet existing or rapidly evolving regulatory or industry standards, including with respect to privacy and data security. Further, bad actors around the world use increasingly sophisticated methods, including the use of AI, to engage in illegal activities involving the theft and misuse of personal information, confidential information and intellectual property. In addition, the use of generative AI models in our internal or third-party systems may create new attack surfaces or methods for adversaries, which could impact us and our vendors. Any of these effects could damage our reputation, result in the loss of valuable property and information, cause us to breach applicable laws and regulations, and adversely impact our business.

Risks Related to Our Third Party Relationships

We may be subject to claims that we or our employees or consultants have wrongfully used or disclosed alleged trade secrets of employees' or consultants' former employers or their clients. These claims may be costly to defend and if we do not successfully do so, we may be required to pay monetary damages and may lose valuable intellectual property rights or personnel.

Many of our employees were previously employed at universities or biotechnology or pharmaceutical companies, including our competitors or potential competitors. Although no claims against us are currently pending, we may be subject to claims that these employees or we have inadvertently or otherwise used or disclosed trade secrets or other proprietary information of their former employers. Litigation may be necessary to defend against these claims. If we fail in defending such claims, in addition to paying monetary damages, we may lose valuable intellectual property rights or personnel. A loss of key research personnel or their work product could hamper our ability to commercialize, or prevent us from commercializing, our development candidates, which could severely harm our business. Even if we are successful in defending against these claims, litigation could result in substantial costs and be a distraction to management.

We expect to rely on third parties to conduct our clinical trials and some aspects of our research, as well as some aspects of our delivery methods, and those third parties may not perform satisfactorily, including failing to meet deadlines for the completion of such trials, research or testing.

We currently, and expect to continue to, rely on third parties, such as CROs, clinical data management organizations, medical institutions, preclinical laboratories and clinical investigators, to conduct some aspects of our research. For example, we may rely on third parties to conduct some of our preclinical animal experiments and supply key materials for our programs. Any of these third parties may terminate their engagements with us at any time under certain criteria. If we need to enter into alternative arrangements, we may delay our product development activities.

Our reliance on these third parties for research and development activities will reduce our control over these activities but will not relieve us of our responsibilities. For example, we will remain responsible for ensuring that each of our clinical trials is conducted in accordance with the general investigational plan and protocols for the trial. Moreover, the FDA, the EMA and other regulatory authorities require us and the study sites and investigators we work with to comply with standards, commonly referred to as GLPs and GCPs for conducting, recording and reporting the results of preclinical studies and clinical trials to assure, amongst other things, that data and reported results are credible and accurate and that the rights, integrity and confidentiality of trial participants are protected.

We may not be successful in finding strategic collaborators for continuing development of certain of our development candidates or successfully commercializing or competing in the market for certain indications; and we may not see any benefit from our collaboration agreement with Novo Nordisk, which is currently on hold.

In September 2024 we entered into a collaboration agreement with Novo Nordisk and in the future, we may decide to collaborate with non-profit organizations, universities, pharmaceutical and other biotechnology companies for the development and potential commercialization of existing and new development candidates. We face significant competition in seeking appropriate collaborators. Whether we reach a definitive agreement for a collaboration will depend, among other things, upon our assessment of the collaborator's resources and expertise, the terms and conditions of the proposed collaboration and the proposed collaborator's evaluation of a number of factors. Those factors may include the design or results of clinical trials, the likelihood of approval by the FDA or similar regulatory authorities outside the United States, the potential market for the subject development candidates, the costs and complexities of manufacturing and delivering such development candidates to patients, the potential of competing drugs, the existence of uncertainty with respect to our ownership of technology, which can exist if there is a challenge to such ownership without regard to the merits of the challenge and industry and market conditions generally. The collaborator may also consider alternative development candidates or technologies for similar indications that may be available to collaborate on and whether such a collaboration could be more attractive than the one with us for its development candidates. The terms of any additional collaborations or other arrangements that we may establish may not be favorable to us. Collaborations are complex and time-consuming to negotiate and document. In addition, there have been a significant number of recent business combinations among large pharmaceutical companies that have resulted in a reduced number of potential future collaborators.

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

The success of any potential collaboration arrangements, including our collaboration agreement with Novo Nordisk, which as of November 2025 is on pause, will depend heavily on the efforts and activities of our collaborators. Collaborators generally have significant discretion in determining the efforts and resources that they will apply to these collaborations. For example, in November 2025, we agreed on a 12-month hold under our collaboration agreement with Novo Nordisk. Disagreements between parties to a collaboration arrangement regarding clinical development and commercialization matters can lead to delays in the development process or commercializing the applicable development candidates and, in some cases, termination of such collaboration arrangements. These disagreements can be difficult to resolve if neither of the parties has final decision-making authority. Collaborations with pharmaceutical or biotechnology companies and other third parties often are terminated or allowed to expire by the other party. Any such termination or expiration would adversely affect us financially and could harm our business reputation.

Future acquisitions or strategic alliances could disrupt our business and harm our financial condition and results of operations.

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

- diversion of management time and focus from operating our business to addressing acquisition integration challenges;
- program divestitures due to potential exclusivity obligations;
- coordination of research and development efforts;
- retention of key employees from the acquired company;

- changes in relationships with strategic partners as a result of product acquisitions or strategic positioning resulting from the acquisition;
- cultural challenges associated with integrating employees from the acquired company into ours;
- the need to implement or improve controls, procedures, and policies at a business that prior to the acquisition may have lacked sufficiently effective controls, procedures and policies;
- liability for activities of the acquired company before the acquisition, including intellectual property infringement claims, violation of laws, commercial disputes, tax liabilities, and other known liabilities;
- unanticipated write-offs or charges; and
- litigation or other claims in connection with the acquired company, including claims from terminated employees, customers, former stockholders or other third parties.

Our failure to address these risks or other problems encountered in connection with our past or future acquisitions or strategic alliances could cause us to fail to realize the anticipated benefits of these transactions, cause us to incur unanticipated liabilities and harm our business generally. There is also a risk that future acquisitions will result in the incurrence of debt, contingent liabilities, amortization expenses or incremental operating expenses, any of which could harm our financial condition or results of operations.

We rely, and anticipate that we will rely, on third parties to design, conduct, supervise and monitor our preclinical studies and clinical trials, and if those third parties perform in an unsatisfactory manner, it may harm our business.

We rely, and anticipate that we will rely, on third party clinical investigators, CROs, clinical data management organizations and consultants to design, conduct, supervise and monitor preclinical studies and clinical trials of our development candidates. Because we rely on third parties and do not have the ability to conduct preclinical studies or clinical trials independently, we have less control over the timing, quality and other aspects of preclinical studies and clinical trials than we would if we conducted them on own, including our inability to control whether sufficient resources are applied to our programs. If any of our CROs are acquired or consolidated, these concerns are likely to be exacerbated and our preclinical studies or clinical trials may be further impacted due to potential integration, streamlining, staffing and logistical changes. These investigators, CROs and consultants are not our employees and we have limited control over the amount of time and resources that they dedicate to our programs. These third parties may have contractual relationships with other entities, some of which may be our competitors, which may draw time and resources from our programs. Further, these third parties may not be diligent, careful or timely in conducting our preclinical studies or clinical trials, resulting in the preclinical studies or clinical trials being delayed or unsuccessful.

If we cannot contract with acceptable third parties on commercially reasonable terms, or at all, or if these third parties do not carry out their contractual duties, satisfy legal and regulatory requirements for the conduct of preclinical studies or clinical trials or meet expected deadlines, our preclinical and clinical development programs could be delayed and otherwise adversely affected. In all events, we are responsible for ensuring that each of our preclinical studies and clinical trials is conducted in accordance with the general investigational plan and protocols for the trial. The FDA and other health authorities require certain preclinical studies to be conducted in accordance with GLP, and clinical trials to be conducted in accordance with GCP, including conducting, recording and reporting the results of clinical trials to assure that data and reported results are credible and accurate and that the rights, integrity and confidentiality of clinical trial participants are protected. If we or our CROs fail to comply with these requirements, the data generated in our clinical trials may be deemed unreliable or uninterpretable and the FDA and other health authorities may require us to perform additional clinical trials. Our reliance on third parties that we do not control does not relieve us of these responsibilities and requirements. In the United States, we are also required to register certain clinical trials and post the results of completed clinical trials on a government-sponsored database, ClinicalTrials.gov, within certain timeframes. Failure to do so can result in fines, adverse publicity and civil and criminal sanctions. Any such event could adversely affect our business, financial condition, results of operations and prospects.

We rely on third parties in the supply and manufacture of our lead candidates and development candidates for our research, preclinical and clinical activities, and may do the same for commercial supplies of our lead or development candidates.

We have not yet manufactured our development candidates on a commercial scale, and may not be able to do so for any of our development candidates. We currently rely on third parties in the supply and manufacture of materials for our research, preclinical and clinical activities and may continue to do so for the foreseeable future, including if we received regulatory approval for any development candidates. We may do the same for the commercial supply of our drug product. We use third

parties to perform additional steps in the manufacturing process, such as the filling, finishing and labeling of vials and storage of our development candidates and we expect to do so for the foreseeable future. There can be no assurance that our supply of research, preclinical and clinical development drug candidates and other materials will not be limited, interrupted or restricted or will be of satisfactory quality or continue to be available at acceptable prices. Replacement of any of the third parties we may engage could require significant effort and expertise because there may be a limited number of qualified replacements. In addition, raw materials, reagents, and components used in the manufacturing process, particularly those for which we have no other source or supplier, may not be available, may not be suitable or acceptable for use due to material or component defects, or may introduce variability into the supply of our development candidates. Furthermore, with the increase of companies developing nucleic acid therapeutics, there may be increased competition for the supply of the raw materials that are necessary to make our oligonucleotides, which could severely impact the manufacturing of our development candidates.

We may be unable to identify manufacturers on acceptable terms or at all because the number of potential manufacturers is limited and they must be acceptable to the FDA or approved by foreign regulatory authorities. Suppliers and manufacturers, including us, must meet applicable manufacturing requirements, including compliance with cGMP regulations, and undergo rigorous facility and process validation tests required by regulatory authorities in order to comply with regulatory standards. In the event that any of our suppliers or manufacturers fail to comply with such requirements or to perform their obligations to us in relation to quality, timing or otherwise, some of which may be out of their or our control, or if our supply of components or other materials becomes limited or interrupted for other reasons, we may be forced to increase the manufacturing of the materials ourself, for which we currently have limited capabilities and resources, or enter into an agreement with another third party, which we may not be able to do on reasonable terms, if at all. Any interruption of the development or operation of the manufacturing of our development candidates, such as order delays for equipment or materials, equipment malfunction, quality control and quality assurance issues, regulatory delays and possible negative effects of such delays on supply chains and expected timelines for product availability, production yield issues, shortages of qualified personnel, discontinuation of a facility or business or failure or damage to a facility resulting from natural disasters, could result in the cancellation of shipments, loss of product in the manufacturing process or a shortfall in available lead and development candidates or materials. In some cases, the technical skills or technology required to manufacture our lead and development candidates may be unique or proprietary to the original manufacturer and we may have difficulty, or there may be contractual restrictions prohibiting us from, transferring such skills or technology to another third party and a feasible alternative may not exist. These factors would increase our reliance on such manufacturer or require us to obtain a license from such manufacturer in order to have another third party manufacture our lead and development candidates. If we are required to change manufacturers for any reason, we will be required to verify that the new manufacturer maintains facilities and procedures that comply with quality standards and with all applicable regulations and guidelines. The delays associated with the verification of a new manufacturer could negatively affect our ability to develop lead and development candidates in a timely manner or within budget.

We may also be required to enter into long-term manufacturing agreements that contain exclusivity provisions and/or substantial termination penalties which could have a material adverse effect on our business prior to or after commercialization of any of our development candidates. If we are unable to obtain or maintain third-party manufacturing for development candidates, or to do so on commercially reasonable terms, we may not be able to develop and commercialize our development candidates successfully. Failure to execute on our manufacturing requirements, either by us or by one of our third-party vendors, could adversely affect our business.

Risks Related to Our Personnel, Operations and Growth

If we are unable to attract and retain qualified key management and scientists, staff, consultants and advisors, our ability to implement our business plan may be adversely affected.

We are highly dependent upon our senior management and our scientific, clinical and medical staff and advisors. The loss of the service of any of the members of our senior management or other key employees could delay our research and development programs and materially harm our business, financial condition, results of operations and prospects. Although we implemented workforce reductions in May 2025 and in November 2025, we expect that we will continue to have an increased need to recruit and hire qualified personnel as we advance our programs and expand operations. Our recent workforce reductions could impede future recruiting and hiring efforts. Failure to successfully recruit and retain personnel could impact our anticipated development plans and timelines. For example, we have faced challenges in retaining and attracting employees to support our research and development efforts, and our failure to do so could have an adverse effect on our ability to execute on our business plan. We are dependent on the continued service of our technical personnel because of the highly technical and novel nature of our lead and development candidates, platform and technologies and the specialized nature of the regulatory approval process. Replacing such personnel may be difficult and may take an extended period of time because of the limited number of individuals in our industry with the breadth of skills and experience required to successfully execute our business strategy, and we cannot assure you that we will be able to identify or employ qualified personnel for any such position on acceptable terms, if at all. Many of the

biotechnology and pharmaceutical companies with whom we compete for qualified personnel have greater financial and other resources, different risk profiles and longer histories in the industry than we do. Because our management team and key employees are not obligated to provide us with continued service, they could terminate their employment with us at any time without penalty. We do not maintain key person life insurance policies on any of our management team members or key employees. Our future success will depend in large part on our continued ability to attract and retain highly qualified scientific, technical and management personnel, as well as personnel with expertise in preclinical and clinical testing, manufacturing, governmental regulation and commercialization. In order to do so, we may need to pay higher compensation or fees to our employees or consultants than we currently expect, and such higher compensation payments may have a negative effect on our operating results. We face increased competition for personnel from other companies, universities, public and private research institutions, government entities and other organizations. If we are unable to attract and retain qualified personnel, the rate and success at which we may be able to discover and develop our development candidates and implement our business plan will be limited.

We expect to need to expand our research, development, delivery, manufacturing, commercialization, regulatory and future sales and marketing capabilities over time, and as a result, we may encounter difficulties in managing our future growth, which could disrupt our operations.

As of December 31, 2025, we had 58 full-time employees, including 44 who hold Ph.D. degrees or other advanced degrees; 39 employees are engaged in research and development and 19 employees are engaged in management or general and administrative activities. In May 2025, we announced a workforce reduction and organizational streamlining and in November 2025, we announced a further workforce reduction to extend our cash runway. In connection with the growth and advancement of our pipeline, we expect that we will need to increase the number of our employees and the scope of our operations, particularly in the areas of drug development, regulatory affairs, and as any development candidates near later stage clinical trials and potential commercialization by us, and sales and marketing. To manage our anticipated future growth, we must continue to implement and improve our managerial, operational and financial systems, expand our facilities, and continue to recruit and train additional qualified personnel. Our workforce reduction may make these efforts more challenging. Due to our limited financial resources and the limited experience of our management team in managing a company with such anticipated growth, we may not be able to effectively manage the expected future expansion of our operations or recruit and train additional qualified personnel. Any inability to manage growth could delay the execution of our business plans or disrupt our operations.

As a pre-commercial biotechnology company, we are actively pursuing new platforms and lead candidates in many therapeutic areas and across a wide range of diseases. Successfully developing development candidates for and fully understanding the regulatory and manufacturing pathways to all of these therapeutic areas and disease states requires a significant depth of talent, resources and corporate processes in order to allow simultaneous execution across multiple areas. Due to our limited resources and recent workforce reductions, we may not be able to effectively manage this simultaneous execution and the expansion of our operations or, when appropriate, recruit and train additional qualified personnel. This may result in weaknesses in our infrastructure, give rise to operational mistakes, legal or regulatory compliance failures, loss of business opportunities, further loss of employees and reduced productivity among remaining employees. The physical expansion of our operations may lead to significant costs and may divert financial resources from other projects, such as the development of our potential development candidates. If our management is unable to effectively manage the expected development and expansion, our expenses may increase more than expected, our ability to generate or increase our revenue could be reduced and we may not be able to implement our business strategy. Our future financial performance and our ability to compete effectively and commercialize any development candidates we may develop will depend in part on our ability to effectively manage our future development and expansion.

Risks Related to Intellectual Property

If we are not able to obtain or protect intellectual property rights related to any of our lead candidates and development candidates, development and commercialization of our development candidates may be adversely affected.

In our industry, the majority of an innovative product's commercial value is usually realized during the period in which it has market exclusivity. Market exclusivity is comprised of both patent and other intellectual property protection, as well as regulatory exclusivity. In the United States and some other countries, when market exclusivity expires and generic versions of a product are approved and marketed, there usually are very substantial and rapid declines in the product's sales. Accordingly, our success depends in part on our ability to obtain and maintain patents and other forms of intellectual property rights, including trademarks, trade secrets and, where necessary in-licenses of intellectual property rights of others, in the United States and in other countries for our development candidates and platform technologies, as well as for methods used to manufacture our

development candidates, and methods for treating patients for approved indications using our development candidates, as well as our ability to preserve our trade secrets, to prevent third parties from infringing upon our proprietary rights and to operate without infringing upon the proprietary rights of others. Certain research and development activities involved in pharmaceutical development are exempt from patent infringement in the United States and other jurisdictions, for example, in the United States by the provisions of 35 U.S.C. § 271I(1), or the Safe Harbor. However, in the United States and certain other jurisdictions, the Safe Harbor exemption can terminate when the sponsor submits an application for marketing approval (e.g., an NDA in the United States). Therefore, the risk that a third party might allege patent infringement may increase as our development candidates approach commercialization.

We cannot offer any assurances about which of our patent applications will issue, the breadth of any resulting patent or whether any of the issued patents will be found invalid and unenforceable or will be threatened by third parties. We cannot offer any assurances that the breadth of our granted patents will be sufficient to stop a competitor from developing and commercializing a product. Furthermore, any successful challenge to these patents or any other patents owned by or licensed to us in the future after patent issuance could deprive us of rights necessary for the successful commercialization of any of our development candidates. Further, if we encounter delays in regulatory approvals, the period of time during which we could market a development candidate under patent protection could be reduced.

We may not be able to apply for patents or obtain patent protection on certain aspects of our development candidates or our RNA editing platform OPERA in a timely fashion or at all. The patent prosecution process is expensive and time-consuming. We may not be able to prepare, file and prosecute all necessary or desirable patent applications at a commercially reasonable cost or in a timely manner or in all jurisdictions. It is also possible that we may fail to identify patentable aspects of inventions made in the course of development and commercialization activities before it is too late to obtain patent protection on them. We may not be able to obtain or maintain patent applications and patents due to the subject matter claimed in such patent applications and patents being in the public domain.

Our existing issued and granted patents and any future patents we obtain may not be sufficiently broad to prevent others from using our technology or from developing competing products and technology. There is no guarantee that any of our pending patent applications will result in issued or granted patents, that any of our issued or granted patents will not later be found to be invalid or unenforceable, or that any issued or granted patents will include claims that are sufficiently broad to cover our development candidates, platform technologies, or any methods relating to them, or to provide meaningful protection from competitors. Consequently, it is unknown whether our platform technology or development candidates will be protectable or remain protected by valid and enforceable patents. Any failure to obtain, maintain or defend our patents and other intellectual property could have a material adverse effect on our business, financial conditions, results of operations and prospects.

We cannot be certain that we are the first to invent the inventions covered by pending patent applications and, if they are not, we may be subject to entitlement disputes. We may be required to disclaim part or all of the term of certain patents or all of the term of certain patent applications. There may be prior art of which we are not aware that may affect the validity or enforceability of a patent claim. There also may be prior art of which we are aware, but which we do not believe affects the validity or enforceability of a claim, which may, nonetheless, ultimately be found to affect the validity or enforceability of a claim. Because patent applications in the United States and other countries are confidential for a period of time after filing, at any moment in time, we cannot be certain that we were in the past or will be in the future the first to file any patent application related to our development candidates. For example, some patent applications in the United States may be maintained in secrecy until the patents are issued. Further, publications in the scientific literature often lag behind actual discoveries. Consequently, we cannot be certain that others have not filed patent applications for technology covered by our owned and issued patents or pending applications, or that we or, if applicable, a licensor were the first to invent or first to file an application for the technology.

The patent position of biotechnology and pharmaceutical companies can be highly uncertain and involves complex legal and factual questions. As a result, the issuance, scope, validity, enforceability and commercial value of any patent rights are highly uncertain. We will be able to protect our proprietary rights from unauthorized use by third parties only to the extent that our current and future proprietary technology and development candidates are covered by valid and enforceable patents or are effectively maintained as trade secrets. If third parties disclose or misappropriate our proprietary rights, it may materially and adversely impact our position in the market.

It is possible that defects of form in the preparation or filing of our patents or patent applications may exist, or may arise in the future, for example with respect to proper priority claims, inventorship, claim scope, or requests for patent term adjustments. If there are material defects in the form, preparation, prosecution, maintenance or enforcement of our patents or patent applications, such patents may be invalid and/or unenforceable, and such applications may never result in valid, enforceable patents. Any of these outcomes could impair our ability to prevent competition from third parties, which may have an adverse impact on our business.

Legal issues related to the patentability of biopharmaceuticals, and methods of their manufacture and use, are complex and uncertain in some countries. In some countries, applicants are not able to protect methods of treating human beings or medical treatment processes. Intellectual property protection varies throughout the world and is subject to change over time. Certain jurisdictions have enacted various rules and laws precluding issuance of patents encompassing any methods a doctor may practice on a human being or any other animal to treat a disease or condition. Further, many countries have enacted laws and regulatory regimes that do not allow patent protection for methods of use of known compounds. Thus, in some countries and jurisdictions, it may not be possible to patent some of our lead candidates and development candidates at all. In some countries and jurisdictions, only composition claims may be obtained, and only when those compositions are or contain compounds that are new and/or novel. Also, patents issued with composition claims (*i.e.,* covering lead candidates and development candidates) cannot always be enforced to protect methods of using those compositions to treat or diagnose diseases or medical conditions. Legal systems in certain countries may not favor enforcement or protection of patents, trade secrets and other intellectual property. Lack of intellectual property protection in such cases may have a materially adverse effect on our business and financial condition.

Furthermore, given the amount of time required for the development, testing and regulatory review of new development candidates, patents protecting such candidates, their manufacture or their use might expire before or shortly after those candidates receive regulatory approval and are commercialized. As a result, our patent portfolio may not provide us with sufficient rights to exclude others from commercializing products similar or identical to ours. We expect to seek extensions of patent terms where these are available upon regulatory approval in those countries where we are prosecuting patents. This includes in the United States under the Drug Price Competition and Patent Term Restoration Act of 1984, which permits a patent term extension of up to five years beyond the expiration of the patent. However, the applicable authorities, including the FDA in the United States, and any equivalent regulatory authority in other countries, may not agree with our assessment of whether such extensions are available, and may refuse to grant extensions to our patents, or may grant more limited extensions than we request. If this occurs, our competitors may take advantage of our investment in development and clinical trials by referencing our clinical and preclinical data and launch their product earlier than might otherwise be possible.

The U.S. Patent and Trademark Office, or USPTO and various foreign governmental patent agencies require compliance with a number of procedural, documentary, fee payment and other provisions during the patent prosecution process. There are situations in which noncompliance can result in abandonment or lapse of a patent or patent application, or loss of right to enforce patent claims, resulting in partial or complete loss of patent rights in the relevant jurisdiction. In such an event, competitors might be able to enter the market earlier than would otherwise have been the case. The standards applied by the USPTO and foreign patent offices in granting patents are not uniform, can vary substantially from country to country, and are not always applied predictably, requiring country-specific patent expertise in each jurisdiction in which patent protection is sought. For example, there is no uniform worldwide policy regarding patentable subject matter or the scope of claims allowable in biotechnology and pharmaceutical patents. As such, we do not know the degree of future protection that we will have on our lead candidates, development candidates and RNA editing technology. While we will endeavor to try to protect our lead candidates, development candidates and RNA editing technology with intellectual property rights such as patents, as appropriate, the process of filing and prosecuting patent applications, and obtaining, maintaining and defending patents is time-consuming, expensive, uncertain, and sometimes unpredictable.

Our pending patent applications may not issue as patents, and even issued patents may not provide sufficient protection of our RNA editing platform OPERA, our lead candidates and our development candidates.

In addition to claims directed toward the technology underlying our OPERA platform, our patents and patent applications contain claims directed to compositions of matter on the active pharmaceutical ingredients, or APIs, in our lead candidates and development candidates, as well as methods-of-use directed to the use of an API for a specified treatment. Composition-of-matter patents on the active pharmaceutical ingredient in prescription drug products provide protection without regard to any particular method of use of the API used. Method-of-use patents do not prevent a competitor or other third party from developing or marketing an identical product for an indication that is outside the scope of the patented method. Moreover, with respect to method-of-use patents, even if competitors or other third parties do not actively promote their product for our targeted indications or uses for which we may obtain patents, providers may recommend that patients use these products off-label, or patients may do so themselves. Although off-label use may infringe or contribute to the infringement of method-of-use patents, the practice is common and this type of infringement is difficult to prevent or prosecute.

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 may in-license in the future may fail to issue as patents with claims that cover our lead candidates and development candidates or uses thereof in the United States or in other foreign countries. For example, while our patent applications are pending, we may be subject to a third party preissuance submission of prior art to the USPTO or become involved derivation proceedings, or equivalent proceedings in foreign jurisdictions.

Even if patents do successfully issue, third parties may challenge our patents based on inventorship, validity, enforceability or scope, including through opposition, revocation, reexamination, post-grant and *inter partes* review proceedings. An adverse determination in any such proceeding or litigation may result in loss of patent rights, loss of exclusivity, or in patent claims being narrowed, invalidated, or held unenforceable, which could limit our ability to stop others from using or commercializing similar or identical technology and products, or limit the duration of the patent protection of our technology and development candidates. 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. Moreover, some of our patents and patent applications may be co-owned with third parties. If we are unable to obtain an exclusive license to any such third-party co-owners' interest in such patents or patent applications, such co-owners may be able to license their rights to other third parties, including our competitors, and our competitors could market competing products and technology. In addition, we may need the cooperation of any such co-owners of our patents in order to enforce such patents against third parties, and such cooperation may not be provided to us. If the breadth or strength of protection provided by the patent applications we hold with respect to our lead candidates and development candidates is threatened, it could dissuade companies from collaborating with us to develop, and threaten our ability to commercialize our development candidates. Further, if we encounter delays in development, testing, and regulatory review of new development candidates, the period of time during which we could market our development candidates under patent protection would be reduced.

We may not identify relevant third-party patents or may incorrectly interpret the relevance, scope or expiration of a third-party patent, which might adversely affect our ability to develop and market our development candidates.

Other parties have developed technologies that may be related or competitive to our technologies. Such parties may have filed or may file patent applications, or may have received or may receive patents, claiming inventions that may overlap or conflict with those claimed in our own patent applications or issued patents. Publications of discoveries in the scientific literature often lag behind the actual discoveries, and patent applications in the U.S. and other jurisdictions are typically not published until 18 months after filing, or in some cases not at all. Therefore, we cannot know with certainty whether we were the first to make the inventions claimed in our owned or licensed patents or pending patent applications, or that we were the first-to-file for patent protection of such inventions. As a result, the issuance, scope, validity, enforceability and commercial value of our patent rights cannot be predicted with any certainty. Our competitors may have filed, and may in the future file, patent applications covering our products or technology similar to our own. Any such patent application may have priority over our patent applications or patents, which could require us to obtain rights to issued patents covering such technologies.

We cannot guarantee that any of our patent searches or analyses, including the identification of relevant patents, the scope of patent claims or the expiration of relevant patents, are complete or thorough, nor can we be certain that we have identified each and every third-party patent and pending application in the United States and abroad that is relevant to or necessary for the commercialization of our programs in any jurisdiction. The scope of a patent claim is determined by an interpretation of the law, the written disclosure in a patent and the patent's prosecution history. Our interpretation of the relevance or the scope of a patent or a pending application may be incorrect. For example, we may incorrectly determine that our products are not covered by a third-party patent or may incorrectly predict whether a third-party's pending application will issue with claims of relevant scope. Our determination of the expiration date of any patent in the United States or abroad that we consider relevant may be incorrect. Our failure to identify and correctly interpret relevant patents may negatively impact our ability to develop and market our products. Moreover, it is also possible that prior art may exist that we are aware of but do not believe is relevant to our current or future patents, but that could nevertheless be determined to render our patents invalid.

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

Competitors may infringe the patents for which we have applied. To counter infringement or unauthorized use, we may be required to initiate legal proceedings to enforce our patent rights, which can be expensive and time-consuming. If we initiate legal proceedings against a third party to enforce a patent covering one of our development candidates, the defendant could counterclaim that the patent covering our product or development candidates is invalid and/or unenforceable. In patent litigation in the United States, counterclaims alleging invalidity and/or unenforceability are common, and there are numerous grounds upon which a third party can assert invalidity or unenforceability of a patent. Grounds for a validity challenge could be an alleged failure to meet any of several statutory requirements, for example, lack of novelty, lack of written disclosure, obviousness, or non-enablement. Grounds for an unenforceability assertion could be an allegation that someone connected with prosecution of the patent withheld relevant information from the USPTO, or made a misleading statement, during prosecution. The outcome of patent litigation is often unpredictable. With respect to the validity question, for example, we cannot be certain that there is no invalidating prior art, of which we and the patent examiner were unaware during prosecution. If a third party were to prevail on a legal assertion of invalidity or unenforceability, we would lose at least part, and perhaps all, of the patent protection on one or

more of our products or certain aspects of our platform technology. Further, a court or administrative body could construe certain patent claims narrowly or refuse to prevent the other party from using the technology at issue on the ground that our patents do not cover the technology.

In an infringement proceeding, a court may decide that the patent claims we are asserting are invalid and/or unenforceable, or may refuse to stop the other party from using the technology at issue on the grounds that our patent claims do not cover the technology in question. 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, *inter partes* review and equivalent proceedings in foreign jurisdictions (for example, opposition proceedings). Such proceedings could result in revocation of or amendment to our patents in such a way that they no longer cover our lead candidates and development 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, we would lose at least part, and perhaps all, of the patent protection on our lead candidates and development candidates. An adverse result in any litigation or defense proceedings could put one or more of our patents at risk of being invalidated or interpreted narrowly, could put our patent applications at risk of not issuing and could have a material adverse impact on our business. Such a loss of patent protection could negatively impact our business. Patents and other intellectual property rights also will not protect our technology if competitors design around our protected technology without legally infringing our patents or other intellectual property rights.

Even if we establish infringement of any of our patents by a third party, a court may decide not to grant an injunction against further infringing activity, thus allowing the competitive product to continue to be marketed by the competitor. It is difficult to obtain an injunction in U.S. litigation and a court could decide that the competitor should instead pay us a "reasonable royalty" as determined by the court, and/or other monetary damages. A reasonable royalty or other monetary damages may or may not be an adequate remedy. Loss of exclusivity and/or competition from a related product would have a material adverse impact on our business.

If we in-license patent rights in the future, we may not have the right to file a lawsuit for infringement and may have to rely on a licensor to enforce these rights for us. If we are not able to directly assert our licensed patent rights against infringers or if a licensor does not vigorously prosecute any infringement claims on our behalf, we may have difficulty competing in certain markets where such potential infringers conduct their business, and our commercialization efforts may suffer as a result.

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

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. There could also 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 material adverse effect on the price of our common stock.

Third-party claims of intellectual property infringement may prevent, delay or otherwise interfere with our product discovery and development efforts.

Our commercial success depends in part on our ability to develop, manufacture, market and sell our development candidates and use our proprietary technologies without infringing, misappropriating or otherwise violating the intellectual property or 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 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 development candidates and/or proprietary technologies infringe, misappropriate or otherwise violate their intellectual property rights.

Numerous U.S. and foreign issued patents and pending patent applications that are owned by third parties exist in the fields in which we are developing our development candidates. As the biotechnology and pharmaceutical industries expand and more patents are issued, the risk increases that our development 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 field, third parties may allege they have patent rights encompassing our development candidates, technologies or methods. We are aware of competitors in the oligonucleotide space whose patent application filings and/or issued patents may include claims directed to technologies and/or products related to some of our programs and development candidates. For example, we are aware of patents and patent applications owned by third parties that have generic claims that may relate to our technologies and products.

If a third party claims that we infringe, misappropriate or otherwise violate our intellectual property rights, we may face a number of issues, including, but not limited to:

- infringement and other intellectual property claims that, 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 development candidates 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 plus the patent owner's attorneys' fees;
- a court prohibiting us from developing, manufacturing, marketing or selling our development candidates, or from using our proprietary technologies, unless the third party licenses its product rights to us, which it is not required to do, on commercially reasonable terms or at all;
- 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 development candidates;
- the requirement that we redesign our development candidates or processes so they do not infringe, which may not be possible or may require substantial monetary expenditures and time; and
- 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.

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, financial condition, results of operations and prospects.

Third parties may assert that we are employing their proprietary technology without authorization, including by enforcing its patents against us by filing a patent infringement lawsuit against us. 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 lead candidates or development candidates. Because patent applications can take many years to issue, there may be currently pending patent applications that may later result in issued patents that our lead candidates or development 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 lead or development candidates, or materials used in or formed during the manufacturing process, or any final product itself, the holders of those patents may be able to block our ability to commercialize our development candidates unless we obtain a license under the applicable patents, or until those patents were to expire or those patents are finally determined to be 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, including combination therapy or patient selection methods, the holders of that patent may be able to block our ability to develop and commercialize the development candidate unless we obtain a license or until such patent expires or is finally determined to be invalid or unenforceable. In either case, a license may not be available on commercially reasonable terms, or at all, particularly if such patent is owned or controlled by one of our primary competitors. 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 development candidates may be impaired or delayed, which could 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 it. 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 development 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 development candidates. Defense of these claims, regardless of their merit, would involve substantial litigation expense and would be a substantial diversion of employee time and 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 license of this nature would be available at all or whether it would be available on commercially reasonable terms. Furthermore, even in the absence of litigation, We may need to obtain licenses from third parties to advance our research or allow commercialization of our development candidates and 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 development candidates, which could significantly harm our business.

Likewise, our patents and patent applications, if issued as patents, directed to our proprietary technologies, lead candidates and development candidates are expected to expire from 2040 through 2046, without taking into account any possible patent term adjustments or extensions. Our earliest in-licensed patents may expire before, or soon after, our first product achieves marketing approval in the United States or foreign jurisdictions. Additionally, we cannot be assured that the USPTO or relevant foreign patent offices will grant any of the pending patent applications we own or in-license currently or in the future. Upon the expiration of our current 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, financial condition, results of operations and prospects.

We or our future licensors, collaborators or strategic partners may be subject to third-party claims for infringement or misappropriation of patent or other proprietary rights. We may be generally obligated under our future potential license or collaboration agreements to indemnify and hold harmless our licensors or collaborators for damages arising from intellectual property infringement by us. If we or our future licensors, collaborators or strategic partners are found to infringe a third-party patent or other intellectual property rights, we could be required to pay damages, potentially including treble damages, if we are found to have willfully infringed. In addition, we or our future licensors, collaborators or strategic partners may choose to seek, or be required to seek, a license from a third party, which may not be available on acceptable terms, if at all. Even if a license can be obtained on acceptable terms, the rights may be non-exclusive, which could give our competitors access to the same technology or intellectual property rights licensed to it. If we fail to obtain a required license, we or our future collaborators may be unable to effectively market development candidates based on our technology, which could limit our ability to generate revenue or achieve profitability and possibly prevent us from generating revenue sufficient to sustain our operations. In addition, we may find it necessary to pursue claims or initiate lawsuits to protect or enforce our patent or other intellectual property rights. The cost to us in defending or initiating any litigation or other proceeding relating to patent or other proprietary rights, even if resolved in our favor, could be substantial, and litigation would divert our management's attention. 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. Uncertainties resulting from the initiation and continuation of patent litigation or other proceedings could delay our research and development efforts and limit our ability to continue our operations.

Additionally, we may be required to protect our patents through procedures created to attack the validity of a patent at the USPTO. An adverse determination in any such submission or proceeding could reduce the scope or enforceability of, or invalidate, our patent rights, which could adversely affect our competitive position. Because of a lower evidentiary standard in USPTO proceedings compared to the evidentiary standard in United States federal courts necessary to invalidate a patent claim, a third party could potentially provide evidence in a USPTO proceeding sufficient for the USPTO to hold a claim invalid even though the same evidence would be insufficient to invalidate the claim if first presented in a district court action.

We may not be successful in acquiring or in-licensing necessary rights to key technologies or any development candidates we may develop.

The future growth of our business may depend in part on our ability to in-license or otherwise acquire the rights to additional development candidates and technologies. There has been extensive patenting activity in the field of gene editing. Pharmaceutical companies, biotechnology companies and academic institutions are competing with us or are expected to compete with us in the in the field of gene editing technology and filing patent applications potentially relevant to our business. In order to market our development candidates, we may find it necessary or prudent to obtain licenses from third-party intellectual property holders. However, we may be unable to secure such licenses or otherwise acquire or in-license any compositions, methods of use, processes, or other intellectual property rights from third parties that we identify as necessary to develop or commercialize our development candidates or other key technologies. We may also require licenses from third parties for certain additional

technologies, including technologies relating to RNA editing, such as guide RNA modification, or target sequences as well as delivery technologies for development candidates we may develop. We may not be able to obtain such a license on an exclusive basis, on commercially reasonable terms, or at all, which could prevent us from commercializing our development candidates or allow our competitors or other third parties the chance to access technology that is important to our business.

Additionally, we may collaborate with academic institutions to accelerate our research or development under written agreements with these institutions. In certain cases, these institutions may provide us with an option to negotiate a license to any of the institution's rights in technology resulting from the collaboration. Even if we hold such an option, we may be unable to negotiate a license from the institution within the specified timeframe or under terms that are acceptable to us, and if we are successful in obtaining an in-license, such collaboration may make us subject to governmental step-in rights under the Bayh-Dole Act. If we are unable to do so, such institution may offer the intellectual property rights to others, potentially blocking our ability to pursue our program.

The licensing or acquisition of third-party intellectual property rights is a highly competitive area, and a number of more established companies are also pursuing strategies to license or acquire third-party intellectual property rights that it may consider attractive or necessary. These established companies may have a competitive advantage over us due to their size, capital resources and greater clinical development and commercialization capabilities. In addition, companies that perceive us to be a competitor may be unwilling to assign or license rights to us. We also may be unable to license or acquire third-party intellectual property rights on terms that would allow us to make an appropriate return on our investment or at all.

It is possible that we may be unable to obtain required licenses at a reasonable cost or on reasonable terms, if at all. Even if we are able to obtain a license, we 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 redesign our technology, programs, or the methods for manufacturing them or to develop or license replacement technology, all of which may not be feasible on a technical or commercial basis. If we are unable to do so, we may be unable to develop or commercialize the affected programs, which could harm our business, financial condition, results of operations, and prospects significantly.

Disputes may arise between us and our future 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 patents and other rights to third parties; our right to transfer or assign the license; the inventorship and ownership of inventions and know-how resulting from the joint creation or use of intellectual property by our future licensors and us and our partners; and the priority of invention of patented technology.

If we are unable to successfully obtain rights to required third party intellectual property rights or maintain the existing intellectual property rights we have, we may have to abandon development of the relevant program or development candidates, which could have a material adverse effect on our business, financial condition, results of operations and prospects.

We may become subject to claims challenging the inventorship or ownership of our patents and other intellectual property.

We may be subject to claims that former employees, collaborators or other third parties have an interest in our patents or other intellectual property as an inventor or co-inventor. The failure to name the proper inventors on a patent application can result in the patents issuing thereon being unenforceable. Inventorship disputes may arise from conflicting views regarding the contributions of different individuals named as inventors, the effects of foreign laws where foreign nationals are involved in the development of the subject matter of the patent, conflicting obligations of third parties involved in developing our programs or as a result of questions regarding co-ownership of potential joint inventions. Litigation may be necessary to resolve these and other claims challenging inventorship and/or ownership. Alternatively, or additionally, we may enter into agreements to clarify the scope of our rights in such intellectual property. If we fail in defending any such claims, in addition to paying monetary damages, we may lose valuable intellectual property rights, such as exclusive ownership of, or right to use, valuable intellectual property. Such an outcome could have a material adverse effect on our business. Even if we are successful in defending against such claims, litigation could result in substantial costs and be a distraction to management and other employees.

Our future licensors may have relied on third-party consultants or collaborators or on funds from third parties, such as the U.S. government, such that our licensors are not the sole and exclusive owners of the patents we in-licensed. If other third parties have ownership rights or other rights to our in-licensed patents, they may be able to license such patents to our competitors, and our competitors could market competing products and technology. This could have a material adverse effect on our competitive position, business, financial conditions, results of operations, and prospects.

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

As is common in the biotechnology and pharmaceutical industries, we employ individuals that are currently or were previously employed at universities, research institutions or other biotechnology or pharmaceutical companies, including our competitors or potential competitors. Although we try to ensure that our employees, consultants, and advisors 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 these individuals have inadvertently or otherwise used or disclosed intellectual property, including trade secrets or other proprietary information, of any such individual's current or former employer. Also, we have in the past and may in the future be subject to claims that these individuals are violating non-compete agreements with their former employers. We may then have to pursue litigation 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 could result in substantial costs and be a distraction to 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, that perception 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, and we may not have sufficient financial or other resources to adequately conduct this type of litigation or proceedings. For example, some of our competitors may be able to sustain the costs of this type of litigation or proceedings more effectively than we can because of their substantially greater financial resources. In any case, uncertainties resulting from the initiation and continuation of intellectual property litigation or other intellectual property related proceedings could adversely affect our ability to compete in the marketplace.

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

Periodic maintenance fees, renewal fees, annuity fees, and various other government fees on patents and applications are due to be paid to the USPTO and foreign patent agencies outside of the United States over the lifetime of our owned or licensed patents and applications. The USPTO and foreign patent agencies require compliance with several procedural, documentary, fee payment, and other similar provisions during the patent application process. We are also dependent on our licensors to take the necessary action to comply with these requirements with respect to our licensed intellectual property. While an inadvertent lapse can be cured by payment of a late fee or by other means in accordance with the applicable rules, there are situations, however, in which non-compliance can result a partial or complete loss of patent rights in the relevant jurisdiction. Were a noncompliance event to occur, our competitors might be able to enter the market with similar or identical products or technology, which could have a material adverse effect on our business, financial condition, results of operations, and prospects.

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

We have limited intellectual property rights outside the United States. Filing, prosecuting, and defending patents on lead candidates and development 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 foreign countries do not protect intellectual property rights to the same extent as federal and state laws of the United States. In addition, our intellectual property license agreements may not always include worldwide rights. Consequently, we may not be able to prevent third parties from practicing our inventions in all countries outside the United States, or from selling or importing products made using our inventions in and into the United States or other jurisdictions. Competitors may use our technologies in jurisdictions where we have not obtained patent protection to develop their own products and, further, may export otherwise infringing products to territories where we have patent protection but where enforcement is not as strong as that in the United States. These products may compete with our development candidates and our patents 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 biotechnology and pharmaceutical 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 intellectual property and proprietary rights generally. Proceedings to enforce our patents and intellectual property 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. Moreover, 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. Accordingly, our efforts to enforce our intellectual property and proprietary rights around the world may be inadequate to obtain a significant commercial advantage from the intellectual property that we develop or license.

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 licensors 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.

Further, filing, prosecuting and defending patents on programs worldwide would be prohibitively expensive and our intellectual property rights in some foreign jurisdictions can be less extensive than those in the United States. As such, we may not have patents in all countries or all major markets and may not be able to obtain patents in all jurisdictions even if we apply for them. Our competitors may operate in countries where we do not have patent protection and can freely use our technologies and discoveries in such countries to the extent such technologies and discoveries are publicly known or disclosed in countries where we do have patent protection or pending patent applications.

Changes in patent law in the United States and in non-U.S. jurisdictions could diminish the value of patents in general, thereby impairing our ability to protect our RNA editing platform technology, lead candidates and development candidates.

As is the case with other biotech and pharmaceutical 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 could increase the uncertainties and costs surrounding the prosecution of patent applications and the enforcement or defense of our issued patents and pending patent applications. For example, in March 2013, under the Leahy-Smith America Invents Act, or the America Invents Act, the United States transitioned from a "first to invent" to a "first-to-file" patent system. Under a "first-to-file" system, assuming that other requirements for patentability are met, the first inventor to file a patent application generally will be entitled to a patent on an invention regardless of whether another inventor had made the invention earlier. A third party that files a patent application in the USPTO after March 2013, but before us could therefore be awarded a patent covering an invention of ours even if we had made the invention before it was made by such third party. This will require us to be cognizant going forward of the time from invention to filing of a patent application.

Because patent applications in the United States and most other countries are confidential for a period of time after filing or until issuance, we cannot be certain that we or our licensors were the first to either file any patent application related to our technology or lead candidates and development candidates or to invent any of the inventions claimed in our or our licensor's patents or patent applications. The America Invents Act also includes a number of other significant changes to U.S. patent law, including provisions that affect the way patent applications are prosecuted, allowing third party submission of prior art and establishing a post-grant review system including post-grant review, *inter partes* review, and derivation proceedings. Because of a lower evidentiary standard in USPTO proceedings compared to the evidentiary standard in United States federal courts necessary to invalidate a patent claim, a third party could potentially provide evidence in a USPTO proceeding sufficient for the USPTO to hold a claim invalid even though the same evidence would be insufficient to invalidate the claim if first presented in a district court action. Accordingly, a third party may attempt to use the USPTO procedures to invalidate our patent claims that would not have been invalidated if first challenged by the third party as a defendant in a district court action.

In addition, recent U.S. Supreme Court and U.S. Court of Appeals for the Federal Circuit 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, these rulings have created uncertainty with respect to the validity and enforceability of patents, once obtained. Depending on future actions by the U.S. Congress, the federal courts, and the USPTO, the laws and regulations governing patents could change in unpredictable ways that could weaken our ability to obtain new patents or to enforce our existing patents and patents that we might obtain in the future. We cannot predict how future decisions by the courts, the U.S. Congress or the USPTO may impact the value of our patents. Any adverse changes in

the patent laws of other jurisdictions could also have a material adverse effect on our business, financial condition, results of operations and prospects.

Geopolitical actions in the United States and in foreign countries could increase the uncertainties and costs surrounding the prosecution or maintenance of patent applications and the maintenance, enforcement or defense of issued patents. Accordingly, our competitive position may be impaired, and our business, financial condition, results of operations and prospects may be adversely affected.

In addition, recently the European Unified Patent Court, or UPC, was created as a common patent court to hear patent infringement and revocation proceedings effective for member states of the EU. This could enable third parties to seek revocation of a European patent in a single proceeding at the UPC rather than through multiple proceedings in each of the jurisdictions in which the European patent is validated. Although we do not currently own any European patents, if we obtain such patents and applications in the future, any such revocation and loss of patent protection could have a material adverse impact on our business and our ability to commercialize or license our technology and products. Moreover, the controlling laws and regulations of the UPC will develop over time, and may adversely affect our ability to enforce or defend the validity of any European patents we may obtain. We may decide to opt out from the UPC any future European patent applications that we may file and any patents we may obtain. If certain formalities and requirements are not met, however, such European patents and patent applications could be challenged for non-compliance and brought under the jurisdiction of the UPC. We cannot be certain that future European patents and patent applications will avoid falling under the jurisdiction of the UPC, if we decide to opt out of the UPC.

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

In addition to seeking patents for our technology, lead candidates and development candidates, we also rely on know-how and trade secret protection, as well as confidentiality agreements, non-disclosure agreements and invention assignment agreements with our employees, consultants and third-parties, to protect our confidential and proprietary information, especially where we does not believe patent protection is appropriate or obtainable.

It is our policy to require our employees, corporate collaborators, outside scientific collaborators, CROs, contract manufacturers, consultants, advisors, and other third parties 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 by 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 certain specified circumstances. In the case of employees, the agreements provide that all inventions conceived by the individual, and that 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 the case of consultants and other third parties, the agreements provide that all inventions conceived in connection with the services provided are our exclusive property. However, we cannot guarantee that we have entered into such agreements with each party that may have or have had access to our trade secrets or proprietary technology and processes. Additionally, the assignment of intellectual property rights may not be self-executing, or the assignment agreements may be breached, and we may be forced to bring claims against third parties, or defend claims that they may bring against us, to determine the ownership of what we regard as our intellectual property. Any of these parties may breach the agreements and disclose our proprietary information, including our trade secrets, and we may not be able to obtain adequate remedies for such breaches. Enforcing a claim that a party illegally disclosed or misappropriated a trade secret is difficult, expensive, and time-consuming, and the outcome is unpredictable.

In addition to contractual measures, we try to protect the confidential nature of our proprietary information through other appropriate precautions, such as physical and technological security measures. However, trade secrets and know-how can be difficult to protect. These 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 any recourse we might take against this type of misconduct may not provide an adequate remedy to protect our interests fully. In addition, trade secrets may be independently developed by others in a manner that could prevent us from receiving legal recourse. If any of our confidential or proprietary information, such as our trade secrets, were to be disclosed or misappropriated, or if any of that information was independently developed by a competitor, our competitive position could be harmed.

In addition, some courts inside and outside the United States are sometimes less willing or unwilling 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. Even if we are successful, these types of lawsuits may consume our time and other resources. Any of the foregoing could have a material adverse effect on our business, financial condition, results of operations and prospects.

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

Patents have a limited lifespan. The terms of individual patents depend upon the legal term for patents in the countries in which they are granted. In most countries, including the United States, if all maintenance fees are timely paid, the natural expiration of a patent is generally 20 years from its earliest non-provisional filing date in the applicable country. However, the actual protection afforded by a patent varies 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. Various extensions including Patent Term Extension, or PTE, and Patent Term Adjustment, or PTA, may be available, but the life of a patent, and the protection it affords, is limited. For more information regarding PTA and PTE, see Item 1 "*Business—Intellectual Property*". Even if patents covering our development candidates are obtained, once the patent life has expired, we may be open to competition from competitive products, including generics. Given the amount of time required for the development, testing and regulatory review of new development candidates, patents protecting our development candidates might expire before or shortly after we or our partners commercialize those candidates. 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 PTE and data exclusivity for any development candidates we may develop, our business may be materially harmed.

Depending upon the timing, duration and specifics of any FDA marketing approval of any development candidates we may develop, one or more of our U.S. patents may be eligible for limited PTE under the Drug Price Competition and Patent Term Restoration Act of 1984, or the Hatch-Waxman Amendments. The Hatch-Waxman Amendments PTE term of up to five years as compensation for patent term lost during the FDA regulatory review process. A PTE cannot extend the remaining term of a patent beyond a total of 14 years from the date of product approval, only one patent per product 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, even if we were to seek a PTE, it may not be granted because of, for example, the failure to exercise due diligence during the testing phase or regulatory review process, the failure to apply within applicable deadlines, the failure to apply prior to expiration of relevant patents, or any other failure 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 PTE 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.

Intellectual property rights do not necessarily address all potential threats.

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

- any development candidates we may develop will eventually become commercially available in generic or biosimilar product forms;
- others may be able to make gene therapy products that are similar to any development candidates we may develop or utilize similar base editing technology but that are not covered by the claims of the patents that we may own in the future;
- we, or our future license partners or collaborators, might not have been the first to make the inventions covered by the issued patent or pending patent application that we license or may own in the future;
- we, or our future license partners or collaborators, might not have been the first to file patent applications covering certain of our or their inventions;
- we, or our future license partners or collaborators, may fail to meet our obligations to the U.S. government regarding any in-licensed patents and patent applications funded by U.S. government grants, leading to the loss or unenforceability of patent rights;
- others may independently develop similar or alternative technologies or duplicate any of our technologies without infringing our owned or licensed intellectual property rights;
- it is possible that our pending patent applications or those that we may own in the future will not lead to issued patents;

- it is possible that there are prior public disclosures that could invalidate our patents, or parts of 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 development candidates or technology similar to ours;
- it is possible that our 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;
- issued patents that we hold rights to may be held invalid, unenforceable, or narrowed in scope, including as a result of legal challenges by our competitors;
- the claims of our issued patents or patent applications, if and when issued, may not cover our development candidates;
- the laws of foreign countries may not protect our proprietary rights or the proprietary rights of our future license partners or collaborators to the same extent as the laws of the United States;
- the inventors of our patents or patent applications may become involved with competitors, develop products or processes that design around our patents, or become hostile to us or the patents or patent applications on which they are named as inventors;
- our competitors may conduct research and development activities in countries where we do not have patent rights or enforceable patent rights and then use the information learned from such activities to develop competitive products for sale in our major commercial markets;
- we have been engaged in scientific collaborations and will continue to do so in the future and our collaborators may develop adjacent or competing products that are outside the scope of our patents;
- we may not develop additional proprietary technologies that are patentable;
- any development candidates we develops may be covered by third parties' patents or other exclusive rights;
- a third party may challenge, invalidate, circumvent or weaken our patents, and as a result, a court could hold that our patents are not valid, enforceable and infringed;
- the patents of others may harm our business; or
- we may choose not to file a patent in order to maintain certain trade secrets or know-how, and a third party may subsequently file a patent covering such intellectual property.

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

Our use of open source software could impose limitations on our ability to commercialize our development candidates.

Our use of open source software could impose limitations on our ability to commercialize our development candidates. Our technology utilizes open source software that contains modules licensed for use from third-party authors under open source licenses. In particular, some of the software that powers OPERA may be provided under license arrangements that allow use of the software for research or other non-commercial purposes. As a result, in the future, as we seek to use our platform in connection with commercially available products, we may be required to license that software under different license terms, which may not be possible on commercially reasonable terms, if at all. If we are unable to license software components on terms that permit our use for commercial purposes, we may be required to replace those software components, which could result in delays, additional cost and additional regulatory approvals.

Use and distribution of open source software may entail greater risks than use of third-party commercial software, as open source licensors generally do not provide warranties or other contractual protections regarding infringement claims or the quality of the software code. Some open source licenses contain requirements that we make available source code for modifications or derivative works we create based upon the type of open source software we use. If we combine our proprietary software with open source software in a certain manner, we could, under certain of the open source licenses, be required to release the source code of our proprietary software to the public. This could allow our competitors to create similar products with lower development effort and time, and ultimately could result in a loss of product sales for us. Although we monitor our use of open

source software, the terms of many open source licenses have not been interpreted by U.S. courts, and there is a risk that those licenses could be construed in a manner that could impose unanticipated conditions or restrictions on our ability to commercialize our development candidates. We could be required to seek licenses from third parties in order to continue offering our development candidates, to re-engineer our development candidates or to discontinue the sale of our development candidates in the event re-engineering cannot be accomplished on a timely basis, any of which could materially and adversely affect our business, financial condition, results of operations and prospects.

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 registered or unregistered 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, which we need to build name recognition among potential partners or customers in our markets of interest. At times, competitors or other third parties 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 trademarks or trademarks that incorporate variations of our registered or unregistered trademarks or trade names. Over the long term, if we are unable to establish name recognition based on our trademarks and trade names, then we may not be able to compete effectively and our business may be adversely affected. Our efforts to enforce or protect our proprietary rights related to trademarks, trade secrets, domain names, copyrights or other intellectual property may be ineffective and could result in substantial costs and diversion of resources and could adversely affect our business, financial condition, results of operations and growth prospects.

General Risk Factors

Our business could be materially and adversely affected in the future by the effects of disease outbreaks, epidemics and pandemics.

Disease outbreaks, epidemics and pandemics in regions where we may have clinical trial sites or other business operations could adversely affect our business, including by causing significant disruptions in our operations and/or in the operations of CROs upon whom we may rely. Disease outbreaks, epidemics and pandemics have negative impacts on our ability to initiate new clinical trial sites, to enroll new patients and to maintain existing patients who are participating in our clinical trials, which may include increased clinical trial costs, longer timelines and delay in our ability to obtain regulatory approvals of development candidates, if at all.

General supply chain issues may be exacerbated during disease outbreaks, epidemics and pandemics and may also impact the ability of our clinical trial sites to obtain basic medical supplies used in our trials in a timely fashion, if at all. If any of our raw materials or components suppliers become subject to acts or orders of U.S. or foreign government entities to allocate or prioritize raw materials or components to the manufacture or distribution of vaccines or medical supplies needed to test or treat patients in a disease outbreak, epidemic or pandemic, this could delay our clinical trials, perhaps substantially, which could materially and adversely affect our business.

Our operations are vulnerable to interruption by disasters, terrorist activity, pandemics and other events beyond our control, which could harm our business.

Our facilities are located in Massachusetts. We have not undertaken a systematic analysis of the potential consequences to our business and financial results from a major flood, power loss, terrorist activity, pandemics or other disasters and do not have a recovery plan for such events. In addition, we do not carry sufficient insurance to compensate us for actual losses from interruption of our business that may occur, and any losses or damages incurred by us could harm our business. The occurrence of any of these business disruptions could seriously harm our operations and financial condition and increase our costs and expenses.

Litigation costs and the outcome of litigation could have a material adverse effect on our business.

From time to time we may be subject to litigation claims through the ordinary course of our business operations regarding, but not limited to, employment matters, security of employee personal information, contractual relations with third parties and intellectual property rights. Litigation to defend ourself against claims by third parties, or to enforce any rights that we may have against third parties, may continue to be necessary, which could result in substantial costs and diversion of our resources, causing a material adverse effect on our business, financial condition, results of operations or cash flows.

The price of our common stock is volatile and fluctuates substantially, which could result in substantial losses for our stockholders.

Our stock price has been, and is likely to continue to be, volatile. Some of the factors that may cause the market price of our common stock to fluctuate include:

- results of clinical trials and preclinical studies of our lead candidates and development candidates, or those of our competitors or our existing or future collaborators;
- failure to meet or exceed financial and development projections we may provide to the public;
- failure to meet or exceed the financial and development projections of the investment community;
- announcements of significant acquisitions, strategic collaborations, joint ventures or capital commitments by us or our competitors;
- actions taken by regulatory agencies with respect to our development candidates, clinical studies, manufacturing process or sales and marketing terms;
- disputes or other developments relating to proprietary rights, including patents, litigation matters, and our ability to obtain patent protection for our technologies;
- additions or departures of key personnel;
- significant lawsuits, including patent or stockholder litigation;
- if securities or industry analysts do not publish research or reports about our business, or if they issue adverse or misleading opinions regarding our business and stock;
- changes in the market valuations of similar companies;
- general market or macroeconomic conditions or market conditions in the pharmaceutical and biotechnology sectors;
- sales of securities by us or our securityholders in the future;
- if we fail to raise an adequate amount of capital to fund our operations or continued development of our development candidates;
- trading volume of our common stock;
- announcements by competitors of new commercial products, clinical progress or lack thereof, significant contracts, commercial relationships or capital commitments;
- adverse publicity relating to precision medicine development candidates, including with respect to other products in such markets;
- the introduction of technological innovations or new therapies that compete with our products and services; and
- period-to-period fluctuations in our financial results.

Moreover, the stock markets in general have experienced substantial volatility that has often been unrelated to the operating performance of individual companies. These broad market fluctuations may also adversely affect the trading price of our common stock. In addition, a recession, depression or other sustained adverse market event could materially and adversely affect our business and the value of our common stock. In the past, following periods of volatility in the market price of a company's securities, stockholders have often instituted class action securities litigation against such companies. Furthermore, market volatility may lead to increased shareholder activism if we experience a market valuation that activists believe is not reflective of our intrinsic value. Activist campaigns that contest or conflict with our strategic direction or seek changes in the composition of our board of directors could have an adverse effect on our operating results, financial condition and cash flows.

We are incurring and expect to continue to incur additional costs and increased demands upon management as a result of complying with the laws and regulations affecting public companies.

We are incurring and expect to continue to incur significant legal, accounting and other expenses operating as a public company, including costs associated with public company reporting obligations under the Exchange Act. Our management team includes some individuals who have not previously managed and operated a public company. These executive officers and other personnel will need to devote substantial time to gaining expertise related to public company reporting requirements and

compliance with applicable laws and regulations to ensure that we continue to comply with all of these requirements. Any changes we make to comply with these obligations may not be sufficient to allow us to satisfy our obligations as a public company on a timely basis, or at all. These reporting requirements, rules and regulations, coupled with the increase in potential litigation exposure associated with operating our current business as a public company, could also make it more difficult for us to attract and retain qualified persons to serve on the board of directors or on board committees or to serve as executive officers, or to obtain certain types of insurance, including directors' and officers' insurance, on acceptable terms.

Once we are no longer a smaller reporting company or otherwise no longer qualify for applicable exemptions, we will be subject to additional laws and regulations affecting public companies that will increase our costs and the demands on management and could harm our operating results and cash flows.

We are subject to the reporting requirements of the Exchange Act, which requires, among other things, that we file with the SEC, annual, quarterly and current reports with respect to our business and financial condition as well as other disclosure and corporate governance requirements. However, as a smaller reporting company with less than $100.0 million of revenues, we may take advantage of exemptions from various requirements such as an exemption from the requirement to have our independent auditors attest to our internal control over financial reporting under Section 404 of the Sarbanes-Oxley Act of 2002. Although we no longer qualify as an emerging growth company, we still qualify as a "smaller reporting company," as such term is defined in Rule 12b-2 under the Exchange Act, which allows us to take advantage of many of the same exemptions from disclosure requirements, including reduced disclosure obligations regarding executive compensation in our periodic reports and proxy statements. Once we are no longer a smaller reporting company or otherwise no longer qualify for these exemptions, we will be required to comply with these additional legal and regulatory requirements applicable to public companies and will incur significant legal, accounting and other expenses to do so. If we are not able to comply with the requirements in a timely manner or at all, our financial condition or the market price of our common stock may be harmed. For example, if we or our auditor identifies deficiencies in our internal control over financial reporting that are deemed to be material weaknesses we could face additional costs to remedy those deficiencies, the market price of our stock could decline or we could be subject to sanctions or investigations by the SEC or other regulatory authorities, which would require additional financial and management resources.

If we fail to maintain proper and effective internal controls, our ability to produce accurate financial statements on a timely basis could be impaired.

We are subject to the reporting requirements of the Exchange Act, the Sarbanes-Oxley Act and the rules and regulations of Nasdaq. The Sarbanes-Oxley Act requires, among other things, that we maintain effective disclosure controls and procedures and internal control over financial reporting. 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 in our annual report on Form 10-K filing for that year, as required by Section 404 of the Sarbanes-Oxley Act. This will require that we incur substantial professional fees and internal costs to expand our accounting and finance functions and that we expend significant management efforts. We may experience difficulty in meeting these reporting requirements in a timely manner.

We may discover weaknesses in our system of internal financial and accounting controls and procedures that could result in a material misstatement of our financial statements. Our internal control over financial reporting will not prevent or detect all errors and all fraud. A control system, no matter how well designed and operated, can provide only reasonable, not absolute, assurance that the control system's objectives will be met. Because of the inherent limitations in all control systems, no evaluation of controls can provide absolute assurance that misstatements due to error or fraud will not occur or that all control issues and instances of fraud will be detected.

If we are not able to comply with the requirements of Section 404 of the Sarbanes-Oxley Act, or if we are unable to maintain proper and effective internal controls, we may not be able to produce timely and accurate financial statements. If that were to happen, the market price of our common stock could decline and we could be subject to sanctions or investigations by Nasdaq, the SEC or other regulatory authorities.

Our certificate of incorporation and bylaws and provisions under Delaware law could make an acquisition of us more difficult and may prevent attempts by our stockholders to replace or remove our management.

Provisions in our restated certificate of incorporation, as amended, and bylaws may discourage, delay or prevent a merger, acquisition or other change in control that stockholders may consider favorable, including transactions in which our common stockholders might otherwise receive a premium price for their shares. These provisions could also limit the price that investors might be willing to pay in the future for shares of our common stock, thereby depressing the market price of our common stock. In addition, because our board of directors will be 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 all members of the board are not 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 nominations for election to the board of directors or for proposing matters that can be acted on at stockholder meetings;
- require that stockholder actions must be effected at a duly called stockholder meeting and prohibit actions by our stockholders by written consent;
- limit who may call a special meeting of stockholders;
- authorize our board of directors to issue preferred stock without stockholder approval, which could be used to institute a "poison pill" that would work to dilute the stock ownership of a potential hostile acquirer, effectively preventing acquisitions that have not been approved by our board of directors; and
- require the approval of the holders of at least 66.67% 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 General Corporation Law of Delaware, or the DGCL, which prohibits stockholders owning in excess of 15% of our outstanding voting stock from merging or combining with us. Although we believe these provisions collectively will provide for an opportunity to receive higher bids by requiring potential acquirors to negotiate with our board of directors, they would apply even if the offer may be considered beneficial by some stockholders. In addition, these provisions may frustrate or prevent any attempts by our stockholders to replace or remove then current management by making it more difficult for stockholders to replace members of the board of directors, which is responsible for appointing the members of management.

Our bylaws provide that, unless we consent in writing to the selection of an alternative forum, certain designated courts will be the sole and exclusive forum for certain legal actions 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, employees or agents.

Our bylaws provide that, unless we consent in writing to an alternative forum, the Court of Chancery of the State of Delaware is the sole and exclusive forum for state law claims for (i) any derivative action or proceeding brought on our behalf, (ii) any action asserting a claim of or based on a breach of a fiduciary duty owed by any of our current or former directors, officers, or other employees to us or our stockholders, (iii) any action asserting a claim arising pursuant to any provision of the DGCL, our charter or our bylaws, or (iv) any action asserting a claim that is governed by the internal affairs doctrine, in each case subject to the Court of Chancery having personal jurisdiction over the indispensable parties named as defendants therein, which for purposes of this risk factor refers to herein as the "Delaware Forum Provision." The Delaware Forum Provision will not apply to any causes of action arising under the Securities Act and the Exchange Act. Our bylaws further provide that, unless we consent in writing to an alternative forum, 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, which for purposes of this risk factor refers to herein as the "Federal Forum Provision." In addition, our bylaws provide that any person or entity purchasing or otherwise acquiring any interest in shares of our capital stock is deemed to have notice of and consented to the foregoing Delaware Forum Provision and Federal Forum Provision; provided, however, that stockholders cannot and will not be deemed to have waived compliance with the U.S. federal securities laws and the rules and regulations thereunder.

The Delaware Forum Provision and the Federal Forum Provision may impose additional litigation costs on our stockholders in pursuing any such claims, particularly if our stockholders do not reside in or near the State of Delaware. Additionally, the forum selection clauses in our bylaws may limit our stockholders' ability to bring a claim in a judicial forum that they find favorable for disputes with us or our directors, officers or employees, which may discourage such lawsuits against us and our directors, officers and employees even though an action, if successful, might benefit our stockholders.

We do not anticipate that we will pay any cash dividends in the foreseeable future.

The current expectation is that we will retain our future earnings, if any, to fund the growth of our business as opposed to paying dividends. As a result, capital appreciation, if any, of our common stock will be your sole source of gain, if any, for the foreseeable future.

An active trading market for our common stock may not continue to develop or be sustained and our stockholders may not be able to resell their shares of common stock for a profit, if at all.

We cannot assure you that an active trading market for our shares of common stock may continue to develop or be sustained. If an active market for our common stock does not continue to develop or is not sustained, it may be difficult for our stockholders to sell their shares at an attractive price or at all.

Future sales of shares by existing stockholders could cause our stock price to decline.

If our existing securityholders sell, or indicate an intention to sell, substantial amounts of our common stock in the public market, the trading price of our common stock could decline as a result of the sale of a substantial number of our shares of common stock in the public market or the perception in the market that the holders of a large number of shares intend to sell their shares.

Our executive officers, directors and principal stockholders have the ability to control or significantly influence all matters submitted to our stockholders for approval.

Our executive officers, directors and principal stockholders, in the aggregate, beneficially own approximately 77% of our outstanding shares of common stock. As a result, if these stockholders were to choose to act together, they would be able to control or significantly influence all matters submitted to our stockholders for approval, as well as our management and affairs. For example, these stockholders, if they choose to act together, would control or significantly influence the election of directors and approval of any merger, consolidation or sale of all or substantially all of our assets. This concentration of voting power could delay or prevent an acquisition of us on terms that other stockholders may desire.

If equity research analysts do not publish research or reports, or publish unfavorable research or reports, about us, our business or our market, our stock price and trading volume could decline.

The trading market for our common stock will be influenced by the research and reports that equity research analysts publish about us and our business. Equity research analysts may elect to not provide research coverage of our common stock and such lack of research coverage may adversely affect the market price of our common stock. In the event we do have equity research analyst coverage, we will not have any control over the analysts or the content and opinions included in their reports. The price of our common stock could decline if one or more equity research analysts downgrade our stock or issue other unfavorable commentary or research. If one or more equity research analysts ceases coverage of us or fails to publish reports on us regularly, demand for our common stock could decrease, which in turn could cause our stock price or trading volume to decline.

We will have broad discretion in the use of our cash and cash equivalents and may invest or spend our cash in ways with which you do not agree and in ways that may not increase the value of your investment.

We will have broad discretion over the use of our cash and cash equivalents. You may not agree with our decisions, and our use of our cash and cash equivalents may not yield any return on your investment. Our failure to apply these resources effectively could compromise our ability to pursue our growth strategy and we might not be able to yield a significant return, if any, on our investment. You will not have the opportunity to influence our decisions on how to use our cash resources.

Raising additional capital may cause dilution to our stockholders, restrict our operations or require us to relinquish rights to our technologies or development candidates we may develop.

Until such time, if ever, as we can generate substantial product revenues, we expect to finance our capital needs through a combination of equity offerings, debt financings, collaborations, strategic alliances and licensing arrangements. We do not have any committed external source of funds. To the extent that we raise additional capital through the sale of equity or convertible debt securities, your ownership interest will be diluted and the terms of these securities may include liquidation or other preferences that adversely affect your rights as a common stockholder. Debt financing, if available, may involve agreements that include covenants limiting or restricting our ability to take specific actions, such as incurring additional debt, making capital expenditures, declaring dividends and possibly other restrictions. In addition, if we raise funds through additional license and collaboration agreements, strategic alliances or licensing arrangements with third parties, we may have to relinquish valuable rights to our intellectual property, technologies, future revenue streams, research programs or development candidates we may develop, or we may have to grant licenses on terms that may not be favorable.

Changes in tax laws or in their implementation or interpretation may adversely affect our business and financial condition.

The rules dealing with U.S. federal, state and local income taxation are constantly under review by persons involved in the legislative process and by the Internal Revenue Service and the U.S. Treasury Department. Changes to tax laws (which changes may have retroactive application) could adversely affect our business and financial condition. In recent years, many such changes have been made and changes are likely to continue to occur in the future. The most recent U.S. federal tax legislation was signed into law on July 4, 2025 and modified how we account for research and development expenses. In addition, it is unclear how these U.S. federal income tax changes will affect state and local taxation. We cannot predict whether, when, in what form or with what effective dates, tax laws, regulations and rulings may be enacted, promulgated or decided or whether they could increase our tax liability or require changes in the manner in which we operate in order to minimize increases in our tax liability.

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

Since our inception, we have incurred losses and we may never achieve profitability. As of December 31, 2025, we had federal and state NOLs of $462.0 million and $436.9 million, respectively. Under current law, our federal NOLs generated in taxable years ending after December 31, 2017, may be carried forward indefinitely, but the deductibility of such federal NOLs is limited to 80% of our taxable income annually for tax years beginning after December 31, 2018. Federal NOLs generated in taxable years ending on or prior to December 31, 2017, however, have a 20-year carryforward period, but are not subject to the 80% limitation. We have federal NOLs of $22.4 million that are subject to expiration between 2036 and 2037 and have $439.6 million of federal NOLs that do not expire. Our state NOLs expire at various dates from 2035 through 2045. As of December 31, 2025, we had federal research and development tax credit carryforwards of $20.2 million that expire at various dates from 2037 through 2045. In addition, as of December 31, 2025, we had state research and development tax credit carryforwards of $9.9 million that expire at various dates from 2032 through 2040.

Under Sections 382 and 383 of the Internal Revenue Code of 1986, as amended, or the Code, if a corporation undergoes an "ownership change," generally defined as one or more shareholders or groups of shareholders who own at least 5% of the corporation's equity increasing their equity ownership in the aggregate by more than 50 percentage points (by value) over a rolling three-year period, the corporation's ability to use its pre-change NOLs and other pre-change tax attributes (such as research and development tax credits) to offset its post-change income or taxes may be limited. Similar rules may apply under state tax laws. Our prior equity offerings and other changes in our stock ownership may have resulted in such ownership changes in the past. We have not conducted a formal study to assess whether a change of control has occurred or whether there have been multiple changes of control since inception. In addition, we may experience ownership changes in the future as a result of future securities offering or subsequent shifts in our stock ownership, some of which are outside of our control. In particular, if the November 2023 business combination or the private financing that closed immediately prior thereto constitutes an ownership change within the meaning of Section 382 of the Code, we could lose or otherwise be substantially limited in our ability to use our NOLs and tax credit carryforwards. As a result, if we earn net taxable income in the future, our ability to use our pre-change NOLs or other pre-change tax attributes to offset U.S. federal taxable income or income taxes may be subject to limitations, which could potentially result in increased future tax liability to us. There is a risk that due to changes under the tax law, regulatory changes or other unforeseen reasons, our existing NOLs or business tax credits could expire or otherwise be unavailable to offset future income tax liabilities. At the state level, there may also be periods during which the use of NOLs or business tax credits is suspended or otherwise limited, which could accelerate or permanently increase state taxes owed by us. For these reasons, we may not be able to realize a tax benefit from the use of our NOLs or tax credits, even if we attain profitability.

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

Our results of operations could be adversely affected by general conditions in the global economy and in the global financial markets. A severe or prolonged economic downturn could result in a variety of risks to our business, including, weakened demand for our development candidates and our ability to raise additional capital when needed on acceptable terms, if at all. A weak or declining economy could also strain our suppliers, possibly resulting in supply disruption, or cause our customers to delay making payments for our services. Any of the foregoing could harm our business and we cannot anticipate all of the ways in which the current economic climate and financial market conditions could adversely impact our business.

Our business may be impacted by macroeconomic conditions, including inflation, rising interest rates and volatile market conditions, and other uncertainties beyond our control, including geopolitical events, such as recent U.S. and Israeli military action in Iran, and effects thereof.

Our ability to effectively run our business could be adversely affected by general conditions in the global economy and in the financial services industry. Various macroeconomic factors could adversely affect our business, including fears concerning the banking sector (such as what occurred in 2023), changes in inflation, interest rates and overall economic conditions and uncertainties (including as a result of announced tariffs or other policy changes by the current U.S. administration). Actual events involving limited liquidity, defaults, non-performance or other adverse developments that affect financial institutions, transactional counterparties or other companies in the financial services industry or the financial services industry generally, or concerns or rumors about any events of these kinds or other similar risks, have in the past and may in the future lead to market-wide liquidity problems. A severe or prolonged economic downturn could result in a variety of risks, including our ability to raise additional funding on a timely basis or on acceptable terms. A weak or declining economy could also impact third parties upon whom we depend to run our business. Although we assess our banking relationships as we believe necessary or appropriate, our access to funding sources in amounts adequate to finance or capitalize our current and projected future business operations could be significantly impaired by factors that affect us, the financial institutions with which we have arrangements directly, or the financial services industry or economy in general. Moreover, significant political, trade, regulatory developments, and other circumstances beyond our control, such as geopolitical events, like the recent U.S. and Israeli military action in Iran and effects thereof, could have a material adverse effect on our financial condition or results of operations.

Item 1B. Unresolved Staff Comments.

None.

Item 1C. Cybersecurity

Cybersecurity Risk Management and Strategy

We recognize the importance of assessing, identifying, and managing risks from cybersecurity threats. We have implemented a cybersecurity risk management process in accordance with our risk profile and business that is informed by industry standards and is integrated into our enterprise risk management process.

We leverage the support of third-party information technology and security providers, including for periodic security testing and risk assessments, as part of our risk management process, designed to identify, assess, and manage cybersecurity risks. We conduct employee cybersecurity training and maintain an incident response and notification plan designed to assist us in identifying, responding to, and recovering from cybersecurity incidents. Further, we intend to evaluate and update our existing cybersecurity policies and procedures as appropriate to continue to align them to our risk profile.

We have a process to assess the security practices of certain third-party vendors, including through the use of vendor security questionnaires, as appropriate.

Although risks from cybersecurity threats have to date not materially affected us, our business strategy, results of operations or financial condition, we have, from time to time, experienced threats to and breaches of our and our third party vendors' data and systems. For more information about these risks, see Item 1A "*Risk Factors—Risks Related to Our Business*."

Governance Related to Cybersecurity Risks

Our Vice President, Information Technology, or Vice President, who reports to the Chief Operating Officer, is responsible for the strategic leadership and direction of our cybersecurity program. With over 20 years of experience in information technology, the Vice President works alongside individuals across other functions, such as legal and engineering, to establish and implement our cybersecurity strategy.

The Vice President and our Chief Operating Officer and General Counsel participate in periodic discussions with other members of our management, including executive leadership, regarding implementation of our cybersecurity program, program enhancements, and relevant cybersecurity risks or threats.

Our audit committee has oversight over cybersecurity risks. With the input of the executive team, the Vice President provides annual presentations to the audit committee on our cybersecurity program, including updates on cybersecurity testing and assessments, cybersecurity risks, and related cybersecurity strategy as applicable. The management team will also update the full board of directors on matters related to cybersecurity as needed.

Additionally, we have implemented an enterprise risk management process, which addresses cybersecurity risks. This process is led by our General Counsel and includes participation by the board of directors, as appropriate. Our General Counsel reports regularly on the enterprise risk management process to executive leadership and the audit committee.

Item 2. Properties.

Our principal office is located at 60 First Street, 2nd Floor, Suite 250, Cambridge, MA 02141, where we lease approximately 50,453 square feet of office and laboratory space. The lease term began in May 2023 and will end in April 2034 with an option to extend the term of the lease for an additional five years.

We believe that our existing office and laboratory space is adequate for our needs for the foreseeable future. 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 be involved in various other claims and legal proceedings relating to claims arising out of our operations. We are not currently a party to any material legal proceedings.

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 is listed on the Nasdaq Capital Market under the symbol "KRRO".

Holders of Our Common Stock

As of March 10, 2026, we had 14,422,571 shares of common stock issued and outstanding held of record by 104 holders. The actual number of holders of these securities is greater than this number of record holders, as the actual number includes holders who are beneficial owners whose securities are held in street name by brokers and other nominees. This number of holders of record also does not include holders whose securities may be held in trust by other entities.

Recent Sales of Unregistered Securities

None.

Equity Compensation Plan Information

Information about our equity compensation plans will be included in our definitive proxy statement to be filed with the SEC with respect to our 2026 Annual Meeting of Stockholders and is incorporated herein by reference.

Purchases of Equity Securities by the Issuer or Affiliated Purchasers

None.

Item 6. [Reserved]

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

You should read the following discussion and analysis of our financial condition and results of operations together with our audited consolidated financial statements and related notes included elsewhere in this Annual Report on Form 10-K. Some of the information contained in this discussion and analysis, including information with respect to our plans and strategy for our business and related financing, includes forward-looking statements that involve risks and uncertainties. As a result of many factors, including those factors set forth under the heading "Risk Factors" in Part I, Item 1A of this Annual Report on Form 10-K our actual results could differ materially from the results described in or implied by the forward-looking statements contained in the following discussion and analysis. See also "Cautionary Statement Regarding Forward-Looking Statements."

Overview

We are a biopharmaceutical company with a mission to discover, develop and commercialize a new class of genetic medicines based on editing RNA, enabling the treatment of both rare and highly prevalent diseases.

We are generating a portfolio of differentiated programs that are designed to harness the body's natural RNA editing process to effect a precise yet transient change to a single nucleoside (adenosine to an inosine edit). By editing RNA instead of DNA, we are expanding the reach of genetic medicines by delivering additional precision and tunability, which has the potential for increased specificity and improved long-term tolerability. We use an oligonucleotide-based approach and expect to bring our medicines to patients by leveraging our proprietary platform with precedented delivery modalities, including N-acetylgalactosamine, or GalNAc, -conjugated delivery for subcutaneous administration, manufacturing know-how, and established regulatory pathways of approved oligonucleotide medicines. However, the scientific evidence to support the feasibility of developing our development candidates using our RNA editing technology is both preliminary and limited. Moreover, regulators have not yet established any definitive guidelines related to overall development considerations for RNA editing therapies and limited clinical data has been generated to date.

The versatility of RNA editing combined with our OPERA platform broadens the therapeutic target space significantly. The advent of large-scale genome sequencing has progressively revealed causal genetic variation underlying several human diseases, both rare and highly prevalent. Genetic mutations, including SNVs implicated in disease have been found to be diverse in nature and can affect the function of genes and their associated downstream biochemical pathways. Data correlating DNA to RNA to disease phenotype have demonstrated that SNVs lead to a loss-of-function or a gain-of-function of the gene. In addition, the majority of SNVs implicated in complex diseases are due to modulation of gene function. By editing RNA to mimic a SNV, we believe we will be able to address unmet patient need by transiently modifying gene expression and the resultant protein function.

We continue to make meaningful advancements across our programs, including KRRO-121 as a potential first-in-class treatment for hyperammonemia that has the potential to address substantial unmet need in patients with poor ammonia control, including those with UCD and HE. KRRO-121 is an RNA-editing oligonucleotide conjugated with GalNAc in development for the potential treatment of UCDs of any mutational background in adults and adolescents. Utilizing our proprietary platform, we designed KRRO-121 to edit the GLUL transcript (the gene for the GS protein), to generate a stabilized, de novo variant of GS with enhanced ammonia clearance capacity. This synthetic rescue approach creates a compensating protein rather than repairing the underlying urea cycle defect. By editing GS mRNA to create a de novo protein with a single amino acid change that prevents glutamine-induced proteasomal degradation, we aim to maintain consistent ammonia clearance capacity irrespective of the specific enzyme deficiency in patients with UCD and to reduce ammonia levels in patients with HE. We anticipate a regulatory filing to enable commencement of a first-in-human trial in the second half of 2026.

In November 2025, we announced that KRRO-110 did not reach projected levels of functional protein following a single administration and pivoted to GalNAc delivery for patients with AATD with development candidate nomination expected in the second quarter of 2026. We are developing a next-generation GalNAc-conjugated RNA editing oligonucleotide for the treatment of AATD that has the potential to be disease-modifying and provide a differentiated therapeutic option.

In May 2025, we announced a strategic plan to streamline our operations, including a reduction in workforce by 19%, or 21 positions. In November 2025, we implemented a strategic restructuring to extend cash runway, including a further workforce reduction of approximately 34%. Please see Note 16 to our audited consolidated financial statements included elsewhere in this Annual Report on Form 10-K.

Since inception, we have focused primarily on organizing and staffing our company, business planning, raising capital, securing related intellectual property, and conducting research and development activities for our potential programs and development candidates. Since inception, we have funded our operations primarily through the private placement of our equity securities. To date, we have raised approximately $223.6 million of aggregate gross proceeds from the sale of our convertible preferred stock, $117.3 million from the sale of shares of common stock issued in a private placement that closed immediately

prior to the November 2023 business combination, $70.0 million from the April 2024 private placement of shares of our common stock, $5.1 million from sales under our at-the-market offering program, and $85.0 million from the March 2026 private placement.

We have incurred significant operating losses since inception. Our net losses were $117.3 million and $83.6 million for the years ended December 31, 2025 and 2024, respectively. We had an accumulated deficit of $383.8 million as of December 31, 2025. We expect to continue to incur significant and increasing expenses and operating losses and negative operating cash flows for the foreseeable future as we continue our research and development efforts, advance development candidates into and through clinical development, and seek regulatory approvals for our development candidates. Our net losses may fluctuate significantly from quarter-to-quarter and year-to-year, depending on the timing of our preclinical studies, initiation and conduct of any clinical trials, and our expenditures on other research and development activities, including the expansion of our pipeline.

We do not have any development candidates approved for sale and have not generated any revenue from product sales. We will not generate revenue from product sales unless and until we successfully obtain regulatory approval for our development candidates, if ever, and as appropriate, move pipeline candidates into the clinic and complete clinical development. If we obtain regulatory approval for our development candidates and do not enter into third-party commercialization partnerships, we expect to incur significant expenses related to developing commercialization capabilities to support product sales, marketing, manufacturing and distribution activities. As a result, we will need substantial additional funding to support our continuing operations and pursue our development and growth strategy. Until we can generate significant revenue from product sales, if ever, we expect to finance our operations through a combination of public or private offerings of securities, debt financings or other sources, such as potential collaboration agreements, strategic alliances and licensing arrangements. We may be unable to raise additional funds or enter into such other agreements or arrangements when needed on acceptable terms, or at all. Our failure to raise capital or enter into such agreements as, and when needed, could have a negative effect on our business, results of operations and financial condition.

Recent Developments

At-the-Market Offering Program

In January 2026, we issued 501,861 shares of common stock under our December 2024 at-the-market sales agreement for gross proceeds of $5.1 million, before deducting estimated offering expenses.

March 2026 Private Placement

On March 9, 2026, we entered into a subscription agreement with certain new and existing accredited investors to issue and sell in a private placement an aggregate of 4,501,928 shares of our common stock at a purchase price of $11.11 per share and pre-funded warrants to purchase up to an aggregate of 3,148,836 shares of our common stock (at an exercise price of $0.001 per share) at a price of $11.109 per pre-funded warrant. The private placement, which closed March 10, 2026, resulted in gross proceeds of approximately $85.0 million before deducting placement agent fees and estimated offering expenses.

Financial Operations Overview

Revenue

We have not generated any revenue from product sales, and do not expect to generate any revenue from the sale of products in the near future. During the year ended December 31, 2025 and 2024, we recognized $6.4 million and $2.3 million of collaboration revenue, respectively, which is related to our research collaboration and license agreement with Novo Nordisk. In

November 2025, we agreed to a 12 month pause on such collaboration with Novo Nordisk, and accordingly, we do not expect to recognize any material collaboration revenue under such agreement during the 12-month hold period.

For additional information about our revenue recognition policy, see Note 2 and Note 12 to our audited consolidated financial statements included in this Annual Report on Form 10-K.

Operating Expenses

Research and Development Expenses

Research and development expenses consist primarily of costs incurred for our research and development activities, including our discovery of novel genetic medicines and the development of our development candidates, salaries and benefits, and third-party license fees. We expense research and development costs as incurred, which include:

- employee-related expenses, including salaries, bonuses, benefits, stock-based compensation and other related costs for employees engaged in research and development efforts;
- expenses incurred under agreements with CROs that conduct our preclinical studies and clinical trials;
- costs of purchasing lab supplies and non-capital equipment used in our preclinical activities and in manufacturing preclinical study materials, as well as supplies and materials used to manufacture clinical trial materials;
- costs of outside consultants and contractors engaged in research and development activities, including their fees and travel expenses;
- payments made under third-party licensing agreements; and
- direct and allocated expenses for facilities.

Costs for certain activities are recognized based on an evaluation of the progress to completion of specific tasks using data such as information provided to us by our vendors and analyzing the progress of our preclinical studies, clinical trials or other services performed. Nonrefundable advance payments for goods or services to be received in the future for use in research and development activities are capitalized. The capitalized amounts are expensed as the related goods are delivered or the services are performed. Significant judgment and estimates are made in determining the accrued expense balances and prepaid expense balances at the end of any reporting period.

A large portion of our research and development expenses have been external expenses, which we track on a program-by-program basis following nomination as a development candidate. Our internal research and development expenses are primarily personnel-related expenses, including stock-based compensation expense and facility expenses, mainly including office rent expenses and depreciation expenses. We do not allocate our internal research and development expenses to specific development candidate programs as they are deployed across multiple projects under research and development.

The successful development of our development candidates is highly uncertain. We plan to substantially increase our research and development expenses for the foreseeable future as we continue the development of our candidates, conduct discovery and research activities for our preclinical programs, and expand our pipeline. We cannot determine with certainty the timing of initiation, the duration or the completion costs of current or future preclinical studies and clinical trials of our development candidates due to the inherently unpredictable nature of preclinical and clinical development. Clinical and preclinical development timelines, the probability of success and development costs can differ materially from expectations. We anticipate that we will make determinations as to which lead candidates and development candidates to pursue and how much funding to direct to each on an ongoing basis in response to the results of ongoing and future preclinical studies and clinical trials, regulatory developments and our ongoing assessments as to each development candidate’s commercial potential. Our clinical development costs are expected to increase significantly as we commence clinical trials. We anticipate that our expenses will increase substantially, particularly due to the numerous risks and uncertainties associated with developing development candidates, including the uncertainty of:

- the scope, rate of progress, and expenses of our ongoing research activities as well as any preclinical studies, clinical trials and other research and development activities;
- establishing an appropriate safety profile with IND enabling studies;
- successful enrollment in and completion of clinical trials;
- whether our development candidates show safety and efficacy in our clinical trials;
- receipt of marketing approvals from applicable regulatory authorities;

- making arrangements with third-party manufacturers;
- obtaining and maintaining patent and trade secret protection and regulatory exclusivity for our development candidates;
- commercializing development candidates, if and when approved, whether alone or in collaboration with others; and
- continued acceptable safety profile of products following any regulatory approval.

Any changes in the outcome of any of these variables with respect to the development of our development candidates in preclinical and clinical development could mean a significant change in the costs and timing associated with the development of these development candidates. We may never succeed in achieving regulatory approval for any of our development candidates. We may obtain unexpected results from our clinical trials. We may elect to discontinue, delay or modify clinical trials of some development candidates or focus on other development candidates. For example, if the FDA, EMA, HREC, TGA or another regulatory authority were to delay the planned start of clinical trials or require us to conduct clinical trials or other testing beyond those that we currently expect or if we experience significant delays in enrollment in any planned clinical trial, we could be required to expend significant additional financial resources and time on the completion of clinical development of that development candidate.

General and Administrative Expenses

General and administrative expenses consist primarily of employee related costs, including salaries, bonuses, benefits, stock-based compensation and other related costs for our executive and administrative functions. General and administrative expenses also include professional services, including legal, finance, accounting, human resources and other consulting fees. General and administrative expenses also include facility costs not otherwise included in research and development expenses.

We anticipate that our general and administrative expenses will decrease or remain flat in the near future to support our current planned research activities and development of our lead candidates and development candidates at current personnel levels. However, should we grow our operations, we anticipate that such personnel-related expenses would increase. We also expect to continue to incur costs associated with being a public company and maintaining controls over financial reporting, including costs of accounting, audit, legal, regulatory, compliance and director and officer insurance costs as well as investor and public relations expenses.

Long-lived Asset Impairment Charges

We determined that indicators of impairment existed during the fourth quarter of 2025 and, as a result, our long-lived assets were reviewed for impairment. We assessed the recoverability of our single enterprise-wide asset group and determined that the assets were not fully recoverable when compared to the future undiscounted cash flows from the asset group. As a result, we estimated the fair value of the asset group, which resulted in a non-cash, long-lived asset impairment charge of $30.9 million in 2025. See Note 3 for further discussion of the impairment analysis.

Restructuring Charges

In May 2025, we announced a strategic plan to streamline our operations, including a workforce reduction of approximately 20%. In connection with the November 2025 announcement regarding KRRO-110, we further implemented a strategic restructuring to reserve resources and extend cash runway, including a reduction in our workforce. Restructuring charges consist primarily of severance and employee benefits costs incurred in relation to our reductions in force.

See Note 16 to our audited consolidated financial statements included in this Annual Report on Form 10-K for further discussion of our restructuring charges.

Other Income, Net

Other income, net primarily consists of interest income earned on money market fund accounts and marketable securities.

Results of Operations

Comparison of the Years Ended December 31, 2025 and 2024

The following table summarizes our results of operations for the years ended December 31, 2025 and 2024:

(in thousands)	Year Ended December 31, 2025	2024	Change
Collaboration revenue	$ 6,392	$ 2,271	$ 4,121
Operating expenses:			
Research and development	65,575	63,636	1,939
General and administrative	28,159	30,545	(2,386)
Long-lived asset impairment charge	30,886	—	30,886
Restructuring charge	3,627	—	3,627
Total operating expenses	128,247	94,181	34,066
Loss from operations	(121,855)	(91,910)	(29,945)
Other income, net			
Other income, net	5,232	8,470	(3,238)
Total other income, net	5,232	8,470	(3,238)
Loss before provision for income taxes	(116,623)	(83,440)	(33,183)
Provision for income taxes	(637)	(141)	(496)
Net loss	$ (117,260)	$ (83,581)	$ (33,679)

Collaboration Revenue

During the year ended December 31, 2025 and 2024, we recognized $6.4 million and $2.3 million of collaboration revenue, respectively, from our research collaboration and license agreement with Novo Nordisk. In November 2025, we agreed to a 12 month pause on our collaboration with Novo Nordisk. Accordingly, we do not expect to recognize any material collaboration revenue under such agreement during the 12-month hold period.

Research and Development Expenses

The following table summarizes our research and development expenses for the years ended December 31, 2025 and 2024:

(in thousands)	Year Ended December 31, 2025	2024	Change
Development candidate expenses			
KRRO-110 (AATD) external expenses	$ 17,870	$ 20,906	$ (3,036)
KRRO-121 (UCD) external expenses	5,429	617	4,812
Unallocated research and development expenses			
Other research and pre-development candidate expenses	10,824	12,311	(1,487)
Personnel expenses	21,010	18,477	2,533
Facilities expenses	10,442	11,325	(883)
Total research and development expenses	$ 65,575	$ 63,636	$ 1,939

Research and development expenses were $65.6 million for the year ended December 31, 2025, compared to $63.6 million for the year ended December 31, 2024. The increase was primarily due to the following:

- a $4.8 million increase in KRRO-121 external expenses, primarily due to exploratory and manufacturing costs; and
- a $2.5 million increase in personnel-related expenses, primarily due to the expansion of our clinical development function and stock-based compensation;
- offset by a $3.0 million decrease in KRRO-110 external expenses, primarily due to a reduction in non clinical costs partially offset by an increase in clinical costs for the Phase 1/2a REWRITE clinical trial as it progressed during 2025; and
- a $1.5 million decrease in other research and pre-development candidate expenses.

General and Administrative Expenses

The following table summarizes our general and administrative expenses for the years ended December 31, 2025 and 2024:

	Year Ended December 31,		
(in thousands)	2025	2024	Change
Personnel-related expenses	$ 14,394	$ 13,160	$ 1,234
Professional services	7,021	9,640	(2,619)
Facilities expenses	2,874	3,732	(858)
Other	3,870	4,013	(143)
Total general and administrative expenses	$ 28,159	$ 30,545	$ (2,386)

General and administrative expenses were $28.2 million for the year December 31, 2025, compared to $30.5 million for the year ended December 31, 2024. The decrease was primarily due to a $2.6 million decrease in professional services expenses, offset by a $1.2 million increase in personnel-related expenses, which was mainly attributable to an increase in stock-based compensation costs.

Long-lived Asset Impairment Charges

Long-lived asset non-cash impairment charges for the year ended December 31, 2025 consisted of $15.0 million and $15.9 million of impairment charges on our operating ROU asset and property and equipment, respectively. We did not incur any impairment charges for the year ended December 31, 2024.

***Restructuring* Charges**

Restructuring charges for the year ended December 31, 2025 consisted of $3.6 million of employee termination benefits related to our workforce reductions in May and November 2025. During the year ended December 31, 2025, all activities related to our May 2025 workforce reduction were completed. The remaining payments related to our November 2025 workforce reduction are expected to be paid by the third quarter of 2026. We did not incur any restructuring charges for the year ended December 31, 2024.

Other Income, Net

Total other income, net was $5.2 million for the year ended December 31, 2025, compared to $8.5 million for the year ended December 31, 2024. The decrease of $3.3 million was primarily due to lower interest income generated from a lower cash, cash equivalent and marketable securities balance in 2025 compared to 2024.

Liquidity and Capital Resources

Sources of Liquidity

Since our inception, we have generated recurring net losses. We have not yet commercialized any products and we do not expect to generate revenue from sales of any products for several years, if at all. Since inception, we have funded our operations primarily through proceeds from the issuance of convertible preferred stock and common stock. To date, we have raised approximately $223.6 million of aggregate gross proceeds from the sale of convertible preferred stock, $117.3 million from the sale of shares of common stock issued in a private placement that closed immediately prior to the November 2023 business combination, $70.0 million from the April 2024 private placement of shares of our common stock, $5.1 million from the January

2026 sales under our at-the-market offering program, and $85.0 million from the March 2026 private placement. As of December 31, 2025, we had cash, cash equivalents and marketable securities of $85.2 million.

Since inception, we have incurred significant operating losses and, as of December 31, 2025, had an accumulated deficit of $383.8 million. We expect to continue to incur significant expenses, operating losses, and negative operating cash flows for the foreseeable future. In addition, we have not yet commercialized any product and we do not expect to generate revenue from sales of any products for several years, if at all.

In December 2024, we entered into a sales agreement with TD Securities (USA) LLC, or TD Cowen, under which we may, from time to time, issue and sell shares of our common stock having aggregate sales proceeds of up to $100.0 million, in a series of one or more at-the-market equity offerings. As of December 31, 2025, we had not sold any shares of common stock under our at-the-market equity offering program. In January 2026, we issued 501,861 shares of common stock under the at-the-market offering program for gross proceeds of $5.1 million.

As of December 31, 2025, we had cash, cash equivalents and marketable securities of $85.2 million. We expect that our cash, cash equivalents and marketable securities outstanding as of December 31, 2025, together with the net proceeds raised under the January at-the-market offering program sales and March 2026 private placement, will be sufficient to fund our operating expenses and capital expenditure requirements into the second half of 2028. We have based this estimate on assumptions that may prove to be wrong, and we could expend our capital resources sooner than we expect. We may also pursue additional cash resources through public or private equity, collaborations or debt financings. There is no assurance that we will be successful in obtaining sufficient financing on acceptable terms to continue funding our operations.

Funding Requirements

We expect to continue to incur significant expenses, operating losses, and negative operating cash flows for the foreseeable future as we continue our novel genetic medicine discovery efforts, advance our pipeline candidates into the clinic and through clinical trials, seek regulatory approval of our development candidates and pursue commercialization of any approved development candidates. In addition, we expect to continue to incur costs associated with operating as a public company.

Because of the numerous risks and uncertainties associated with research, development and commercialization of our development candidates, we are unable to estimate the exact amount of our working capital requirements.

Our future capital requirements will depend on many factors, including:

- the scope, progress, results, and costs of discovery, preclinical development, laboratory testing, manufacturing and clinical trials for KRRO-121 and other candidates we may develop;
- the cost of continuing to build our OPERA platform and discover additional novel genetic medicines;
- the extent to which we partner our programs, acquire or in-license other lead candidates, development candidates and technologies or enter into additional collaborations;
- the outcome, timing and cost of meeting regulatory requirements established by the FDA, EMA and other regulatory authorities;
- the timing and amount of milestone and royalty payments that we are required to make or eligible to receive under any future collaboration and license agreements;
- any future headcount growth and associated costs, should we expand our research and development efforts;
- the cost of expanding, maintaining and enforcing our intellectual property portfolio, including filing, prosecuting, defending and enforcing our patent claims and other intellectual property rights;
- the cost of defending potential intellectual property disputes, including patent infringement actions brought by third parties against us or any of our lead candidates or development candidates;
- the costs and timing of future commercialization activities, including product manufacturing, marketing, sales and distribution, for any development candidates for which we receive marketing approval;
- the cost and timing of completion of commercial-scale manufacturing activities;
- the effect of competing technological and market developments; and
- the costs of operating as a public company.

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

Cash Flows

Comparison of the Years Ended December 31, 2025 and 2024

The following table summarizes our cash flows for the years ended December 31, 2025 and 2024:

	Year Ended December 31,	
(in thousands)	**2025**	**2024**
Net cash used in operating activities	$ (78,561)	$ (60,074)
Net cash provided by (used in) investing activities	43,993	(123,347)
Net cash provided by financing activities	685	69,355
Effect of foreign exchange rate changes	64	(4)
Net decrease in cash, cash equivalents and restricted cash	$ (33,819)	$ (114,070)

Cash Used in Operating Activities

Net cash used in operating activities was $78.6 million for the year ended December 31, 2025, primarily resulted from our net loss of $117.3 million, which was primarily attributable to our research and development activities and our general and administrative expenses, along with changes in our operating assets and liabilities of $4.4 million, offset by $43.1 million of non-cash items, primarily the $30.9 million impairment of long-lived assets.

Net cash used in operating activities was $60.1 million for the year ended December 31, 2024, primarily resulted from our net loss of $83.6 million, which was primarily attributable to our research and development activities and our general and administrative expenses, along with changes in our operating assets and liabilities of $13.6 million, offset by $9.9 million of non-cash items.

Cash Provided by (Used in) Investing Activities

Net cash provided by investing activities was $44.0 million for the year ended December 31, 2025 and consisted primarily of the proceeds from maturities of marketable securities, offset by purchase of marketable securities and the purchase of property and equipment.

Net cash used in investing activities was $123.3 million for the year ended December 31, 2024 and consisted primarily of the purchase of marketable securities and the purchase of property and equipment, offset by proceeds from maturities of marketable securities.

Cash Provided by Financing Activities

Net cash provided by financing activities was $0.7 million for the year ended December 31, 2025 and consisted of proceeds from exercises of stock options.

Net cash provided by financing activities was $69.4 million for the year ended December 31, 2024 and consisted of net proceeds from the April 2024 private placement and proceeds from exercises of stock options.

Critical Accounting Policies and Estimates

Our management's discussion and analysis of our financial condition and results of operations is based on our consolidated financial statements, which have been prepared in accordance with generally accepted accounting principles in the United States, or GAAP. The preparation of these consolidated financial statements requires us to make judgments and estimates that affect the reported amounts of assets, liabilities, revenues 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. On an ongoing basis, we evaluate our judgments and estimate in light of changes in circumstances, facts, and experience. The effects of material revisions in estimates, if any, will be reflected in the consolidated financial statements prospectively from the date of change in estimates.

While our significant accounting policies are described in more detail in Note 2 to our audited consolidated financial statements appearing elsewhere in this Annual Report on Form 10-K, we believe that the following accounting policy is most critical to the judgments and estimates used in the preparation of our consolidated financial statements.

Long-lived Assets

We periodically evaluate long-lived assets for impairment when changes in circumstances or the occurrence of certain events indicate the carrying amount of an asset or asset group may not be recoverable. Identifying and assessing whether impairment indicators exist, or if events or changes in circumstances have occurred, including an adverse change in legal factors or in the business climate that could affect the value of the long-lived asset (group); an adverse change in the extent or manner in which the long-lived asset (group) is used or is expected to be used, or in its physical condition; and current or forecasted operating or cash flow losses that demonstrate continuing losses associated with the use of the long-lived asset (group), requires judgment. Additionally, grouping assets requires judgment. Changes in judgment used could materially affect our financial condition and results of operations.

We determined that indicators of impairment existed during the fourth quarter of 2025 and, as a result, reviewed our long-lived assets for impairment. We assessed the recoverability of our single enterprise-wide asset group and determined that the assets were not fully recoverable when compared to the future undiscounted cash flows from the asset group. As a result, we estimated the fair value of the asset group which resulted in a non-cash, long-lived asset impairment charge of $30.9 million in 2025.

See Note 3 to our audited consolidated financial statements included in this Annual Report on Form 10-K for further discussion of our impairment analysis.

Contractual Obligations and Other Commitments

Our contractual obligations and commitments relate primarily to our operating leases and non-cancelable purchase obligations under agreements with various research and development organizations and suppliers in the ordinary course of business. See Note 13, "Commitments and Contingencies" to our audited consolidated financial statements appearing elsewhere in this Annual Report on Form 10-K.

Recent Accounting Pronouncements

A description of recently issued and recently adopted accounting pronouncements applicable to our financial position and results of operations is included in Note 2 to our audited consolidated financial statements appearing elsewhere in this Annual Report on Form 10-K.

Smaller Reporting Company Status

We are a "smaller reporting company" as defined in Item 10(f)(1) of Regulation S-K. Smaller reporting companies may take advantage of certain reduced disclosure obligations, including, among other things, providing only two years of audited financial statements. We will remain a smaller reporting company until the last day of the fiscal year in which (i) the market value of our common stock held by non-affiliates exceeds $250 million as of the prior June 30, or (ii) our annual revenues exceed $100

million during such completed fiscal year and the market value of our common stock held by non-affiliates exceeds $700 million as of the prior June 30.

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

As of December 31, 2025, we had cash, cash equivalents and marketable securities of $85.2 million, which consist of bank deposits, money market funds and US treasury and other government-backed securities. Interest income is sensitive to changes in the general level of interest rates; however, due to the nature of these investments, an immediate 10% change in market interest rates would not have a material effect on the fair market value of our cash, cash equivalents or marketable securities.

Our employees and operations are primarily located in the United States. We have, from time to time, engaged in contracts with contractors or other vendors in a currency other than the U.S. dollar. To date, we have had minimal exposure to fluctuations in foreign currency exchange rates as the time period between the date that transactions are initiated, and the date of payment or receipt of payment is generally of short duration. Accordingly, we believe it does not have a material exposure to foreign currency risk.

Inflation generally affects us by increasing our cost of labor and research, manufacturing and developments costs. We believe that inflations has not had a material effect on our financial statements included elsewhere in this Annual Report on Form 10-K. However, our operations may be adversely affected by inflation in the future.

Item 8. Financial Statements and Supplementary Data

Korro Bio, Inc.

INDEX TO FINANCIAL STATEMENTS

Report of Independent Registered Public Accounting Firm

To the Stockholders and the Board of Directors of Korro Bio, Inc.

Opinion on the Financial Statements

We have audited the accompanying consolidated balance sheets of Korro Bio, Inc. (the Company) as of December 31, 2025 and 2024, the related consolidated statements of operations and comprehensive loss, stockholders' equity and cash flows for each of the two years in the period ended December 31, 2025, and the related notes (collectively referred to as the “consolidated financial statements”). In our opinion, the consolidated financial statements present fairly, in all material respects, the financial position of the Company at December 31, 2025 and 2024, and the results of its operations and its cash flows for each of the two years in the period ended December 31, 2025, in conformity with U.S. generally accepted accounting principles.

Basis for Opinion

These financial statements are the responsibility of the Company's management. Our responsibility is to express an opinion on the Company’s financial statements based on our audits. We are a public accounting firm registered with the Public Company Accounting Oversight Board (United States) (PCAOB) and are required to be independent with respect to the Company in accordance with the U.S. federal securities laws and the applicable rules and regulations of the Securities and Exchange Commission and the PCAOB.

We conducted our audits in accordance with the standards of the PCAOB. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements are free of material misstatement, whether due to error or fraud. The Company is not required to have, nor were we engaged to perform, an audit of its internal control over financial reporting. As part of our audits we are required to obtain an understanding of internal control over financial reporting but not for the purpose of expressing an opinion on the effectiveness of the Company's internal control over financial reporting. Accordingly, we express no such opinion

Our audits included performing procedures to assess the risks of material misstatement of the financial statements, whether due to error or fraud, and performing procedures that respond to those risks. Such procedures included examining, on a test basis, evidence regarding the amounts and disclosures in the financial statements. Our audits also included evaluating the accounting principles used and significant estimates made by management, as well as evaluating the overall presentation of the financial statements. We believe that our audits provide a reasonable basis for our opinion.

Critical Audit Matter

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

Long-Lived Asset Impairment

Description of the Matter	As more fully described in Notes 2 and 3 to the consolidated financial statements, the Company determined that indicators of impairment existed during the fourth quarter of 2025 and, as a result, the Company's long-lived assets were reviewed for impairment. The Company assessed the recoverability of their asset group and determined that the assets were not fully recoverable. The Company estimated the fair value of the asset group and recorded an impairment charge of $30.9 million that was allocated to the long-lived assets of the asset group on a pro rata basis using the relative carrying amount of those assets. Auditing the Company's long-lived asset impairment required a higher nature and extent of audit effort to address this matter, including the use of specialists.
How We Addressed the Matter in Our Audit	To test the long-lived asset impairment, our audit procedures included, among others, understanding the Company's process to perform its impairment assessment and testing the accuracy and completeness of the underlying data used to determine the fair value and carrying value of the asset group. We involved internal valuation specialists to test the fair value measurement of the principal long-lived assets included in the asset group, including assessment of the significant assumptions therein. Further, we evaluated the Company's disclosures related to the impairment of long-lived assets.

/s/ Ernst & Young LLP

We have served as the Company's auditor since 2020.
Boston, Massachusetts
March 12, 2026

Korro Bio, Inc.
Consolidated Balance Sheets
(amounts in thousands, except share and par value amounts)

	December 31, 2025	December 31, 2024
Assets:		
Current assets:		
Cash and cash equivalents	$ 21,824	$ 55,643
Short-term marketable securities	53,332	70,452
Accounts receivable	969	1,696
Prepaid expenses and other current assets	6,247	3,741
Total current assets	82,372	131,532
Property and equipment, net	8,164	27,710
Operating lease right-of-use assets	8,058	23,836
Restricted cash, net of current portion	2,409	3,406
Long-term marketable securities	10,031	36,959
Other non-current assets	2,472	2,797
Total assets	$ 113,506	$ 226,240
Liabilities and stockholders' equity		
Current liabilities:		
Accounts payable	$ 1,651	$ 3,992
Accrued expenses and other current liabilities	7,614	6,171
Operating lease liabilities, current portion	2,672	1,284
Deferred revenue, current portion	—	3,513
Total current liabilities	11,937	14,960
Operating lease liabilities, net of current portion	40,814	43,481
Deferred revenue, net of current portion	7,835	5,912
Other non-current liabilities	1,481	1,472
Total liabilities	62,067	65,825
Commitments and contingencies (Note 13)		
Stockholders' equity		
Preferred stock, $0.001 par value; 10,000,000 shares authorized at December 31, 2025 and December 31, 2024; no shares issued and outstanding at December 31, 2025 and December 31, 2024	—	—
Common stock, $0.001 par value; 200,000,000 shares authorized at December 31, 2025 and December 31, 2024; 9,417,295 shares and 9,377,259 shares issued and outstanding at December 31, 2025 and December 31, 2024, respectively	9	9
Additional paid-in capital	435,064	426,724
Accumulated other comprehensive income	212	268
Accumulated deficit	(383,846)	(266,586)
Total stockholders' equity	51,439	160,415
Total liabilities and stockholders' equity	$ 113,506	$ 226,240

The accompanying notes are an integral part of these consolidated financial statements.

Korro Bio, Inc.
Consolidated Statements of Operations and Comprehensive Loss
(amounts in thousands, except share and per share amounts)

	Year Ended December 31,	
	2025	2024
Revenue:		
Collaboration revenue	$ 6,392	$ 2,271
Operating expenses:		
Research and development	65,575	63,636
General and administrative	28,159	30,545
Long-lived asset impairment charge	30,886	—
Restructuring charge	3,627	—
Total operating expenses	128,247	94,181
Loss from operations	(121,855)	(91,910)
Other income:		
Other income, net	5,232	8,470
Total other income, net	5,232	8,470
Loss before provision for income taxes	(116,623)	(83,440)
Provision for income taxes	(637)	(141)
Net loss	$ (117,260)	$ (83,581)
Other comprehensive income:		
Unrealized (loss) gain on available-for-sale marketable securities	(26)	184
Foreign currency translation adjustments, net	(30)	84
Comprehensive loss	$ (117,316)	$ (83,313)
Net loss per share, basic and diluted	$ (12.48)	$ (9.37)
Weighted-average shares used in computing net loss per share, basic and diluted	9,395,402	8,920,561

The accompanying notes are an integral part of these consolidated financial statements.

Korro Bio, Inc.
Consolidated Statements of Stockholders' Equity
(amounts in thousands, except share amounts)

	Common Stock		Additional Paid-In Capital	Accumulated Other Comprehensive Income (Loss)	Accumulated Deficit	Total Stockholders' Equity
	Shares	Amount				
Balance at December 31, 2023	8,016,516	$ 8	$ 352,908	$ —	$ (183,005)	$ 169,911
Exercises of stock options	111,460	—	1,970	—	—	1,970
Stock-based compensation expense	—	—	4,462	—	—	4,462
Issuance of common stock for cash in PIPE financing	1,249,283	1	67,384	—	—	67,385
Other comprehensive income	—	—	—	268	—	268
Net loss	—	—	—	—	(83,581)	(83,581)
Balance at December 31, 2024	9,377,259	$ 9	$ 426,724	$ 268	$ (266,586)	$ 160,415
Exercises of stock options	40,036	—	685	—	—	685
Stock-based compensation expense	—	—	7,655	—	—	7,655
Other comprehensive loss	—	—	—	(56)	—	(56)
Net loss	—	—	—	—	(117,260)	(117,260)
Balance at December 31, 2025	9,417,295	$ 9	$ 435,064	$ 212	$ (383,846)	$ 51,439

The accompanying notes are an integral part of these consolidated financial statements.

Korro Bio, Inc.
Consolidated Statements of Cash Flows
(amounts in thousands)

	Year Ended December 31,	
	2025	2024
Operating Activities:		
Net loss	$ (117,260)	$ (83,581)
Adjustments to reconcile net loss to net cash used in operating activities:		
Non-cash lease expense	730	3,314
Stock-based compensation expense	7,655	4,462
Depreciation expense	4,280	3,565
Long-lived asset impairment charge	30,886	—
Net amortization of premiums and discounts on marketable securities	(489)	(1,782)
Loss on disposal of property and equipment	63	357
Changes in operating assets and liabilities:		
Accounts receivable	727	(1,696)
Prepaid expenses and other current assets	(1,674)	(726)
Accounts payable	(2,311)	(1,341)
Accrued expenses and other current liabilities	1,431	(3,969)
Deferred revenue	(1,590)	9,425
Operating lease liabilities	(1,279)	11,558
Other non-current assets	270	340
Net cash used in operating activities	(78,561)	(60,074)
Investing Activities:		
Purchases of marketable securities	(26,189)	(146,345)
Proceeds from maturities of marketable securities	70,700	40,900
Purchases of property and equipment	(518)	(17,902)
Net cash provided by (used in) investing activities	43,993	(123,347)
Financing Activities:		
Proceeds from PIPE financing, net of issuance costs	—	67,385
Proceeds from exercises of stock options	685	1,970
Net cash provided by financing activities	685	69,355
Effect of exchange rate changes on cash, cash equivalents and restricted cash	64	(4)
Net decrease in cash, cash equivalents and restricted cash	(33,819)	(114,070)
Cash, cash equivalents and restricted cash, beginning of period	59,049	173,119
Cash, cash equivalents and restricted cash, end of period	$ 25,230	$ 59,049
Non-cash investing and financing activities:		
Property and equipment capitalized under tenant improvement allowance	$ —	$ 10,716
Purchases of property and equipment in accounts payable and accrued expenses	$ —	$ 48
Supplemental cash flow information:		
Cash paid for income taxes	$ 1	$ 141
Cash paid for operating lease liabilities	$ 6,311	$ 3,055

The accompanying notes are an integral part of these consolidated financial statements.

Korro Bio, Inc.
Notes to Consolidated Financial Statements

1. The Company and Liquidity

Nature of Business

Korro Bio, Inc. (together with its subsidiaries, the "Company") is a biopharmaceutical company with a mission to discover, develop and commercialize a new class of genetic medicines based on editing RNA, enabling the treatment of both rare and highly prevalent diseases. The Company was incorporated in November 2014 as a Delaware corporation and in November 2023 completed a reverse merger through a now wholly-owned subsidiary and changed its name from Frequency Therapeutics, Inc. ("Frequency") to Korro Bio, Inc. The Company's principal offices are in Cambridge, Massachusetts.

Risks and Uncertainties

The Company is subject to risks common to companies in the biotechnology industry including, but not limited to, new technological innovations, protection of proprietary technology, dependence on key personnel, compliance with government regulations and the need to obtain additional financing. Lead candidates and development candidates currently under development will require significant additional research and development efforts, including extensive pre-clinical and clinical testing and regulatory approval, prior to commercialization. These efforts will require significant amounts of additional capital, adequate personnel infrastructure and extensive compliance-reporting capabilities. Even if the Company's product development efforts are successful, it is uncertain when, if ever, the Company will realize revenue from product sales.

Liquidity and Capital Resources

The Company's consolidated financial statements have been prepared on the basis of the Company continuing as a going concern. The Company expects that its existing cash, cash equivalents and marketable securities will enable the Company to fund its planned operating expense and capital expenditure requirements for at least 12 months from the date of issuance of these consolidated financial statements. The Company has incurred recurring losses and negative cash flows from operations since inception. As of December 31, 2025, the Company had an accumulated deficit of $383.8 million. The Company expects its operating losses and negative operating cash flows to continue into the foreseeable future. The future viability of the Company is dependent on its ability to generate cash from operating activities or to raise additional capital to finance its operations. There can be no assurance that the Company will ever earn product revenues or achieve profitability, or if achieved, that the revenues or profitability will be sustained on a continuing basis. In addition, the Company's preclinical and clinical development activities, manufacturing and commercialization of the Company's development candidates, if approved, will require significant additional financing. However, if the Company is unable to obtain additional financing, the Company would be forced to delay, reduce or eliminate its research and development programs and/or relinquish valuable rights to its technology, lead candidates and development candidates. There is no assurance that the Company will be successful in obtaining sufficient financing on acceptable terms to continue funding its operations.

2. Basis of Presentation and Summary of Significant Accounting Policies

Basis of Presentation and Consolidation

The accompanying consolidated financial statements have been prepared in accordance with generally accepted accounting principles in the United States of America ("GAAP"). These consolidated financial statements have been prepared on the going concern basis of accounting, which assumes continuity of operations, realization of assets and satisfaction of liabilities in the ordinary course of business.

The consolidated financial statements include the accounts of Korro Bio, Inc. and its wholly-owned subsidiaries. All intercompany transactions and balances have been eliminated in consolidation.

Use of Estimates

The preparation of the Company's consolidated financial statements requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities and disclosure of contingent assets and liabilities at the date of the consolidated financial statements and the reported amounts of expenses during the reporting period. Significant estimates and assumptions reflected in these consolidated financial statements include, but are not limited to, impairment of long-lived assets and stock-based compensation expense. The Company bases its estimates on historical experience, known trends and other market-specific or other relevant factors that it has concluded to be reasonable under the circumstances. On an ongoing basis, management evaluates its estimates as there are changes in circumstances, facts and experience. Changes in estimates are recorded in the period in which they become known. Actual results may differ materially from those estimates or assumptions.

Foreign Currency Translation and Transactions

The majority of the Company's operations occur in entities that have the U.S. dollar as their functional currency. Non-U.S. dollar denominated functional currency subsidiary has assets and liabilities translated into U.S. dollars at rates of exchange in effect at the end of the year. Revenue and expense amounts are translated using the average exchange rates for the period. Net unrealized gains and losses resulting from foreign currency translation are included in "Accumulated other comprehensive income" on the Company's consolidated balance sheets. Net foreign currency exchange transaction gains or losses are included in "Other income, net" on the Company's consolidated statement of operations, the impact of which is not significant.

Cash Equivalents

Cash equivalents are highly-liquid investments that are readily convertible into cash with original maturities of three months or less when purchased. These assets include investments in money market funds that invest in U.S. Treasury obligations. Cash equivalents are reflected at fair value based on quoted market prices, as further described in Note 3, "Fair Value Measurements".

Fair Value Measurements

ASC Topic 820, *Fair Value Measurement*, ("ASC 820") establishes a fair value hierarchy for an asset or liability measured at fair value that distinguishes between assumptions based on market data (observable inputs) and the Company's own assumptions (unobservable inputs). Observable inputs are inputs that market participants would use in pricing the asset or liability based on market data obtained from sources independent of the Company. Unobservable inputs are inputs that reflect the Company's assumptions about the inputs that market participants would use in pricing the asset or liability and are developed based on the best information available in the circumstances.

ASC 820 identifies fair value as the exchange price, or exit price, representing the amount that would be received to sell an asset or paid to transfer a liability in an orderly transaction between market participants. As a basis for considering market participant assumptions in fair value measurements, ASC 820 establishes a three-tier fair value hierarchy that distinguishes between the following:

- Level 1 inputs are quoted prices (unadjusted) in active markets for identical assets or liabilities.
- Level 2 inputs are inputs other than quoted prices included within Level 1 that are observable for the asset or liability, either directly or indirectly.
- Level 3 inputs are unobservable inputs that reflect the Company's own assumptions about the assumptions market participants would use in pricing the asset or liability.

The hierarchy is based upon the transparency of inputs to the valuation of an asset or liability as of the measurement date. The classification of fair value measurements within the hierarchy is based upon the lowest level of input that is significant to the measurement. See Note 3 for further discussion of fair value measurements.

Investments

Investments consist of securities with original maturities greater than three months when purchased. Short-term investments consist of investments that are available for use in current operations. Long-term investments consist of investments with maturities of greater than one year that are not available for use in current operations.

The Company classifies all of its investments as available-for-sale securities. Accordingly, these investments are recorded at fair value. Realized gains and losses and amortization and accretion of discounts and premiums are included in "Other income, net". Unrealized gains and losses on available-for-sale securities are included in "Accumulated other comprehensive loss" as a component of stockholders' deficit until realized.

The Company reviews its investment portfolio to identify and evaluate investments that have indicators of possible other-than-temporary impairment. Factors considered in determining whether a loss is other-than-temporary include the length of time and extent to which fair value has been less than the cost basis, the financial condition of the issuer and the Company's intent and ability to hold the investment for a period of time sufficient to allow for any anticipated recovery in market value. Credit losses are identified when the Company does not expect to receive cash flows sufficient to recover the amortized cost basis of a security. In the event of a credit loss, only the amount associated with the credit loss is recognized in operating results, with the amount of loss relating to other factors recorded in accumulated other comprehensive income.

Accounts Receivable

The Company's accounts receivable is comprised of amounts due related to its collaboration agreement with Novo Nordisk (see Note 12). The Company monitors the financial performance and credit worthiness of its counterparties so that it can properly assess and respond to changes in their credit profile. The Company provides allowances against receivables for estimated losses, if any, that may result from a counterparty's inability to pay. Amounts determined to be uncollectible are written-off against the allowance.

Property and Equipment

Property and equipment are recorded at cost and consists of laboratory equipment, furniture and office equipment, computer equipment, leasehold improvements, and construction in progress. The Company capitalizes property and equipment that is acquired for research and development activities and that has alternative future use. Expenditures for repairs and maintenance are recorded to expense as incurred, whereas major betterments are capitalized as additions to property and equipment. Property and equipment not yet placed into service is capitalized as construction in progress and is depreciated once placed into service. Leasehold improvements are depreciated over the lesser of their useful lives or the term of the lease. Depreciation, including depreciation for assets recorded under finance leases, is calculated over the estimated useful lives of the assets using the straight-line method.

Long-Lived Assets

The Company periodically evaluates long-lived assets for impairment when changes in circumstances or the occurrence of certain events indicate the carrying amount of an asset or asset group may not be recoverable. If any impairment indicators are present, or if other circumstances indicate that an impairment might exist, the Company performs a recoverability test, to determine whether an impairment loss should be measured. The Company groups long-lived assets and liabilities at the lowest level for which there are identifiable cash flows that are largely independent of the cash flows of the other assets and liabilities and estimates the future net undiscounted cash flows expected to be generated from the use of the long-lived asset (group) and its eventual disposal. If the undiscounted cash flows used in the recoverability test are less than the carrying amount of the long-lived asset (group), the Company is required to determine the fair value of the long-lived asset (group) and recognize an impairment loss if the carrying amount of the long-lived asset (group) exceeds its fair value. Fair value is estimated as the price that would be received to sell an asset or paid to transfer a liability in an orderly transaction between market participants at the measurement date.

Identifying and assessing whether impairment indicators exist, or if events or changes in circumstances have occurred, including an adverse change in legal factors or in the business climate that could affect the value of the long-lived asset (group); an adverse change in the extent or manner in which the long-lived asset (group) is used or is expected to be used, or in its physical condition; and current or forecasted operating or cash flow losses that demonstrate continuing losses associated with the use of the long-lived asset (group), requires judgment. Additionally, grouping assets requires judgment.

In November 2025, the Company announced that its first-generation alpha-1 antitrypsin deficiency (“AATD”) program, KRRO-110, its proprietary RNA editing oligonucleotide with a liquid nano particle delivery system, did not reach projected levels of functional protein following a single administration. The Company pivoted to GalNAc delivery for AATD and terminated its REWRITE clinical program investigating KRRO-110 as a treatment for AATD. In connection with the November 2025 announcement regarding KRRO-110, the Company further implemented a strategic restructuring to reserve resources and extend cash runway, including a reduction in its workforce. Additionally, in November 2025, the Company announced that the Company and Novo Nordisk A/S (“Novo Nordisk”) entered into an amendment to the research collaboration and license agreement under which the Company and Novo Nordisk agreed to pause the research collaboration and license agreement for 12 months. Following these announcements, the Company determined that indicators of impairment existed during the fourth quarter of 2025 and, as a result, the Company's long-lived assets were reviewed for impairment. The Company assessed the recoverability of its single enterprise-wide asset group and determined that the assets were not fully recoverable when compared to the future undiscounted cash flows from the asset group. As a result, the Company estimated the fair value of the asset group, which resulted in a non-cash, long-lived asset impairment charge of $30.9 million in 2025. The $30.9 million consists of $15.0 million and $15.9 million of impairment charges on the Company's operating right-of-use (“ROU”) asset and property and equipment, respectively. See Note 3 for further discussion of the impairment analysis.

Leases

Under ASC Topic 842, *Leases* (“ASC 842”), the Company determines whether an arrangement is or contains a lease at inception. For leases with a term of 12 months or less, the Company does not recognize a right-of-use asset or lease liability. The Company’s operating leases are recognized on its consolidated balance sheets as noncurrent assets, current liabilities and noncurrent liabilities. The Company does not have any finance leases.

Right-of-use assets represent the Company's right to use an underlying asset for the lease term and lease liabilities represent the Company's obligation to make lease payments arising from the lease. Operating lease right-of-use assets and liabilities are recognized at the lease commencement date based on the present value of lease payments over the lease term. As the Company's leases typically do not provide an implicit rate, the Company uses an estimate of its incremental borrowing rate based on the information available at the lease commencement date in determining the present value of lease payments. Lease expense is recognized on a straight-line basis over the lease term. The Company typically only includes an initial lease term in its assessment of a lease arrangement. Options to renew or options to terminate a lease are not included in the Company's assessment unless there is reasonable certainty that the Company will exercise such options, respectively.

The Company has elected to account for the lease and non-lease components together for existing classes of underlying assets.

Preferred Stock

The Company applies the guidance of ASC Topic 480, Distinguishing Liabilities from Equity ("ASC 480"), when determining the classification and measurement of its preferred stock. Preferred stock subject to mandatory redemption (if any) are classified as liability instruments and are measured at fair value. The Company classifies contingently redeemable preferred stock (if any), which includes preferred stock that features redemption rights that are either within the control of the holder or subject to redemption upon the occurrence of uncertain events not solely within the Company's control, as temporary equity. At all other times, the Company classifies its preferred stock in stockholders' equity.

Revenue Recognition and Deferred Revenue

The Company accounts for contracts with customers in accordance with ASC Topic 606, Revenue from Contracts with Customers (ASC 606). The Company recognizes revenue when its customer obtains control of promised goods or services, in an amount that reflects the consideration which the Company expects to receive in exchange for those goods or services. To determine revenue recognition for arrangements that the Company determines are within the scope of ASC 606, the Company performs the following five steps: (i) identify the contract(s) with a customer; (ii) identify the performance obligations in the contract; (iii) determine the transaction price; (iv) allocate the transaction price to the performance obligations in the contract; and (v) recognize revenue when (or as) the Company satisfies a performance obligation. The Company only applies the five-step model to contracts when it is probable that the Company will collect the consideration it is entitled to in exchange for the goods or services it transfers to the customer. At contract inception, once the contract is determined to be within the scope of ASC 606, the Company assesses the goods or services promised within each contract and determines those that are performance obligations, and assesses whether each promised good or service is distinct. The Company then recognizes as revenue the amount of the transaction price that is allocated to the respective performance obligation when (or as) the performance obligation is satisfied.

Performance obligations promised in a contract are identified based on the goods and services that will be transferred to the customer that are both capable of being distinct and are distinct in the context of the contract. To the extent a contract includes multiple promised goods and services, the Company applies judgment to determine whether promised goods and services are both capable of being distinct and are distinct in the context of the contract. If these criteria are not met, the promised goods and services are accounted for as a combined performance obligation.

The transaction price is determined based on the consideration to which the Company will be entitled in exchange for transferring goods and services to the customer. To the extent the transaction price includes variable consideration, the Company estimates the amount of variable consideration that should be included in the transaction price utilizing either the expected value method or the most likely amount method, depending on the nature of the variable consideration. Variable consideration is included in the transaction price if, in management's judgment, it is probable that a significant future reversal of cumulative revenue under the contract will not occur. Any estimates, including the effect of the constraint on variable consideration, are evaluated at each reporting period for any changes.

If the contract contains a single performance obligation, the entire transaction price is allocated to the single performance obligation. Contracts that contain multiple performance obligations require an allocation of the transaction price to each performance obligation on a relative standalone selling price basis unless the transaction price is variable and meets the criteria to be allocated entirely to a performance obligation or to a distinct service that forms part of a single performance obligation.

The Company satisfies performance obligations either over time or at a point in time. Revenue is recognized over time if either (i) the customer simultaneously receives and consumes the benefits provided by the entity's performance, (ii) the entity's performance creates or enhances an asset that the customer controls as the asset is created or enhanced, or (iii) the entity's performance does not create an asset with an alternative use to the entity and the entity has an enforceable right to payment for performance completed to date. If the entity does not satisfy a performance obligation over time, the related performance obligation is satisfied at a point in time by transferring the control of a promised good or service to a customer.

Licenses of intellectual property, or IP: If the license to the Company's IP is determined to be distinct from the other performance obligations identified in the arrangement, the Company recognizes revenues from consideration allocated to the license when the license is transferred to the customer and the customer can use and benefit from the licenses. For licenses that are combined with 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 for purposes of recognizing revenue. The Company evaluates the measure of progress each reporting period and, if necessary, adjusts the measure of performance and related revenue recognition. The Company generally recognizes revenue using the cost incurred to date as compared to the total estimated cost. The impact on revenue of changes in total estimated costs are recognized on a cumulative basis in the period that the change occurs. If estimates of the total cost change, or if contract amendments change the scope of the performance obligation, the required adjustments to revenue could be material.

Milestone payments: At the inception of each arrangement that includes development or regulatory milestone payments, the Company evaluates the probability of reaching the milestones and estimates the amount to be included in the transaction price using the most likely amount method. If it is probable that a significant revenue reversal would not occur in the future, the associated milestone value is included in the transaction price. Milestone payments that are not within the Company's control or the licensee's, such as regulatory approvals, are not considered probable of being achieved until those approvals are received and therefore consideration included in the transaction price is constrained. The transaction price is then allocated to each performance obligation on a relative standalone selling price basis, for which the Company recognizes revenue as or when the performance obligations under the contract are satisfied. At the end of each subsequent reporting period, the Company re-evaluates the probability of achievement of such development 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 revenues and earnings in the period of adjustment.

Commercial milestone payments and royalties: For arrangements that include sales-based royalties, including milestone payments based on levels of sales, if 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).

When no remaining performance obligations are required of the Company, or following the completion of the performance obligation period, such amounts are recognized as revenue upon transfer of control of the goods or services to the customer.

Consideration received prior to revenue recognition is recorded as deferred revenue in the consolidated balance sheets. Amounts expected to be recognized as revenue within the 12 months following the balance sheet date are classified as current portion of deferred revenue in the accompanying consolidated balance sheets. Amounts not expected to be recognized as revenue within the 12 months following the balance sheet date are classified as deferred revenue, net of current portion. Amounts are recorded as accounts receivable if the Company transfers goods or services to a customer before the customer pays consideration and the Company's right to consideration is unconditional. The Company does not assess whether a contract has a significant financing component if the expectation at contract inception is that the period between payment by the customer and the transfer of the promised goods or services to the customer will be one year or less.

Research and Development Expenses

Expenditures relating to research and development are expensed as incurred. Research and development expenses include external expenses incurred under arrangements with third parties, such as contract research organizations, academic and non-profit institutions and consultants; salaries and personnel-related costs, including non-cash stock-based compensation expense; license fees to acquire in-process technology and other expenses, which include direct and allocated expenses for laboratory, facilities and other costs. Non-refundable advance payments for goods and services that will be used in future research and development activities are expensed when the activity has been performed or when the goods have been received rather than when the payment is made.

As part of the process of preparing the consolidated financial statements, the Company is required to estimate its accrued research and development expenses as of each balance sheet date. In accruing service fees, the Company estimates the time period over which services will be performed and the level of effort to be expended in each period. This process involves reviewing open contracts and purchase orders, communicating with internal personnel and vendors to identify services that have been performed on the Company's behalf and estimating the level of service performed and the associated cost incurred for the service when the Company has not yet been invoiced or otherwise notified of the actual cost. The Company periodically confirms the accuracy of its estimates with its service providers and makes adjustments if necessary. The majority of the Company's service providers invoice monthly in arrears for services performed or when contractual milestones are met. The financial terms of agreements with these service providers are subject to negotiation, vary from contract-to-contract and may result in uneven payment flows. In circumstances where amounts have been paid in excess of costs incurred, the Company records a prepaid expense.

Intellectual Property Expenses

The Company expenses legal costs related to patent applications as they are incurred. Such costs are classified as general and administrative expenses within the consolidated statements of operations and comprehensive loss.

Stock-based Compensation

The Company accounts for stock-based payments in accordance with ASC Topic 718, *Compensation—Stock Compensation* ("ASC 718"). This guidance requires all stock-based payments, including grants of stock options and restricted common stock, to be recognized as expense in the consolidated statements of operations and comprehensive loss based on their grant date fair values. For stock options granted to employees, non-employees and members of the Company's Board of Directors for their services on the Board of Directors, the Company estimates the grant date fair value of each stock option using the Black-Scholes option-pricing model. For restricted common stock granted to employees and non-employees, the Company estimates the grant date fair value of each award using the intrinsic value, which is based on the value of the underlying common stock less any purchase price. For stock-based payments subject to service-based vesting conditions, the Company recognizes stock-based compensation expense equal to the grant date fair value of stock-based payment on a straight-line basis over the requisite service period.

In addition to the grant date fair value of the Company's common stock, the Black-Scholes option pricing model requires the input of certain subjective assumptions, including (i) the calculation of expected term of the stock-based payment, (ii) the risk-free interest rate, (iii) the expected stock price volatility and (iv) the expected dividend yield. The Company uses the simplified method as proscribed by SEC Staff Accounting Bulletin No. 107 to calculate the expected term for stock options granted to employees as the Company does not have sufficient historical exercise data to provide a reasonable basis upon which to estimate the expected term. The Company determines the risk-free interest rate based on a treasury instrument whose term is consistent with the expected term of the stock options. Due to the lack of Company-specific historical and implied volatility data, the Company bases its estimates of expected volatility on the historical volatility of a group of publicly-traded companies with similar characteristics to itself, including stage of product development and therapeutic focus within the life sciences industry. The expected volatility has been determined using a weighted-average of the historical volatility measures of this group of companies. The Company expects to continue to do so until such time as it has adequate historical data regarding the volatility of its own traded stock price. Historical volatility is calculated over a period of time commensurate with the expected term of the stock-based payment. The Company uses an assumed dividend yield of zero as the Company has never paid dividends on its common stock, nor does it expect to pay dividends on its common stock in the foreseeable future.

The Company accounts for forfeitures of all stock-based payments when such forfeitures occur.

Income Taxes

Income taxes are recorded in accordance with ASC Topic 740, *Income Taxes*, which provides for deferred taxes using an asset and liability approach. The Company recognizes deferred tax assets and liabilities for the expected future tax consequences of events that have been included in the consolidated financial statements or tax returns. Deferred tax assets and liabilities are determined based on the difference between the financial statement and tax bases of assets and liabilities using enacted tax rates in effect for the year in which the differences are expected to reverse. A valuation allowance against deferred tax assets is recorded if, based on the weight of the available evidence, it is more likely than not that some or all of the deferred tax assets will not be realized.

The Company accounts for uncertain tax positions using a more-likely-than-not threshold for recognizing and resolving uncertain tax positions. The evaluation of uncertain tax positions is based on factors, including, but not limited to, changes in the law, the measurement of tax positions taken or expected to be taken in tax returns, the effective settlement of matters subject to audit, new audit activity and changes in facts or circumstances related to a tax position.

Interest and penalty charges, if any, related to income taxes would be classified as a component of the "Provision for income taxes" in the consolidated statements of operations and comprehensive loss.

Net Loss per Share

Net loss per share attributable to common stockholders is calculated using the two-class method, which is an earnings allocation formula that determines net loss per share for the holders of the Company's common shares and participating securities. The Company's Preferred Stock contains participation rights in any dividend paid by the Company and is deemed to be a participating security. Net income attributable to common stockholders and participating preferred shares are allocated to each share as if all of the earnings for the period had been distributed. The participating securities do not include a contractual

obligation to share in losses of the Company and are not included in the calculation of net loss per share in the periods in which a net loss is recorded. Net loss attributable to common stockholders is equal to the net loss for the period.

Diluted net loss per share is computed using the more dilutive of (a) the two-class method or (b) the treasury stock method and if-converted method. The Company allocates earnings first to preferred stockholders based on dividend rights and then to common and preferred stockholders based on ownership interests. The weighted-average number of common shares included in the computation of diluted net loss gives effect to all potentially dilutive common equivalent shares, including outstanding stock options and Preferred Stock. Common stock equivalent shares are excluded from the computation of diluted net loss per share if their effect is antidilutive. In periods in which the Company reports a net loss attributable to common stockholders, diluted net loss per share attributable to common stockholders is generally the same as basic net loss per share attributable to common stockholders since dilutive common shares are not assumed to have been issued if their effect is anti-dilutive.

Concentration of Credit Risk and Off-Balance Sheet Risk

Financial instruments that potentially expose the Company to concentrations of credit risk primarily consist of cash, cash equivalents and investments. Cash balances are deposited with federally-insured financial institutions in the United States and may, at times, exceed federally-insured limits. The Company maintains its cash, cash equivalents and investments with high-quality financial institutions and, consequently, the Company believes that such funds are subject to minimal credit risk. The Company's cash equivalents are comprised of money market funds that are invested in U.S. Treasury and government agency obligations. The Company's investments are comprised of government securities. Credit risk in these securities is reduced as a result of the Company's investment policy to limit the amount invested in any single issuer and to only invest in securities of a high credit quality.

The Company relies, and expects to continue to rely, on a small number of vendors to manufacture supplies and to process its lead candidates and development candidates for its development programs. These programs could be adversely affected by a significant interruption in the manufacturing process or supply chain.

The Company has no significant off-balance sheet risk such as foreign exchange contracts, option contracts or other foreign hedging arrangements.

New and Recently Adopted Accounting Pronouncements

From time to time, new accounting pronouncements are issued by the Financial Accounting Standards Board, or FASB, or other standard setting bodies that the Company adopts as of the specified effective date. Unless otherwise discussed below, the Company does not believe that the adoption of recently issued standards have or may have a material impact on its consolidated financial statements and disclosures.

In December 2023, the FASB issued *ASU 2023-09, Improvements to Income Tax Disclosures*, which requires entities to disclose disaggregated information about their effective tax rate reconciliation and income taxes paid. The disclosure requirements will be applied on a prospective basis, with the option to apply them retrospectively. The Company adopted *ASU 2023-09* retrospectively for the year ended December 31, 2025, and it did not have a material impact on the Company's consolidated financial statements.

In November 2024, the FASB issued *ASU 2024-03, Income Statement-Reporting Comprehensive Income- Expense Disaggregation Disclosures*, which requires disclosure of additional information about specific expense categories in the notes to the financial statements on an interim and annual basis. The standard is effective for fiscal years beginning after December 15, 2026, and for interim periods beginning after December 15, 2027, with early adoption permitted. The Company is currently evaluating the disclosure requirements related to this new standard.

3. Fair Value Measurements

Recurring Fair Value Measurements

The Company measures the fair value of money market funds based on quoted prices in active markets for identical securities. Marketable securities include U.S. treasury bills and U.S. government agency securities that are valued either based on recent trades of securities in inactive markets or based on quoted market prices of similar instruments and other significant inputs derived from or corroborated by observable market data.

The carrying amounts reflected in the consolidated balance sheets for cash, prepaid expenses and other current assets, accounts payable and accrued expenses approximate their fair values, due to their short-term nature.

Assets and liabilities measured at fair value on a recurring basis as of December 31, 2025 were as follows (in thousands):

	Total	Quoted Prices in Active Markets for Identical Assets (Level 1)	Significant Other Observable Inputs (Level 2)	Significant Unobservable Inputs (Level 3)
Financial assets				
Cash equivalents:				
Money market funds	$ 21,377	$ 21,377	$ —	$ —
Marketable securities				
U.S. government agency securities	63,363	—	63,363	—
MS APA asset	1,481	—	—	1,481
Total financial assets	$ 86,221	$ 21,377	$ 63,363	$ 1,481
Financial liabilities				
CVR liability	$ 1,481	$ —	$ —	$ 1,481
Total financial liabilities	$ 1,481	$ —	$ —	$ 1,481

Assets and liabilities measured at fair value on a recurring basis as of December 31, 2024 were as follows (in thousands):

	Total	Quoted Prices in Active Markets for Identical Assets (Level 1)	Significant Other Observable Inputs (Level 2)	Significant Unobservable Inputs (Level 3)
Financial assets				
Cash equivalents:				
Money market funds	$ 55,155	$ 55,155	$ —	$ —
Marketable securities				
U.S. treasury bills	22,238	—	22,238	—
U.S. government agency securities	85,173	—	85,173	—
MS APA asset	1,472	—	—	1,472
Total financial assets	$ 164,038	$ 55,155	$ 107,411	$ 1,472
Financial liabilities				
CVR liability	$ 1,472	$ —	$ —	$ 1,472
Total financial liabilities	$ 1,472	$ —	$ —	$ 1,472

The fair value of the CVR liability and the MS APA are based on significant unobservable inputs, which represent Level 3 measurements within the fair value hierarchy. In determining the fair value of the CVR liability and the MS APA asset, the Company used the income approach, primarily discounted cash flow models. The discounted cash flow models require the use of significant judgment, estimates and assumptions, including the probability of technical and regulatory success, and discount rates. For the year ended December 31, 2025, the aggregate change in fair value of the CVR liability and MS APA asset was $0.1 million. For the year ended December 31, 2024, the aggregate change in fair value of the CVR liability and MS APA asset was $0.1 million.

There were no changes in valuation techniques, nor were there any transfers among the fair value hierarchy levels during the years ended December 31, 2025 or 2024.

Nonrecurring Fair Value Measurements

The Company determined that indicators of impairment existed during the fourth quarter of 2025 and, as a result, the Company's long-lived assets were reviewed for impairment. The Company assessed the recoverability of its single enterprise-wide asset group and determined that the assets were not fully recoverable when compared to the future undiscounted cash flows from the asset group. As a result, the Company estimated the fair value of the asset group which resulted in a non-cash, long-lived

asset impairment charge of $30.9 million in 2025. The asset impairment charge was recorded as Long-lived asset impairment charge in the consolidated statement of operations and comprehensive loss for the year ended December 31, 2025. The $30.9 million consists of $15.0 million and $15.9 million of impairment charges on the Company's operating ROU asset and property and equipment, respectively. The impairment charge was allocated to the long-lived assets of the asset group on a pro rata basis using the relative carrying amount of those assets. The fair value of the single enterprise-wide asset group was calculated using the Company's market capitalization at the date the impairment indicators were identified using Level 1 inputs.

4. Marketable Securities

Marketable Securities as of December 31, 2025 were comprised as follows (in thousands):

	Maturities	Amortized Cost	Unrealized Gains	Unrealized Losses	Fair Value
U.S. government agency securities	Within 1 year	$ 53,220	$ 112	$ —	$ 53,332
U.S. government agency securities	Between 1 to 2 years	9,985	46	—	10,031
Total		$ 63,205	$ 158	$ —	$ 63,363

Marketable securities were comprised as follows as of December 31, 2024 (in thousands):

	Maturities	Amortized Cost	Unrealized Gains	Unrealized Losses	Fair Value
U.S. treasury bills	Within 1 year	$ 22,206	$ 32	$ —	$ 22,238
U.S. government agency securities	Within 1 year	48,085	140	(11)	48,214
U.S. government agency securities	Between 1 to 2 years	36,936	110	(87)	36,959
Total		$ 107,227	$ 282	$ (98)	$ 107,411

The amortized cost of available-for-sale securities is adjusted for amortization of premiums and accretion of discounts to maturity. There were no realized gains or losses on available-for-sale securities for the periods presented. None of the investments were in an unrealized loss position for greater than 12 months as of December 31, 2025. The unrealized losses on the Company's available-for-sale securities were caused by the impact of central bank and market interest rates on the investments held. The Company does not intend to sell the investments, and it is not more likely than not that the Company will be required to sell the investments before recovery of their amortized cost bases. After analyzing the securities in an unrealized loss position, the portion of these losses that relates to changes in credit quality is insignificant. The Company did not record an allowance for credit losses as of December 31, 2025. Furthermore, the Company does not believe that these securities expose the Company to undue market risk or counterparty credit risk.

5. Restricted Cash

As of December 31, 2025, the Company maintained current restricted cash of $1.0 million and non-current restricted cash of $2.4 million. The current restricted cash of $1.0 million is included under the caption "prepaid expenses and other current assets" in the Company's consolidated balance sheet. As of December 31, 2024, the Company maintained no current restricted cash and non-current restricted cash of $3.4 million. All restricted cash amounts are comprised solely of letters of credit required pursuant to the Company's facility lease.

The following table provides a reconciliation of cash, cash equivalents and restricted cash as of December 31, 2025 and 2024 that sums to the total of the same amounts shown in the consolidated statements of cash flows (in thousands):

	December 31,	
	2025	2024
Cash and cash equivalents	$ 21,824	$ 55,643
Restricted cash	3,406	3,406
Cash, cash equivalents and restricted cash	$ 25,230	$ 59,049

6. Property and Equipment, Net

Property and equipment, net, as of December 31, 2025 and 2024 was comprised as follows (in thousands):

	Estimated Useful Life (in Years)	December 31, 2025	December 31, 2024
Laboratory equipment	5	$ 8,312	$ 11,331
Furniture and office equipment	4	651	1,075
Computer equipment	3	89	87
Leasehold improvements	Shorter of useful life or remaining lease term	9,681	22,438
Construction in progress		—	107
Total property and equipment, gross		18,733	35,038
Less: accumulated depreciation		(10,569)	(7,328)
Total property and equipment, net		$ 8,164	$ 27,710

Depreciation expense for the years ended December 31, 2025 and 2024 was $4.3 million and $3.6 million, respectively.

During the fourth quarter of 2025, the Company recorded a non-cash, long-lived asset impairment charge of $15.9 million related to property and equipment. See Note 3 for further discussion of the impairment charge.

7. Accrued Expenses and Other Current Liabilities

Accrued expenses and other current liabilities as of December 31, 2025 and 2024 were comprised as follows (in thousands):

	December 31, 2025	December 31, 2024
Employee compensation and benefits	$ 1,846	$ 3,693
External research and development services	3,236	1,793
Severance	2,196	82
Professional fees	266	326
Other operating expenses	70	277
Total accrued expenses and other current liabilities	$ 7,614	$ 6,171

8. Common Stock

As of December 31, 2025, the Company was authorized to issue 200,000,000 shares of common stock, $0.001 per value per share. Holders of common stock are entitled to one vote per share. In addition, holders of common stock are entitled to receive dividends, if and when declared by the Company's Board of Directors. As of December 31, 2025, no dividends had been declared.

As of December 31, 2025 and 2024, the Company had reserved for future issuance the following number of shares of common stock:

	December 31, 2025	December 31, 2024
Exercises of outstanding stock options	1,647,077	1,248,288
Exercise of outstanding warrant	8,049	8,049
Vesting of restricted stock unit awards	506,981	—
Future issuances under 2023 Stock Incentive Plan	142,985	619,923
Future issuances under 2023 ESPP Plan	262,440	168,667
Total reserved for future issuance	2,567,532	2,044,927

PIPE Offering

On April 17, 2024, the Company entered into a subscription agreement with certain new and existing accredited investors to issue and sell an aggregate of 1,249,283 shares of its common stock in a private placement ("PIPE") that resulted in gross proceeds of approximately $70.0 million, before deducting placement agent fees and offering expenses of approximately $2.6 million. The PIPE closed on April 22, 2024.

At-The-Market Equity Program

In December 2024, the Company filed a Shelf Registration Statement on Form S-3 (the "Shelf Registration Statement") with the Securities and Exchange Commission ("SEC"), which covered the offering, issuance and sale by the Company of up to an aggregate of $400.0 million of the Company's common stock, preferred stock, debt securities, units and/or warrants. The Shelf Registration Statement included a prospectus covering the offering, issuance and sale of up to $100.0 million of the Company's common stock from time to time through an "at-the-market" offering under the Securities Act of 1933, as amended.

Subsequently in December 2024, the Company entered into an Open Market Sale Agreement (the “Sales Agreement”) with TD Cowen Securities (USA) LLC or TD Cowen, acting as the Company's Agent and/or principal (the "Sales Agent") with respect to an "at the market offering" program under which the Company may from time to time, at its sole discretion, issue and sell shares of its common stock having an aggregate offering price of up to $100.0 million through the Sales Agent. TD Cowen is entitled to compensation for its services equal to up to 3.0% of the aggregate gross proceed of any shares of common stock sold through TD Cowen under the Sales Agreement. Pursuant to the Sales Agreement, any shares will be sold pursuant to the Shelf Registration Statement filed with the SEC on December 2, 2024, including the base prospectus contained therein, as declared effective by the SEC on December 9, 2024. As of December 31, 2025, there have been no sales of common stock pursuant to the Sales Agreement.

9. Preferred Stock

As of December 31, 2025 and 2024, the Company was authorized to issue up to 10,000,000 shares of preferred stock, at a par value of $0.001 with no preferred stock shares issued or outstanding.

10. Stock-based Compensation

2023 Stock Option and Incentive Plan

In November 2023, the Company’s board of directors adopted the Company’s 2023 Stock Option and Incentive Plan (the “2023 Plan”). The 2023 Plan was approved by the Company’s stockholders in November 2023 and became effective in November 2023 in connection with completion of the Merger. The 2023 Plan initially reserved 885,028 shares for the issuance of stock awards. In addition, the number of shares of common stock available for issuance under the 2023 Plan will be automatically increased on the first day of each calendar year during the ten-year term of the 2023 Plan, beginning with January 1, 2024 and ending with January 1, 2033, by the amount equal to 5% of the outstanding number of shares of the Company’s common stock on December 31 of the preceding calendar year or such lesser amount as determined by the Company’s board of directors. Awards granted under the 2023 Plan expire no later than ten years from the date of grant. For stock options, the option price shall generally not be less than 100% of the fair market value on the day of grant. As of December 31, 2025, there were in aggregate 1,847,780 shares of common stock reserved for issuance and 142,985 shares available to grant under the 2023 Plan. As of December 31, 2024, there were in aggregate 1,368,452 shares of common stock reserved for issuance and 619,923 shares available to grant under the 2023 Plan.

2019 Stock Incentive Plan

In January 2019, the Legacy Korro's Board of Directors adopted the 2019 Stock Incentive Plan (as amended from time to time, the “Legacy Korro Plan”). The Legacy Korro Plan provides for the grant of stock options, stock awards and restricted stock units to employees, members of the Company’s Board of Directors and non-employee consultants and advisors. The Legacy Korro Plan initially provided for the issuance of up to 110,285 shares of common stock. The Legacy Korro Plan was subsequently amended in May 2019, June 2020, October 2020, April 2021, November 2021 and March 2023 to modify the number of shares of common stock issuable under the Legacy Korro Plan. Subsequent to the March 2023 amendment to the Legacy Korro Plan, Legacy Korro could issue up to 747,752 shares of common stock under the Legacy Korro Plan.

In connection with the Merger, each option to purchase shares of Legacy Korro common stock that was outstanding and unexercised under the Legacy Korro Plan immediately prior to the Effective Time, whether or not vested, was converted into an option to purchase shares of the Company’s common stock and became eligible to be registered on Form S-8. The Company assumed each outstanding option to purchase shares of Legacy Korro common stock in accordance with the terms (as in effect as of the date of the Merger Agreement) of the Legacy Korro Plan and the terms of the stock option agreement by which such option to purchase shares of Legacy Korro common stock is evidenced. The number of shares under the Legacy Korro Plan subject to

outstanding awards as of the effective date of the 2023 Plan that are subsequently canceled, forfeited or repurchased by the Company will be added to the shares reserved under the 2023 Plan.

The number of shares of common stock reserved for issuance pursuant to outstanding awards under the Legacy Korro Plan as of December 31, 2025 and 2024 was 449,258 shares and 499,759 shares, respectively. There were no shares available for grant under the Legacy Korro Plan at December 31, 2025 and 2024, respectively. Upon completion of the Merger and effectiveness of the 2023 Plan, the Company ceased granting awards under the Legacy Korro Plan.

Stock-based Compensation Expense

Total stock-based compensation expense recognized in the consolidated statements of operations and comprehensive loss for the years ended December 31, 2025 and 2025 was as follows (in thousands):

	Year Ended December 31,	
	2025	2024
Research and development	$ 2,927	$ 1,477
General and administrative	4,728	2,985
Total stock-based compensation expense	$ 7,655	$ 4,462

Stock Option Activity

The fair value of stock options granted during the years ended December 31, 2025 and 2024 was calculated on the date of grant using the following weighted-average assumptions:

	Year Ended December 31,	
	2025	2024
Risk-free interest rate	4.3%	4.1%
Expected dividend yield	—%	—%
Expected term (in years)	6.0	6.0
Expected volatility	73.9%	74.4%

Using the Black-Scholes option pricing model, the weighted-average grant date fair value of stock options granted during the years ended December 31, 2025 and 2024 was $19.33 and $31.80 per share, respectively.

The following table summarizes changes in stock option activity during the year ended December 31, 2025 (in thousands, except per share amounts):

	Options	Weighted-Average Exercise Price	Weighted-Average Remaining Contractual Term (in years)	Aggregate Intrinsic Value
Outstanding at December 31, 2024	1,248,288	$ 25.42	8.0	$ 21,313
Granted	752,065	$ 28.48		
Exercised	(40,036)	$ 17.10		
Forfeited	(300,656)	$ 28.05		
Cancelled	(12,584)	$ 32.62		
Outstanding as of December 31, 2025	1,647,077	$ 26.49	7.3	$ —
Exercisable at December 31, 2025	835,365	$ 25.68	5.9	$ —

The aggregate intrinsic value of 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 common stock as of the end of the period. The aggregate intrinsic value of stock options exercised during the years ended December 31, 2025 and 2024 was $1.0 million and $5.0 million, respectively.

As of December 31, 2025, there was unrecognized stock-based compensation expense related to unvested stock options of $13.4 million, which the Company expects to recognize over a weighted-average period of approximately 2.7 years.

Restricted Stock Unit Awards

The following table summarizes changes in restricted stock unit award activity during the year ended December 31, 2025 (in thousands, except per share amounts):

	Shares	Weighted-Average Grant Date Fair Value Per Share
Unvested restricted stock unit awards as of December 31, 2024	—	$ —
Issued	506,981	$ 7.96
Vested	—	$ —
Forfeited	—	$ —
Unvested restricted stock unit awards as of December 31, 2025	506,981	$ 7.96

The grant date fair value of restricted stock units granted during the year ended December 31, 2025 was $4.0 million.

As of December 31, 2025, there was unrecognized stock-based compensation expense related to unvested restricted stock unit awards of $3.8 million, which the Company expects to recognize over a weighted-average period of approximately 1.0 year.

Compensation cost of $0.2 million and $0.0 million related to the restricted stock units was recognized during the years ended December 31, 2025 and 2024, respectively.

11. Income Taxes

For the years ended December 31, 2025 and 2024, the loss before income taxes consisted of the following (in thousands):

	Year Ended December 31,	
	2025	2024
Domestic	$ (117,816)	$ (83,500)
Foreign	1,193	60
Total	$ (116,623)	$ (83,440)

The provision for income taxes for the years ended December 31, 2025 and 2024 was comprised as follows (in thousands):

	Year Ended December 31,	
	2025	2024
Current taxes:		
Federal	$ —	$ —
State	1	141
Foreign	636	—
Total current taxes	637	141
Deferred taxes:		
Federal	—	—
State	—	—
Foreign	—	—
Total deferred taxes	—	—
Total provision for income taxes	$ 637	$ 141

A reconciliation of the federal statutory income tax rate to the Company's effective tax rate is as follows (in thousands):

	December 31,			
	2025	2025	2024	2024
Income tax computed at federal statutory rate	$ (24,490)	21.0%	$ (17,523)	21.0%
State taxes, net of federal benefit [(a)]	1	—%	141	(0.2)%
Foreign tax effects				
Other foreign jurisdictions	384	(0.3)%	(12)	—%
Effect of cross boarder transactions	251	(0.2)%	—	—%
Enactment of new tax laws	—	—%	—	—%
Nontaxable or nondeductible items	485	(0.4)%	(204)	0.2%
Tax credits				
Research & development credits	(1,433)	1.2%	(3,198)	3.8%
Changes in valuation allowance	25,512	(21.9)%	17,743	(21.3)%
Changes in unrecognized tax benefits	—	—%	—	—%
Other items				
Stock option cancellations	—	—%	2,842	(3.4)%
Other	(73)	0.1%	352	(0.3)%
Effective tax rate	$ 637	(0.5)%	$ 141	(0.2)%

[(a)] The states and local jurisdictions that contribute to the majority (greater than 50%) of the tax effect in this category include Massachusetts.

For the years ended December 31, 2025 and 2024, the amount of cash income taxes paid by the Company was as follows (in thousands):

	December 31,	
	2025	2024
Cash taxes paid:		
Federal	$ —	$ —
State		
Massachusetts	1	141
Foreign	—	—
Total	$ 1	$ 141

The principal components of the Company's deferred tax assets and liabilities as of December 31, 2025 and 2024 were comprised as follows (in thousands):

	December 31,	
	2025	2024
Deferred tax assets:		
Net operating loss carryforwards	$ 124,617	$ 94,196
Tax credit carryforwards	28,041	26,410
Capitalized research and development	33,654	41,719
Stock-based compensation	3,376	1,808
Amortization	1,589	1,296
Operating lease liability	11,883	12,075
Accrued expenses and other temporary differences	1,386	1,147
Total deferred tax assets	204,546	178,651
Less: valuation allowance	(202,344)	(168,319)
Net deferred tax assets	2,202	10,332
Deferred tax liabilities:		
Operating right-of-use asset	(2,202)	(6,429)
Depreciation	—	(3,903)
Total deferred tax liabilities	(2,202)	(10,332)
Net deferred taxes	$ —	$ —

As of December 31, 2025, the Company had federal and state net operating loss ("NOL") carryforwards $462.0 million and $436.9 million, respectively. Under current law, the Company's federal NOLs generated in taxable years ending after December 31, 2017, may be carried forward indefinitely, but the deductibility of such federal NOLs is limited to 80% of the Company's taxable income annually for tax years beginning after December 31, 2018. Federal NOLs generated in taxable years ending on or prior to December 31, 2017, however, have a 20-year carryforward period, but are not subject to the 80% limitation. The Company has federal NOLs of $22.4 million that are subject to expiration between 2036 and 2037 and has $439.6 million of federal NOLs that do not expire.

State NOLs expire at various dates from 2035 through 2045. As of December 31, 2025, the Company had federal research and development tax credit carryforwards of $20.2 million that expire at various dates from 2037 through 2045. In addition, as of December 31, 2025, the Company had state research and development tax credit carryforwards of $9.9 million that expire at various dates from 2032 through 2040.

The Company has evaluated the positive and negative evidence bearing upon the realizability of its deferred tax assets, which primarily pertain to NOL carryforwards, tax credit carryforwards and capitalized research and development. The Company has determined that it is more likely than not that it will not realize the benefits of its deferred tax assets, and as a result, a valuation allowance of $202.3 million has been established at December 31, 2025. The increase in the valuation allowance of $34.0 million during the year ended December 31, 2025 was primarily due to the additional operating loss generated by the Company.

NOL and tax credit carryforwards are subject to review and possible adjustment by the Internal Revenue Service and may become subject to an annual limitation in the event of certain cumulative changes in the ownership interest of significant shareholders over a three-year period in excess of 50% as defined under Sections 382 and 383 in the IRC. This could limit the amount of tax attributes that can be utilized annually to offset future taxable income or tax liabilities. The amount of the annual limitation is determined based on the Company's value immediately prior to the ownership change. As a result of ownership changes in the Company from its inception through December 31, 2025, the Company's NOL and tax credit carryforwards allocable to the periods preceding each such ownership change could be subject to limitations under IRC Section 382, however the Company has not yet completed an IRC Section 382 study. The Company's foreign net operating loss carryforwards may also be limited under similar laws in the foreign jurisdiction.

The Company had no unrecognized tax benefits as of either December 31, 2025 or 2024. The Company has not conducted a study of its research and development credit carryforwards generated during any year. This study, once completed, may result in an adjustment to the Company's research and development credit carryforwards.

However, until a study is completed and any adjustment is known, no amounts are being presented as an uncertain tax position. A full valuation allowance has been provided against the Company's research and development credit carryforwards, and if an adjustment is required, this adjustment would be offset by an adjustment to the valuation allowance. Thus, there would be no impact to the consolidated statements of operations and comprehensive loss if an adjustment were required.

The Company files income tax returns in the United States federal tax jurisdiction and the California, Connecticut, Florida, Massachusetts, New Hampshire, New Jersey and South Carolina state tax jurisdictions. The Company also files an income tax return in Australia for the Company's Australian subsidiary. Because the Company is in a loss carryforward position, it is generally subject to examination by federal and state tax authorities for all tax years in which a loss carryforward is available.

As of December 31, 2025, the Company has not incurred any material interest or penalty charges.

12. Collaboration Agreements

Genevant Agreement

In March 2023, Legacy Korro entered into a collaboration and license agreement (the "Genevant Agreement") with Genevant Sciences GmbH ("Genevant"). Key financial terms under the Genevant Agreement are as follows:

- The Company made a $2.5 million payment to Genevant in March 2023 upon execution of the Genevant Agreement and recorded the payment within research and development expense in the consolidated statement of operations for the year ended December 31, 2023.
- The Company will reimburse Genevant for certain out-of-pocket and full-time equivalent costs incurred as a result of research and development activities performed under the Genevant Agreement.
- Genevant is entitled to receive payments from the Company upon the achievement of certain milestones, including potential clinical milestone payments of up to $13.5 million, potential regulatory and development milestone

payments of up to $27.0 million, and potential commercial milestone payments up to an aggregate total of $57.0 million.

- Genevant is eligible to receive royalties at percentage rates in the mid-single-digits, based on future annual net sales of licensed products within the scope of the Genevant Agreement.

As of December 31, 2024, one development milestone of $1.0 million had been achieved. In January 2025, the Company announced dosing of the first participants in its Phase 1/2a REWRITE clinical program investigating KRRO-110 as a treatment for AATD, which triggered the second payment of a $1.5 million development milestone. The Company recorded $1.9 million and $3.0 million within research and development expense in the consolidated statement of operations and comprehensive loss during the year ended December 31, 2025 and 2024, respectively, related to the Genevant Agreement.

Novo Nordisk Agreement

On September 13, 2024, the Company entered into a research collaboration and license agreement with Novo Nordisk, pursuant to which the Company granted Novo Nordisk an exclusive worldwide license under certain intellectual property rights to research, develop, manufacture, commercialize or otherwise exploit certain licensed compounds and licensed products for an initial target in the cardiometabolic field and for a second target (to be nominated by Novo Nordisk within a specified time period as set forth in the agreement).

Under the agreement, the Company has the potential to receive up to a total of $530.0 million plus tiered royalties and cost reimbursement for the Company's performance of research and development activities for two programs. Novo Nordisk agreed to pay the Company an upfront non-refundable fee of $10.0 million for the research program with respect to the initial target, and the Company is eligible to receive an additional $10.0 million upfront nonrefundable fee for a second research program with respect to the second target (if nominated by Novo Nordisk). The Company is eligible to receive research and development and regulatory milestone payments of up to $115.0 million for the initial target and up to an additional $115.0 million for the second target (if applicable). The Company is eligible to receive commercial milestone payments of up to $140.0 million for the initial target and up to an additional $140.0 million for the second target (if applicable). In addition, Novo Nordisk agreed to pay the Company royalties for each potential licensed product developed under the agreement that are an escalating tiered, mid-single digit percentage of the annual net sales of such licensed product.

Subject to the terms of the agreement, the Company granted Novo Nordisk an exclusive, worldwide, royalty-bearing license, with the right to grant sublicenses, to use certain technology controlled by the Company for the purpose of researching, developing, manufacturing, commercializing or otherwise exploiting certain licensed compounds and licensed products that contain such licensed compounds, for all uses and indications, including prophylactic, diagnostic, therapeutic, curative, management, mitigation and preventative uses. During the term of the agreement and a two-year post-termination period and on a per target basis, the Company will not be permitted to research, develop, manufacture, commercialize, or otherwise exploit outside of the collaboration, any product targeting such target.

Under the agreement, the Company is responsible for certain research and development activities with respect to licensed compounds and licensed products directed against the initial target and the second target (if nominated by Novo Nordisk), and the Company is eligible to receive cost reimbursement from Novo Nordisk for its performance of such research and development activities under the agreement with respect to such target(s). Novo Nordisk may undertake subsequent worldwide development, manufacturing, marketing and commercialization of the licensed products directed against the initial target and the second target (if applicable).

Unless earlier terminated, the agreement has a term that continues, on a per licensed product and per country basis, until the later of (i) the expiration of the last valid patent claim controlled or invented by us that covers the composition of matter of such licensed product’s licensed compound in such country, and (ii) 10 years after the first reimbursed sale of such licensed product in such country. Novo Nordisk has the right to terminate the agreement without cause in its entirety or on a per research program or per licensed product basis. The agreement may also be terminated by either party based on an uncured material breach by the other party or the bankruptcy of the other party. Upon termination of the agreement due to Novo Nordisk’s actions, the license granted by the Company to Novo Nordisk to develop, manufacture, commercialize or otherwise exploit the licensed compounds and licensed products will automatically terminate with respect to the terminated research program or terminated licensed product, as applicable. Upon termination of the agreement due to the Company's actions, Novo Nordisk may choose to either have the license granted by the Company to Novo Nordisk to develop, manufacture, commercialize or otherwise exploit the licensed compounds and licensed products terminate or continue with respect to the terminated research program or terminated licensed product.

In October 2024, the Company received an upfront nonrefundable payment of $10.0 million from Novo Nordisk and expected to receive approximately $29.5 million in cost reimbursement through 2026 to fund the related research and development activities related to the first product candidate, or program target.

The Company assessed this arrangement in accordance with ASC 606 and concluded that the contract counterparty, Novo Nordisk, is a customer. The Company determined that the research services and the exclusive licenses granted under the collaboration agreement for the initial target are not distinct and, therefore, the Company accounts for the research services and exclusive licenses as a single performance obligation. Additionally, the Company concluded that Novo Nordisk's option to select a second target does not give rise to a material right or performance obligation until the additional target is selected due to the additional services being priced at standalone selling price. The Company recognizes revenue related to the combined license and research services performance obligation over time using the input method. Under the input method, the extent of progress towards completion is measured based on the ratio of costs incurred to date to the total estimated costs at completion of the performance obligation, which the Company believes best measures its progress towards satisfying the combined performance obligation. A cost-based input method of revenue recognition requires management to make estimates of costs to complete the performance obligation. In making such estimates, judgment is required to evaluate assumptions related to cost estimates.

Effective November 11, 2025, the Company and Novo Nordisk entered into an amendment to the research collaboration and license agreement under which the Company and Novo Nordisk agreed to pause the research collaboration and license agreement for 12 months (the "hold period"), effective as of the date of the amendment. During the hold period, the parties agreed that all research and development activities and corresponding obligations under the agreement will be suspended without any liability or payment obligation for either party. The Company also agreed to promptly wind-down its research and development activities in connection with the license agreement and Novo Nordisk agreed to reimburse the Company for certain wind-down costs associated with the hold period.

As of December 31, 2025, the total transaction price was determined to be $40.0 million based on the $10.0 million upfront nonrefundable payment and $30.0 million of estimated research services for the first program target. During the years ended December 31, 2025 and 2024, the Company recognized total collaboration revenue of $6.4 million and $2.3 million, respectively. In November 2025, the Company agreed to a 12 month pause on such collaboration with Novo Nordisk, and accordingly, the Company is expected to recognize revenue through 2028.

The Company had $0.0 million of current deferred revenue and $7.8 million of noncurrent deferred revenue as of December 31, 2025, based on the period the services are expected to be performed and/or related costs to be incurred. The Company had $1.0 million of current accounts receivable as of December 31, 2025.

The Company will assess the probability of achieving the milestones and include them in the transaction price when they are deemed probable. Royalties and commercial sale milestones will be recognized when the subsequent sales occur based on the sales or usage-based royalty exception.

13. Commitments and Contingencies

Leases

The Company is party to an operating lease for 50,453 square feet of office and laboratory space at 60 First Street, Cambridge, Massachusetts (the "60 First Street Lease"). In May 2023, the Company obtained control over the space and the Company recognized the operating lease right-of-use asset and the operating lease liability of $26.8 million on the commencement date of the lease. The total rental payments over the 11 year lease are expected to be $62.1 million, including rent credits and other lease incentives per the terms of the lease. Specifically, the 60 First Street Lease provides the Company with a tenant improvement allowance of $13.1 million. The Company utilized full amount of the $13.1 million tenant improvement allowance as of December 31, 2024. The lease has a remaining term of approximately nine years. The Company has an option to extend the lease for an additional period of five years with the rent during the option period being the then fair market rent.

The maturity of undiscounted payments due under lease liabilities and the present value of those liabilities as of December 31, 2025 were as follows (in thousands):

	As of December 31, 2025
2026	$ 7,341
2027	7,557
2028	7,778
2029	8,007
Thereafter	36,713
Total Future Minimum Leases Payments	67,396
Less: Interest	(23,910)
Present Value of Operating Lease Liabilities	$ 43,486

As of December 31, 2025, the weighted average remaining lease term was 8.3 years and the weighted average incremental borrowing rate used to determine the operating lease liability was 11.2%.

The Company combines the lease and non-lease components of fixed costs in its lease arrangements as a single lease component. Variable costs, such as utilities and maintenance costs, are not included in the measurement of ROU assets and lease liabilities, but rather are expensed when the event determining the amount of variable consideration to be paid occurs.

The following table summarizes the effect of lease costs in the Company's consolidated statement of operations and comprehensive loss of its operating leases (in thousands):

	Year Ended December 31,	
	2025	2024
Operating lease costs	$ 5,630	$ 7,629
Variable lease costs	1,740	1,602
Short-term lease costs	915	1,171
Total lease costs	$ 8,285	$ 10,402

During the fourth quarter of 2025, the Company recorded a non-cash, long-lived asset impairment charge of $15.0 million related to its operating ROU asset. See Note 3 for further discussion of the impairment charge.

Legal Contingencies

The Company accrues a liability for legal contingencies when it believes that it is both probable that a liability has been incurred and that the Company can reasonably estimate the amount of the loss. The Company reviews these accruals and adjusts them to reflect ongoing negotiations, settlements, rulings, advice of legal counsel and other relevant information. To the extent new information is obtained and the views on the probable outcomes of claims, suits, assessments, investigations or legal proceedings change, changes in the Company's accrued liabilities would be recorded in the period in which such determination is made.

In addition, in accordance with the relevant authoritative guidance, for any matters in which the likelihood of material loss is at least reasonably possible, the Company will provide disclosure of the possible loss or range of loss. If a reasonable estimate cannot be made, however, the Company will provide disclosure to that effect. The Company expenses legal costs as they are incurred.

The Company was not subject to any material legal proceedings or claims as of December 31, 2025.

Indemnifications

The Company indemnifies each of its officers and directors for certain events or occurrences, subject to certain limits, while the officer or director is or was serving at the Company's request in such capacity, as permitted under Delaware law and in accordance with the Company's amended and restated certificate of incorporation and bylaws. The term of the indemnification period lasts as long as an officer or director may be subject to any proceeding arising out of acts or omissions of such officer or director in such capacity.

The maximum amount of potential future indemnification is unlimited; however, the Company currently holds director and officer liability insurance. This insurance allows the transfer of risk associated with the Company's exposure and may enable the Company to recover a portion of any future amounts paid. The Company believes that the fair value of these potential indemnification obligations is minimal. Accordingly, the Company has not recognized any liabilities relating to these obligations for any period presented.

14. 401(k) Savings Plan

The Company has a defined-contribution savings plan under Section 401(k) of the IRC (the "401(k) Plan"). The 401(k) Plan covers all employees who meet defined minimum age and service requirements and allows participants to defer a portion of their annual compensation, subject to statutory limitations. Effective in 2025, the Company makes an employer non-elective safe harbor contribution of 3% of the participant's salary, subject to employer match limitations under the IRC. As such, the Company

made $0.5 million and $0.6 million of matching contributions to the 401(k) Plan during the year ended December 31, 2025 and December 31, 2024, respectively.

15. Net Loss per Share

The following common stock equivalents have been excluded from the calculation of diluted net loss per share because their effect would be anti-dilutive:

	Year Ended December 31,	
	2025	2024
Outstanding stock options	1,647,077	1,248,288
Unvested restricted stock unit awards	506,981	—
Outstanding warrant	8,049	8,049
Total	2,162,107	1,256,337

16. Restructuring

In May 2025, the Company implemented a strategic plan to streamline its operations, including a reduction in the Company's workforce by approximately 20%. On November 12, 2025, the Company implemented a strategic restructuring to extend cash runway, including a reduction in the Company's workforce by approximately 34%.

During the year ended December 31, 2025, the Company recorded one-time restructuring charges of $1.2 million and $2.4 million related to the May 2025 and November 2025 workforce reductions, respectively, including employee severance, benefits and related termination costs and are included under the caption "Restructuring charge" in the Company's consolidated statement of operations and comprehensive loss. During the year ended December 31, 2025, all activities related to the May 2025 workforce reduction were completed. The remaining payments related to the November 2025 workforce reduction are expected to be paid by the third quarter of 2026.

Restructuring cost accruals are included under the caption "Accrued expenses and other current liabilities" in the Company's consolidated balance sheet.

The following is a summary of the activity for the May 2025 and November 2025 workforce reductions:

	Employee separation costs
Balance at December 31, 2024	$ —
Accruals	3,627
Cash payments	(1,734)
Balance at December 31, 2025	$ 1,893

17. Segment Information

The Company operates and manages its business as one reportable segment and one operating segment, which is the business of discovering, developing and commercializing therapies derived from or incorporating its RNA-editing technology. The Company's chief operating decision maker ("CODM) is the chief executive officer.

The CODM assesses performance, monitors budget versus actual results, and decides how to allocate resources based on net loss that also is reported on the consolidated statements of operations and comprehensive loss. The CODM allocates resources based on the Company's available cash resources, forecasted cash flow, and expenditures on a consolidated basis, as well as an assessment of the probability of success of its research and development activities. Resource allocation decisions are informed by budgeted and forecasted expense information, along with actual expenses incurred to date. The accounting policies of the Company's single reportable segment are the same as those described in the summary of significant accounting policies. The level of disaggregation and amounts of significant segment expenses that are regularly provided to the CODM are the same as those

presented in the consolidated statements of operations and comprehensive loss. Therefore, duplication of the Company's consolidated statements of operations and comprehensive in this segment disclosure is not required.

The measure of segment assets is reported on the consolidated balance sheets as total consolidated assets. All long-lived assets are located in the United States. Long-lived assets primarily consist of property and equipment, net, operating lease right-of-use assets and long-term marketable securities.

Factors used in determining the reportable segment include the nature of the Company's operating activities, the organizational and reporting structure and the type of information reviewed by the CODM regularly to allocate resources and evaluate financial performance.

The Company does not have intra-entity sales or transfers.

18. Subsequent Events

At-The-Market_Equity Sale

In January 2026, the Company issued 501,861 shares of common stock under the at-the-market sales agreement for gross proceeds of $5.1 million, before deducting estimated offering expenses.

March 2026 Private Placement

On March 9, 2026, the Company entered into a subscription agreement with certain new and existing accredited investors to issue and sell an aggregate of 4,501,928 shares of its common stock at a purchase price of $11.11 per share and pre-funded warrants to purchase up to an aggregate 3,148,836 shares of its common stock per pre-funded warrant at a price of $11.109 per pre-funded warrant in a private placement that resulted in gross proceeds of approximately $85.0 million, before deducting placement agent fees and estimated offering expenses. The pre-funded warrants have an exercise price of $0.001 per share. The private placement closed on March 10, 2026.

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

Our management, under the supervision and with the participation of our Principal Executive Officer (our Chief Executive Officer) and Interim Principal Financial Officer (our Chief Executive Officer), has evaluated the effectiveness of our disclosure controls and procedures as of December 31, 2025. The term "disclosure controls and procedures," as defined in Rules 13a-15(e) and 15d-15(e) under the Exchange Act, means controls and other procedures of a company 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 the company's management, including its principal executive and principal financial officers, as appropriate to allow timely decisions regarding required disclosure.

Management recognizes that any disclosure controls and procedures, no matter how well designed and operated, can provide only reasonable assurance of achieving their objectives, and management necessarily applies its judgment in evaluating the cost-benefit relationship of possible controls and procedures. Based on the evaluation of our disclosure controls and procedures as of December 31, 2025, our Principal Executive Officer and Interim Principal Financial Officer concluded that, as of such date, our disclosure controls and procedures were effective at the reasonable assurance level.

Management's Report on Internal Control over Financial Reporting

Management is responsible for establishing and maintaining adequate internal control over financial reporting, as such term is defined in Rule 13a-15(f) under the Exchange Act. We maintain a system of internal control that is designed to provide reasonable assurance regarding the reliability of our financial reporting and the preparation of consolidated financial statements for external purposes in accordance with generally accepted accounting principles. Management assessed the effectiveness of our internal control over financial reporting as of December 31, 2025. In making this assessment, it used the criteria established in Internal Control—Integrated Framework (2013) issued by the Committee of Sponsoring Organizations of the Treadway Commission (COSO). Based on such assessment, management has concluded that our internal control over financial reporting was effective as of December 31, 2025.

As a non-accelerated filer and a "smaller reporting company", as defined in Rule 12b-2 under the Exchange Act, our independent registered public accounting firm is not required to issue an attestation report on the internal control over financial reporting.

Changes in Internal Control over Financial Reporting

Other than as discussed above, there have not been any changes in our internal control over financial reporting (as defined in Rules 13a-15(f) and 15d-15(f) under the Exchange Act) occurred during the twelve months ended December 31, 2025 that has materially affected, or is reasonably likely to materially affect, our internal control over financial reporting.

Item 9B. Other Information.

Trading Plans

During the three months ended December 31, 2025, none of our officers (as defined in Rule 16a-1(f) under the Exchange Act) or directors informed us that they adopted contracts, instructions or written plans for the purchase or sale of our securities that were intended to satisfy the affirmative defense conditions of Rule 10b5-1(c) under the Exchange Act or a trading plan not intended to satisfy the affirmative defense conditions of Rule 10b5-1(c) under the Exchange Act.

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

Not applicable.

PART III

Item 10. Directors, Executive Officers and Corporate Governance.

The information required by this item is incorporated herein by reference to our definitive proxy statement for our 2026 annual meeting of stockholders.

Item 11. Executive Compensation.

The information required by this item is incorporated herein by reference to our definitive proxy statement for our 2026 annual meeting of stockholders.

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

The information required by this item is incorporated herein by reference to our definitive proxy statement for our 2026 annual meeting of stockholders.

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

The information required by this item is incorporated herein by reference to our definitive proxy statement for our 2026 annual meeting of stockholders.

Item 14. Principal Accountant Fees and Services.

The information required by this item is incorporated herein by reference to our definitive proxy statement for our 2026 annual meeting of stockholders.

PART IV

Item 15. Exhibit and Financial Statement Schedules.

(1) For a list of the financial statements included herein, see the Index to the Consolidated Financial Statements in Item 8 on page F-110 of this Annual Report on Form 10-K, incorporated into this Item by reference.

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

(3) Exhibits:

Exhibit Number	Description
3.1	Restated Certificate of Incorporation (incorporated by reference to Exhibit 3.1 to the registrant's Current Report on Form 8-K filed on October 7, 2019).
3.2	Certificate of Amendment to Restated Certificate of Incorporation (incorporated by reference to Exhibit 3.1 to the registrant's Current Report on Form 8-K filed on November 6, 2023).
3.3	Certificate of Amendment to Restated Certificate of Incorporation (incorporated by reference to Exhibit 3.2 to the registrant's Current Report on Form 8-K filed on November 6, 2023).
3.4	Certificate of Amendment to Restated Certificate of Incorporation (incorporated by reference to Exhibit 3.1 to the registrant's Current Report on Form 8-K filed on June 12, 2024).
3.5	Amended and Restated Bylaws (incorporated by reference to Exhibit 3.1 to the registrant's Current Report on Form 8-K filed on September 23, 2020).
4.1	Description of Securities (incorporated by reference to Exhibit 4.1 to the registrant's Annual Report on Form 10-K filed on March 26, 2024).
10.1#	Korro Bio, Inc. 2023 Stock Option and Incentive Plan, and form of award agreements thereunder (incorporated by reference to Exhibit 10.1 to the registrant's Registration Statement on Form S-1/A filed December 20, 2023).
10.2#	Korro Bio, Inc. 2023 Employee Stock Purchase Plan (incorporated by reference to Exhibit 10.2 to the registrant's Registration Statement on Form S-1/A filed December 1, 2023).
10.3#	Korro Bio, Inc. 2019 Stock Incentive Plan, and form of award agreements thereunder (incorporated by reference to Exhibit 10.8 to the registrant's Current Report on Form 8-K filed on November 6, 2023).
10.4#	Korro Bio, Inc. Amended and Restated Non-Employee Director Compensation Policy (incorporated by reference to Exhibit 10.4 to the registrant's Annual Report on Form 10-K filed on March 18, 2025).
10.5#	Frequency Therapeutics, Inc. 2014 Stock Incentive Plan, as amended, and form of option agreements thereunder (incorporated by reference to Exhibit 10.1 to the registrant's Registration Statement on Form S-1 (333-233652) filed on September 6, 2019).
10.6#	Frequency Therapeutics, Inc. 2019 Incentive Award Plan and form of award agreements thereunder (incorporated by reference to Exhibit 10.2 to the registrant's Registration Statement on Form S-1/A (333-233652) filed on September 23, 2019).
10.7#	Korro Bio, Inc. Senior Executive Cash Incentive Bonus Plan (incorporated by reference to Exhibit 10.12 to the registrant's Current Report on Form 8-K, filed November 6, 2023).
10.8#	Employment Agreement, dated as of November 10, 2023, by and between Korro Bio, Inc. and Ram Aiyar, Ph.D. (incorporated by reference to Exhibit 10.1 to the registrant's Current Report on Form 8-K filed November 14, 2023).
10.9#	Amended and Restated Employment Agreement, dated December 15, 2025, by and between Korro Bio, Inc. and Jeffrey Cerio (incorporated by reference to Exhibit 10.1 to the registrant's Current Report on Form 8-K filed December 18, 2025).
10.10#	Employment Agreement, dated November 9, 2023, by and between Korro Bio, Inc. and Todd Chappell (incorporated by reference to Exhibit 10.13 to the registrant's Registration Statement on Form S-1/A filed December 1, 2023).
10.11#	Employment Agreement, dated March 15, 2025, by and between Korro Bio, Inc. and Loïc Vincent (incorporated by reference to Exhibit 10.1 to the registrant's Quarterly Report on Form 10-Q filed May 7, 2025).
10.12#	Separation Agreement and Release by and between Korro Bio, Inc. and Vineet Agarwal, dated October 7, 2025 (incorporated by reference to Exhibit 10.1 to the registrant's Current Report on Form 8-K filed on October 8, 2025).
10.13#	Separation Agreement and Release by and between Korro Bio, Inc. and Olukemi A. Olugemo, dated November 7, 2025 (incorporated by reference to Exhibit 10.3 to the registrant's Quarterly Report on Form 10-Q filed November 12, 2025).
10.14#	Consulting Agreement, dated August 26, 2024 between Korro Bio, Inc. and David Lucchino (incorporated by reference to Exhibit 10.3 to the registrant's Quarterly Report on Form 10-Q filed November 12, 2024).
10.15#	Form of Indemnification Agreement for Officers of Korro Bio, Inc. (incorporated by reference to Exhibit 10.6 to the registrant's Current Report on Form 8-K filed November 6, 2023).

10.16#	Form of Indemnification Agreement for Directors of Korro Bio, Inc. (incorporated by reference to Exhibit 10.7 to the registrant's Current Report on Form 8-K filed November 6, 2023).
10.17‡	Lease Agreement, dated April 25, 2022 between Korro Bio Ops, Inc. (formerly known as Korro Bio, Inc.) and NW Cambridge Property Owner LLC (incorporated by reference to Exhibit 10.2 to the registrant's Quarterly Report on Form 10-Q filed November 12, 2024).
10.18	Third Amended and Restated Investors' Rights Agreement of Korro Bio, Inc., dated November 8, 2021 (incorporated by reference to Exhibit 10.27 to the Form S-4/A (333-273490) filed September 1, 2023).
10.19	Warrant Agreement dated January 22, 2021 (incorporated by reference to Exhibit 10.13 to the registrant's Current Report on Form 8-K, filed November 6, 2023).
10.20	Contingent Value Rights Agreement dated November 3, 2023 (incorporated by reference to Exhibit 10.4 to the registrant's Current Report on Form 8-K filed November 6, 2023).
10.21	Registration Rights Agreement, dated as of July 14, 2023 (incorporated by reference to Exhibit 10.2 to the registrant's Current Report on Form 8-K filed on November 6, 2023).
10.22+	Registration Rights Agreement, dated as of April 17, 2024 (incorporated by reference to Exhibit 10.2 to the registrant's Current Report on Form 8-K filed on April 18, 2024).
10.23	Sales agreement, dated December 2, 2024, by and between Korro Bio, Inc. and TD Securities (USA) LLC (incorporated by reference to Exhibit 1.2 to the registrant's Registration Statement on Form S-3 (333-283552) filed on December 2, 2024).
10.24	Pre-Funded Warrant, dated March 9 2026, by and among Korro Bio, Inc. and the purchasers party thereto (incorporated by reference to Exhibit 4.1 to the registrant's Current Report on Form 8-K filed March 9, 2026).
10.25‡	Subscription Agreement, dated March 9 2026, by and among Korro Bio, Inc. and the purchasers party thereto (incorporated by reference to Exhibit 10.1 to the registrant's Current Report on Form 8-K filed March 9, 2026).
10.26‡	Registration Rights Agreement, dated March 9 2026, by and among Korro Bio, Inc. and the purchasers party thereto (incorporated by reference to Exhibit 10.2 to the registrant's Current Report on Form 8-K filed March 9, 2026).
10.27*	Research Collaboration and License Agreement, dated September 13, 2024 between Korro Bio, Inc. and Novo Nordisk A/S (incorporated by reference to Exhibit 10.1 to the registrant's Quarterly Report on Form 10-Q filed November 12, 2024).
10.28	First Amendment to Research Collaboration and License Agreement by and between Korro Bio, Inc. and Novo Nordisk A/S (incorporated by reference to Exhibit 10.2 to the registrant's Quarterly Report on Form 10-Q filed November 12, 2025).
19.1	Korro Bio, Inc. Insider Trading Policy (incorporated by reference to Exhibit 19.1 to the registrant's Annual Report on Form 10-K filed March 18, 2025).
21.1	List of Subsidiaries (incorporated by reference to Exhibit 21.1 to the registrant's Annual Report on Form 10-K filed March 18, 2025).
23.1	Consent of Ernst & Young LLP.
24.1	Power of Attorney (included on the signature page attached hereto).
31.1	Certification of Principal Executive Officer and 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.
97.1#	Korro Bio, Inc. Compensation Recovery Policy (incorporated by reference to Exhibit 97.1 to the registrant's Annual Report on Form 10-K filed March 26, 2024).
101.INS	Inline XBRL Instance Document – the instance document does not appear in the Interactive Data File because XBRL tags are embedded within the Inline XBRL document.
101.SCH	Inline XBRL Taxonomy Extension Schema Document
104	Cover Page Interactive Data File (embedded within the Inline XBRL document)

# Indicates a management contract or any compensatory plan, contract or arrangement.
+ Schedules and exhibits have been omitted pursuant to Item 601(b)(2) of Regulation S-K. We agree to furnish supplementally a copy of any omitted schedule or exhibit to the SEC upon request.
‡ Schedules and exhibits have been omitted pursuant to Item 601(a)(5) of Regulation S-K. A copy of any omitted schedule and/or exhibit will be furnished to the SEC upon request.
¥ These certifications will not be deemed "filed" for purposes of Section 18 of the Exchange Act or otherwise subject to the liability of that section. Such certification will not be deemed to be incorporated by reference into any filing under the Securities Act or the Exchange Act except to the extent specifically incorporated by reference into such filing.
* Portions of this exhibit (indicated by asterisks) will be omitted in accordance with the rules of the SEC because the registrant has determined that information is both not material and is the type that the registrant treats as private or confidential.

Item 16. Form 10-K Summary

None.

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**.**

Korro Bio, Inc.

Date: March 12, 2026

By: /s/ Ram Aiyar
Ram Aiyar
President and Chief Executive Officer and Interim Principal Financial Officer

KNOW ALL PERSONS BY THESE PRESENTS, that each person whose signature appears below constitutes and appoints Ram Aiyar and Oliver Dolan, and each of them, as his or her true and lawful attorneys-in-fact and agents, each with the full power of substitution, for him or her and in his or her name, place or stead, 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 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 in and about the premises, 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, or their, 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 in the capacities and on the dates indicated.

Name	Title	Date
/s/ Ram Aiyar Ram Aiyar	President, Chief Executive Officer and Director *Principal Executive Officer, Interim Principal Financial Officer*	March 12, 2026
/s/Oliver Dolan Oliver Dolan	Senior Vice President, Finance *Principal Accounting Officer*	March 12, 2026
/s/ Ali Behbahani Ali Behbahani	Director	March 12, 2026
/s/ Nessan Bermingham Nessan Bermingham	Director	March 12, 2026
/s/ Jean-Francois Formela Jean-Francois Formela	Director	March 12, 2026
/s/ Katharine Knobil Katharine Knobil	Director	March 12, 2026
/s/ Rachel Meyers Rachel Meyers	Director	March 12, 2026
/s/ Timothy Pearson Timothy Pearson	Director	March 12, 2026

Exhibit 23.1

Consent of Independent Registered Public Accounting Firm

We consent to the incorporation by reference in the following Registration Statements:

(1) Registration Statement (Form S-1 No. 333-248474) of Frequency Therapeutics, Inc.,
(2) Registration Statement (Form S-1 No. 333-279402) of Korro Bio, Inc.,
(3) Registration Statement (Form S-3 No. 333-275353) of Korro Bio, Inc.,
(4) Registration Statement (Form S-3 No. 333-283552) of Korro Bio, Inc.,
(5) Registration Statement (Form S-8 No. 333-234128) pertaining to the 2014 Stock Incentive Plan, as amended, 2019 Incentive Award Plan and 2019 Employee Stock Purchase Plan of Frequency Therapeutics, Inc.,
(6) Registration Statement (Form S-8 No. 333-263643) pertaining to the 2019 Incentive Award Plan and 2019 Employee Stock Purchase Plan of Frequency Therapeutics, Inc.,
(7) Registration Statement (Form S-8 No. 333-275354) pertaining to the 2019 Stock Incentive Plan, 2023 Stock Option and Incentive Plan, and 2023 Employee Stock Purchase Plan of Korro Bio, Inc.,
(8) Registration Statement (Form S-8 No. 333-278245) pertaining to the 2023 Stock Option and Incentive Plan and 2023 Employee Stock Purchase Plan of Korro Bio, Inc.,
(9) Registration Statement (Form S-8 No. 333-285873) pertaining to the 2023 Stock Option and Incentive Plan and 2023 Employee Stock Purchase Plan of Korro Bio, Inc., and
(10) Registration Statement (Form S-8 No. 333-292984) pertaining to the 2023 Stock Option and Incentive Plan and 2023 Employee Stock Purchase Plan of Korro Bio, Inc.;

of our report dated March 12, 2026, with respect to the consolidated financial statements of Korro Bio, Inc., included in this Annual Report (Form 10-K) of Korro Bio, Inc. for the year ended December 31, 2025.

/s/ Ernst & Young LLP

Boston, Massachusetts
March 12, 2026

Exhibit 31.1

CERTIFICATION OF PRINCIPAL EXECUTIVE OFFICER AND PRINCIPAL FINANCIAL OFFICER PURSUANT TO RULE 13a-14(a) / RULE 15d-14(a) OF THE SECURITIES EXCHANGE ACT OF 1934, AS AMENDED

I, Ram Aiyar, certify that:

1. I have reviewed this Annual Report on Form 10-K for the fiscal year ended December 31, 2025 of Korro Bio, Inc. (the "registrant");

2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;

3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this report;

4. The registrant's other certifying officer(s) and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the registrant and have:

    a. Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;

    b. Designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, 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;

    c. Evaluated the effectiveness of the registrant's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and

    d. Disclosed in this report any change in the registrant's internal control over financial reporting that occurred during the registrant's most recent fiscal quarter (the registrant's fourth fiscal quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the registrant's internal control over financial reporting; and

5. The registrant's other certifying officer(s) and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant's auditors and the audit committee of the registrant's board of directors (or persons performing the equivalent functions):

    a. all significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the registrant's ability to record, process, summarize and report financial information; and

    b. any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant's internal control over financial reporting.

/s/ Ram Aiyar

Ram Aiyar
President and Chief Executive Officer
(Principal Executive Officer and Interim Principal Financial Officer)

Dated: March 12, 2026

Exhibit 32.1

CERTIFICATIONS 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

In connection with the Annual Report on Form 10-K of Korro Bio, Inc. (the "Company") for the fiscal year ended December 31, 2025 as filed with the Securities and Exchange Commission on the date hereof (the "Report"), the undersigned hereby certifies, pursuant to 18 U.S.C. Section 1350, that, to the best of his knowledge:

(1) the Report fully complies with the requirements of Section 13(a) or 15(d) of the Securities Exchange Act of 1934, as amended; and

(2) the information contained in the Report fairly presents, in all material respects, the financial condition and results of operations of the Company.

/s/ Ram Aiyar
Ram Aiyar
President and Chief Executive Officer
(Principal Executive Officer and Interim Principal Financial Officer)

Dated: March 12, 2026

This certification accompanies the Form 10-K to which it relates, is not deemed filed with the Securities and Exchange Commission and is not to be incorporated by reference into any filing of Korro Bio, Inc. 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.