

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

**AMENDMENT NO. 2**  
**to**  
**FORM S-3 on FORM S-1**  
**REGISTRATION STATEMENT UNDER THE SECURITIES ACT OF 1933**

**KORRO BIO, INC.**

(Exact name of registrant as specified in its charter)

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

2834  
(Primary Standard Industrial  
Classification Code No.)

47-2324450  
(I.R.S. Employer  
Identification Number)

One Kendall Square, Building 600-700  
Suite 6-401  
Cambridge, MA 02139  
(617) 468-1999

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

Ram Aiyar  
President and Chief Executive Officer  
Korro Bio, Inc.  
One Kendall Square, Building 600-700  
Suite 6-401  
Cambridge, MA 02139  
(617) 468-1999

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

*Copies to:*

Kingsley L. Taft, Esq.  
Marianne C. Sarrazin, Esq.  
Goodwin Procter LLP  
100 Northern Avenue  
Boston, MA 02210  
(617) 570-1000

**Approximate Date of Commencement of Proposed Sale to the Public:** From time to time after the effective date of this registration statement.

If any of the securities being registered on this Form are to be offered on a delayed or continuous basis pursuant to Rule 415 under the Securities Act of 1933, check the following box.

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

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

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

Indicate by check mark whether the registrant is a large accelerated filer, an accelerated filer, a non-accelerated filer, 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 7(a)(2)(B) of the Securities Act.

The registrant hereby amends this registration statement on such date or dates as may be necessary to delay its effective date until the registrant shall file a further amendment which specifically states that this registration statement shall thereafter become effective in accordance with Section 8(a) of the Securities Act of 1933 or until this registration statement shall become effective on such date as the Securities and Exchange Commission, acting pursuant to said Section 8(a), may determine.

[Table of Contents](#)

**The information in this preliminary prospectus is not complete and may be changed. Neither we nor the selling securityholders may sell these securities until the registration statement filed with the Securities and Exchange Commission is effective. This preliminary prospectus is not an offer to sell these securities and is not soliciting an offer to buy these securities in any jurisdiction where the offer or sale is not permitted.**

**SUBJECT TO COMPLETION DATED DECEMBER 20, 2023**

**PRELIMINARY PROSPECTUS**



**Up to 1,714,570 Shares of Common Stock**

---

This prospectus relates to the proposed offer and resale or other disposition from time to time by the selling stockholders identified in this prospectus of up to an aggregate of 1,714,570 shares of common stock, par value \$0.001 per share, of Korro Bio, Inc.

We are registering the resale of the shares of common stock pursuant to the selling stockholders' registration rights under a registration rights agreement between us and the selling stockholders. Our registration of the resale of the shares of common stock covered by this prospectus does not mean that the selling stockholders will offer or sell all or any of the shares of common stock. The selling stockholders may offer, sell or distribute all or a portion of their shares of common stock from time to time directly or indirectly through one or more underwriters, broker-dealers or agents, and in one or more public or private transactions. The shares of common stock may be sold in one or more transactions at fixed prices, at prevailing market prices at the time of the sale, at varying prices determined at the time of sale or at negotiated prices. These sales may be effected in transactions, which may involve crosses or block transactions. See the section entitled "*Plan of Distribution*" for more information.

We will not receive any proceeds from any sale of common stock by the selling stockholders pursuant to this prospectus. We have agreed to bear the expenses in connection with the registration of the resale of the shares of common stock to be offered by this prospectus by the selling stockholders other than any underwriting discounts and commissions or transfer taxes relating to the sale of common stock, which will be borne by the selling stockholders.

We are an "emerging growth company" as defined under the federal securities laws and, as such, have elected to comply with certain reduced public company reporting requirements for this prospectus and our other filings with the Securities and Exchange Commission.

Our common stock is listed on the Nasdaq Capital Market, or Nasdaq, under the symbol "KRRO." On December 19, 2023, the closing price for our common stock, as reported on Nasdaq, was \$54.20 per share.

---

See the section entitled "[Risk Factors](#)" beginning on page 5 of this prospectus to read about factors you should consider before buying our securities.

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

The date of this prospectus is \_\_\_\_\_, 2023.

---

TABLE OF CONTENTS

	<u>Page</u>
<a href="#">ABOUT THIS PROSPECTUS</a>	ii
<a href="#">CAUTIONARY NOTE REGARDING FORWARD-LOOKING STATEMENTS</a>	iii
<a href="#">SUMMARY</a>	1
<a href="#">RISK FACTORS</a>	5
<a href="#">USE OF PROCEEDS</a>	68
<a href="#">MARKET INFORMATION FOR COMMON STOCK AND DIVIDEND POLICY</a>	69
<a href="#">UNAUDITED PRO FORMA CONDENSED COMBINED FINANCIAL INFORMATION</a>	70
<a href="#">KORRO BIO MANAGEMENT’S DISCUSSION AND ANALYSIS OF FINANCIAL CONDITION AND RESULTS OF OPERATIONS</a>	81
<a href="#">FREQUENCY MANAGEMENT’S DISCUSSION AND ANALYSIS OF FINANCIAL CONDITION AND RESULTS OF OPERATIONS</a>	93
<a href="#">BUSINESS</a>	108
<a href="#">MANAGEMENT</a>	160
<a href="#">LEGACY KORRO EXECUTIVE COMPENSATION</a>	169
<a href="#">FREQUENCY EXECUTIVE AND DIRECTOR COMPENSATION</a>	180
<a href="#">LEGACY KORRO CERTAIN RELATIONSHIPS AND RELATED PARTY TRANSACTIONS</a>	189
<a href="#">CERTAIN RELATED PERSON TRANSACTIONS OF FREQUENCY</a>	193
<a href="#">PRINCIPAL SECURITYHOLDERS</a>	196
<a href="#">SELLING SECURITYHOLDERS</a>	200
<a href="#">DESCRIPTION OF OUR CAPITAL STOCK</a>	204
<a href="#">MATERIAL UNITED STATES FEDERAL INCOME TAX CONSIDERATIONS</a>	207
<a href="#">PLAN OF DISTRIBUTION</a>	212
<a href="#">LEGAL MATTERS</a>	214
<a href="#">EXPERTS</a>	214
<a href="#">CHANGE IN AUDITORS</a>	214
<a href="#">WHERE YOU CAN FIND MORE INFORMATION</a>	215
<a href="#">INDEX TO FINANCIAL STATEMENTS</a>	F-1
<a href="#">PART II INFORMATION NOT REQUIRED IN PROSPECTUS</a>	II-1
<a href="#">EXHIBIT INDEX</a>	II-3
<a href="#">SIGNATURES</a>	II-7

---

You should rely only on the information provided in this prospectus, as well as the information incorporated by reference to exhibits to the registration statement of which this prospectus forms a part and any applicable prospectus supplement or amendment. Neither we nor the Selling Securityholders have authorized anyone to provide you with different information. Neither we nor the Selling Securityholders are making an offer of these securities in any jurisdiction where the offer is not permitted. You should not assume that the information in this prospectus or any applicable prospectus supplement is accurate as of any date other than the date of the applicable document. Since the date of this prospectus and the documents filed as exhibits to the registration statement of which this prospectus forms a part, our business, financial condition, results of operations and prospects may have changed.

## ABOUT THIS PROSPECTUS

This prospectus is part of a registration statement that we filed with the U.S. Securities and Exchange Commission, or SEC, utilizing a “shelf” registration process. Under this shelf registration process, the selling stockholders may, from time to time, sell the shares of common stock described in this prospectus in one or more offerings.

Neither we, nor the selling stockholders, have authorized anyone to give any information or to make any representation other than those contained or incorporated by reference in this prospectus. You must not rely upon any information or representation not contained or incorporated by reference in this prospectus. The selling stockholders are offering to sell, and seeking offers to buy, shares of our common stock only in jurisdictions where it is lawful to do so. This prospectus does not constitute an offer to sell or the solicitation of an offer to buy any shares other than the registered shares to which it relates, nor does this prospectus constitute an offer to sell or the solicitation of an offer to buy shares in any jurisdiction to any person to whom it is unlawful to make such offer or solicitation in such jurisdiction. You should not assume that the information contained in this prospectus is accurate on any date subsequent to the date set forth on the front of the document or that any information we have incorporated by reference is correct on any date subsequent to the date of the document incorporated by reference, even though this prospectus is delivered or shares are sold on a later date. Our business, financial condition, results of operations and prospects may have changed since those dates. This prospectus incorporates by reference market data and industry statistics and forecasts that are based on independent industry publications and other publicly available information. Although we believe these sources are reliable, we do not guarantee the accuracy or completeness of this information and we have not independently verified this information. In addition, the market and industry data and forecasts that may be included or incorporated by reference in this prospectus may involve estimates, assumptions and other risks and uncertainties and are subject to change based on various factors, including those discussed under the heading “Risk Factors” contained in this prospectus, and under similar headings in other documents that are incorporated by reference into this prospectus. Accordingly, investors should not place undue reliance on this information.

A prospectus supplement may add to, update or change the information contained in this prospectus. You should read both this prospectus and any applicable prospectus supplement together with additional information described below under the heading “Where You Can Find Additional Information” or incorporated by reference herein as described under the heading “Incorporation of Certain Information by Reference.”

On November 3, 2023, or the Closing Date, we consummated the previously announced business combination, or the Merger, pursuant to that certain Agreement and Plan of Merger, or the Merger Agreement, dated July 14, 2023, by and among our company (formerly known as Frequency Therapeutics, Inc., or Frequency), Frequency Merger Sub, Inc., or Merger Sub, and Korro Bio OpCo, Inc., or Legacy Korro.

Pursuant to the terms of the Merger Agreement, a business combination between Frequency and Legacy Korro was effected through the merger of Merger Sub with and into Legacy Korro, with Legacy Korro surviving as a wholly owned subsidiary of Frequency. On the Closing Date, Frequency changed its name to Korro Bio, Inc.

Unless the context otherwise indicates, references in this prospectus to “Company,” “we,” “our” and “us” refer, collectively, to Korro Bio, Inc., a Delaware corporation, and its consolidated subsidiaries (including Legacy Korro).

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 prospectus are the property of their respective owners. Solely for convenience, the trademarks and trade names in this prospectus 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.

## CAUTIONARY NOTE REGARDING FORWARD-LOOKING STATEMENTS

This prospectus contains and/or incorporates by reference 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, 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 prospectus may include, for example, statements about:

- our ability to recognize the benefits of the Merger;
- the initiation, timing, progress, results, and cost of 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, the period during which the results of the trials will become available, and our research and development programs;
- our strategy;
- our cash runway and ability to reach data inflection points;
- the therapeutic and commercial potential of our product candidates;
- our research and development and other expenses;
- 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 product candidates;
- competitive developments, including the impact on our competitive position of rival products and product candidates and our ability to meet such competition; and
- our ability to manage the growth of our business.

These forward-looking statements are based on information available to us at the time of this prospectus or the document incorporated by reference herein and current expectations, forecasts and assumptions, and involve a number of judgments, risks and uncertainties. Accordingly, forward-looking statements should not be relied upon as representing our views as of any subsequent date, and we do not undertake any obligation to update forward-looking statements to reflect events or circumstances after the date they were made, whether as a result of new information, future events or otherwise, except as may be required under applicable securities laws.

The outcome of the events described in these forward-looking statements is subject to known and unknown risks, uncertainties, and other factors. As a result of a number of known and unknown risks and uncertainties, our actual results or performance may be materially different from those expressed or implied by these forward-looking statements, including those set forth in this prospectus in the section entitled "*Risk Factors*" and in our period filings with the SEC. Our SEC filings are available publicly on the SEC's website at [www.sec.gov](#). Given these risks and uncertainties, you should not place undue reliance on these forward-looking statements. Additional cautionary statements or discussions of risks and uncertainties that could affect our results or the achievement of the expectations described in forward-looking statements may also be contained in any accompanying prospectus supplement. Should one or more of the risks or uncertainties described in this prospectus, or should underlying assumptions prove incorrect, actual results and plans could differ materially from those expressed in any forward-looking statements.

---

[Table of Contents](#)

You should read this prospectus and any accompanying prospectus supplement completely and with the understanding that our actual future results, levels of activity and performance as well as other events and circumstances may be materially different from what we expect. 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 prospectus. We qualify all of our forward-looking statements by these cautionary statements.

**PROSPECTUS SUMMARY**

**Our Company**

We are a biopharmaceutical company creating transformative genetic medicines targeted to treat both rare and highly prevalent diseases. Our initial focus is to bring additional precision and tunability to genetic medicines by developing therapies based on editing RNA instead of DNA, which is expected to lead to an improved safety profile and increased clinical activity and specificity.

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 single base 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. Using an oligonucleotide-based approach, we expect to bring our medicines to patients by leveraging our proprietary RNA editing technology with precedented delivery modalities, manufacturing know-how, and established regulatory pathways for other approved oligonucleotide drugs. However, the scientific evidence to support the feasibility of developing product 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 no clinical data has been generated to date.

The versatility of RNA editing combined with our Oligonucleotide Promoted Editing of RNA, or OPERA, platform broadens the therapeutic target space significantly. The pipeline chart below demonstrates the breadth of indications and applications enabled by our platform, with an initial focus on four programs that are all wholly-owned. In addition, we have two other wholly-owned programs not reflected in the pipeline chart below: one for an undisclosed target for sAH, and one for a kinase target for cardiometabolic disease.

Concept	Indication	Target	Discovery	Preclinical development	Phase 1	Phase 2	Phase 3	Wholly owned?
Repairing a pathogenic variant	Alpha-1 anti-trypsin deficiency	AIAT	Regulatory filing expected in 2H'24					<input checked="" type="checkbox"/>
Repairing a pathogenic variant	Parkinson disease	LRRK2						<input checked="" type="checkbox"/>
Preventing protein aggregation	Amyotrophic lateral sclerosis	TDP43						<input checked="" type="checkbox"/>
Selectively modulating ion channels	Subsets of pain	Na <sub>v</sub> 1.7						<input checked="" type="checkbox"/>

While our approach can be used to repair pathogenic single nucleotide variants, or SNVs, as demonstrated by our most advanced program, our Alpha-1 Antitrypsin Deficiency, or AATD, product candidate, KRRO-110, it can also engineer *de novo* SNVs and change amino acids on proteins to endow them with desired properties while preserving their broader functional capabilities, as exemplified by three of our other programs (severe Alcoholic Hepatitis, amyotrophic lateral sclerosis, pain). In preclinical studies, we have demonstrated that single RNA changes can disrupt protein-protein interactions, prevent protein aggregation, selectively modulate ion channels and activate kinases. These modification approaches can unlock validated target classes that have historically been difficult to drug, enabling us to pursue a broad range of diseases traditionally out-of-scope for other genetic medicine approaches and current traditional drug modalities.

Our most advanced program, KRRO-110, is a product candidate in development as a potential treatment for AATD where, using our RNA editing approach, we are repairing a pathogenic variant on RNA. KRRO-110 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 alpha-1 antitrypsin protein, or A1AT, caused by SNV mutations in the SERPINA1 gene. There are an estimated 3.4 million individuals with deficiency allele combinations worldwide. KRRO-110 has the potential to elevate the standard of care and expand the number of patients on treatment and potential to be a leader with a large market opportunity worldwide.

KRRO-110 is a proprietary oligonucleotide that utilizes an established lipid nanoparticle, or LNP, based delivery system administered intravenously to transiently restore production of normal A1AT in liver hepatocytes. By correcting the pathogenic G to A SNV in the SERPINA1 gene, we aim to bring individuals with the Z mutation to a phenotype where over 50% of RNA has been corrected to produce normal A1AT protein, preserving lung and liver function and preventing further damage. KRRO-110 is designed to co-opt an endogenous enzyme Adenosine Deaminase Acting on RNA (ADAR) to repair a pathogenic SNV on RNA and restore production of normal A1AT.

Preclinical development of KRRO-110 is ongoing in preparation for a potential regulatory filing in the second half of 2024.

### **Risks Associated with Our Business**

Our ability to implement our business strategy is subject to numerous risks that you should be aware of before making an investment decision. These risks are described more fully in the section entitled “*Risk Factors*,” following this prospectus summary. These risks include the following, among others:

- We have incurred significant losses since inception and expect to incur losses for the foreseeable future and may never achieve or maintain profitability.
- There is substantial doubt about our ability to continue as a going concern.
- Expectations regarding our cash runway and ability to reach data inflection points are based on numerous assumptions that may prove to be untrue.
- 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.
- 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.
- 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 product candidates. It will be many years before we or our collaborators commercialize a product 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 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.
- 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 product candidates or experience significant delays in doing so, our business will be materially harmed.
- Any product candidates we develop may fail in preclinical or clinical development or be delayed to a point where they do not become commercially viable.



- If we are not able to obtain or protect intellectual property rights related to any of our product candidates, development and commercialization of our product candidates may be adversely affected.
- The market price of our common stock is expected to be volatile, the market price of the common stock may drop following the Merger and an active trading market for our common stock may not develop and our stockholders may not be able to resell their shares of common stock for a profit, if at all.
- Provisions in our charter documents and under Delaware law could make an acquisition of our company more difficult and may discourage any takeover attempts that stockholders may consider favorable, and may lead to entrenchment of management.
- Our executive officers, directors and principal stockholders have the ability to control or significantly influence all matters submitted to our stockholders for approval.

### **Corporate Information**

Our principal executive offices are located at One Kendall Square, Building 600-700, Suite 6-401, Cambridge, MA 02139, and our telephone number is (617) 468-1999. Our website address is [www.korrobio.com](http://www.korrobio.com). We do not incorporate the information on or accessible through our website into this prospectus, and you should not consider any information on, or that can be accessed through, our website as part of this prospectus. Our common stock is listed on Nasdaq under the symbol “KRRO.”

### **Implications of Being an Emerging Growth Company and a Smaller Reporting Company**

We are an emerging growth company as defined in the Jumpstart Our Business Startups Act of 2012 (the “JOBS Act”). We will remain an emerging growth company under the JOBS Act until the earliest of (a) the last day of our first fiscal year following the fifth anniversary of CMLS’s IPO, (b) the last date of our fiscal year in which we have total annual gross revenue of at least \$1.07 billion, (c) the date on which we are deemed to be a “large accelerated filer” under the rules of the SEC with at least \$700.0 million of outstanding securities held by non-affiliates or (d) the date on which we have issued more than \$1.0 billion in non-convertible debt securities during the previous three years.

We are also a “smaller reporting company” as defined in the Exchange Act. We may continue to be a smaller reporting company even after we are no longer an emerging growth company. We may take advantage of certain of the scaled disclosures available to smaller reporting companies and will be able to take advantage of these scaled disclosures for so long as the market value of the Common Stock held by non-affiliates is less than \$250.0 million measured on the last business day of our second fiscal quarter, or our annual revenue is less than \$100.0 million during the most recently completed fiscal year and the market value of the Common Stock held by non-affiliates is less than \$700.0 million measured on the last business day of our second fiscal quarter.

As a result, the information in this prospectus and that we provide to our investors in the future may be different than what you might receive from other public reporting companies.

**The Offering**

Issuer	Korro Bio, Inc.
Common stock Offered by the Selling Stockholders	1,714,570 shares of common stock
Use of Proceeds	We will not receive any proceeds from the sale of the shares of common stock covered by this prospectus.
Nasdaq Symbol	KRRO
Offering Price	The selling stockholders will offer the shares of common stock offered by this prospectus at the prevailing market prices or at privately negotiated prices.
Risk Factors	You should read the “ <i>Risk Factors</i> ” section of this prospectus for a discussion of factors to consider carefully before deciding to invest in shares of our common stock.

For additional information concerning the offering, see “*Plan of Distribution*” beginning on page 212.

## RISK FACTORS

*On November 3, 2023, we completed the business combination with the privately held Delaware corporation, Korro Bio, Inc., or Legacy Korro, in accordance with the terms of the Agreement and Plan of Merger dated as of July 14, 2023, or the Merger Agreement, among our company, Legacy Korro and a wholly-owned merger subsidiary. We refer to this business combination throughout these Risk Factors as the Merger. Immediately after the Merger the former Legacy Korro securityholders owned approximately 91% of our fully diluted common stock, and our pre-Merger securityholders owned the remaining approximately 9%. As a result of the Merger, our business is now substantially comprised of the business of Legacy Korro, and although we are considered the legal acquiror of Legacy Korro, for accounting purposes, Legacy Korro is considered to have acquired our company in the Merger. Consequently, the Merger is accounted for as a reverse recapitalization. Upon completion of the Merger, we changed our name from “Frequency Therapeutics, Inc.” to “Korro Bio, Inc.,” our common stock began trading on The Nasdaq Capital Market under a new ticker symbol “KRRO” on November 6, 2023 and our financial statements became those of Legacy Korro.*

*As used in this section, the words “we,” “us,” “our,” the “Company,” and “Korro Bio” refer to Korro Bio, Inc. and its consolidated subsidiaries following completion of the Merger.*

*Investing in our securities involves risks. Before you make a decision to buy our securities, in addition to the risks and uncertainties discussed above under “Cautionary Note Regarding Forward-Looking Statements,” you should carefully consider the specific risks set forth herein. We operate in a dynamic and rapidly changing industry that involves numerous risks and uncertainties. If any of these risks actually occur, it may materially harm our business, financial condition, liquidity and results of operations. As a result, the market price of our securities could decline, and you could lose all or part of your investment. When determining whether to invest, you should also refer to the other information contained in this prospectus, including our financial statements and the related notes thereto, and the other financial information concerning us included elsewhere in this prospectus. Additionally, the risks and uncertainties described in this prospectus or any prospectus supplement are not the only risks and uncertainties that we face. Additional risks and uncertainties not presently known to us or that we currently believe to be immaterial may become material and adversely affect our business.*

### **Risks Related to Our Business**

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

***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 \$22.0 million, \$58.0 million, \$42.0 million, and \$55.7 million for the years ended December 31, 2021 and 2022, and the nine months ended September 30, 2022 and 2023, respectively. As of September 30, 2023, we had an accumulated deficit of \$157.6 million. We have financed our operations primarily through private placements of our preferred stock and more recently, common stock in the pre-closing financing that closed immediately prior to the Merger. 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. 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:

- continue current research programs and preclinical development of any product candidates we may identify;
- seek to identify additional research programs and product candidates;
- initiate preclinical studies and clinical trials for any product candidates we may identify;

## Table of Contents

- further develop Oligonucleotide Promoted Editing of RNA, or OPERA, our RNA editing platform;
- maintain, expand, enforce, defend and protect our intellectual property portfolio and provide reimbursement of third-party expenses related to our intellectual property portfolio;
- seek marketing approvals for any product candidates that successfully complete clinical trials;
- develop, maintain and enhance a sustainable, scalable, reproducible and transferable manufacturing process for the product candidates we may develop;
- ultimately establish a sales, marketing and distribution infrastructure to commercialize any therapies for which we may obtain marketing approval;
- hire additional research and development personnel;
- hire clinical and commercial personnel;
- add operational, financial and management information systems and personnel, including personnel to support our product development;
- acquire or in-license product candidates, intellectual property and technologies;
- establish and maintain collaborations;
- should we decide to do so, build and maintain commercial-scale current Good Manufacturing Practices, or cGMP, manufacturing facility;
- experience any delays or interruptions due to global pandemics, such as the recent COVID-19 pandemic, or other events unrelated to our business such as the Russian invasion of Ukraine or Israeli-Hamas conflict that could result in delays in preclinical testing and clinical trials or interruptions in the supply chain; and
- operate as a public company.

We have not initiated clinical development of any potential product candidate and expect that it will be many years, if ever, before we have a RNA editing therapy ready for commercialization. To become and remain profitable, we must develop and, either directly or through collaborators, eventually commercialize a therapy or therapies with market potential. This will require us to be successful in a range of challenging activities, including identifying product candidates, completing preclinical studies and clinical trials of product candidates, obtaining marketing approval for these product candidates, manufacturing, marketing and selling those therapies for which we may obtain marketing approval and satisfying any post-marketing requirements. We may never succeed in these activities and, even if we do, may never generate revenues that are significant or large enough to achieve profitability.

We have transitioned from discovery, research and development to early preclinical development for our most advanced product candidate, KRRO-110. Because of the numerous risks and uncertainties associated with developing oligonucleotide product candidates, 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.

### ***There is substantial doubt about our ability to continue as a going concern.***

A history of operating losses and negative cash flows from operations combined with our anticipated use of cash to fund operations raised substantial doubt about our ability to continue as a going concern beyond the 12-month period from the issuance date of our audited financial statements for year ended December 31, 2022.

## Table of Contents

Although we recently received \$117.3 million from the private placement that closed immediately prior the Merger, or the Pre-Closing Financing, and now expect that our cash, cash equivalents and short-term investments outstanding as of September 30, 2023, together with the proceeds from the Pre-Closing Financing and our predecessor's net cash from the Merger will be sufficient to fund our operating expenses and capital expenditure requirements at least into 2026, our future viability as an ongoing business is dependent on our ability to generate cash from our operating activities or to raise additional capital to finance our operations. There is no assurance that we will succeed in obtaining sufficient funding on terms acceptable to us to fund continuing operations, if at all. The perception that we might be unable to continue as a going concern may also make it more difficult to obtain financing for the continuation of our operations on terms that are favorable to us, or at all, and could result in the loss of confidence by investors and employees. Our financial statements do not include any adjustments that might result from the outcome of this uncertainty. If we are unable to continue as a going concern, we may have to liquidate our assets and may receive less than the value at which those assets are carried on our financial statements, and it is likely that our investors will lose all or a part of their investment.

### ***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, product 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 product candidates and successfully complete research and development of such product candidates;
- seek and obtain regulatory and marketing approvals for any product candidates for which we complete clinical trials;
- launch and commercialize any product 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 product 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 product candidates for which we obtain regulatory and marketing approval;
- develop, maintain and enhance a sustainable, scalable, reproducible and transferable manufacturing process for the product candidates we may develop;
- address competing technological and market developments;
- negotiate favorable terms in any collaboration, licensing or other arrangements into which we may enter and performing 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.

## [Table of Contents](#)

Our expenses could increase beyond expectations if we are required by the U.S. Food and Drug Administration, or the FDA, the European Medicines Agency, or the EMA, 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 product candidates we may develop are approved for commercial sale, we anticipate incurring significant costs associated with commercializing any approved product 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 product 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, product candidates. Because we have limited financial and managerial resources, we have prioritized our research programs and lead 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 product 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. Our spending on current and future research and development programs and product candidates for specific indications may not yield any commercially viable therapies.

In addition, if we obtain marketing approval for any product 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 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 September 30, 2023, our cash and cash equivalents and short-term investments were \$46.1 million, excluding restricted cash, or \$51.3 million, including restricted cash. We had a cash balance of approximately \$170.0 million at the closing of the Merger and the Pre-Closing Financing, and believe our existing cash and cash equivalents and short-term investments will be sufficient to fund our operating expenses and capital expenditure requirements through several value-creating milestones and into 2026. 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. For example, our assumptions relating to the amounts of Frequency's cash available to us after the closing of the Merger, including amounts that may be required to negotiate early lease terminations and costs associated with Frequency's ongoing litigation, may prove to be incorrect. 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 product candidates we may develop. We cannot be certain that additional funding will be available on acceptable terms or at all. We have no committed source of additional capital and, if we are unable to raise additional capital in sufficient amounts or on terms acceptable to

## [Table of Contents](#)

us, we may have to significantly delay, scale back or discontinue the development or commercialization of any product candidates or other research and development initiatives. We could be required to seek collaborators for potential product 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 product candidates on unfavorable terms in certain markets where we otherwise would seek to pursue development or commercialization ourselves.

### ***Raising additional capital may cause dilution to our stockholders, restrict our operations or require us to relinquish rights to our technologies or product 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 product candidates we may develop, or we may have to grant licenses on terms that may not be favorable.

### ***Our operating history may make it difficult for you to evaluate the success of our business to date and to assess our future viability.***

Our business has now become that of Legacy Korro, an early-stage company founded in September 2018 and which commenced operations in October 2019. Prior to the Merger, Legacy Korro's operations (which are now ours) were limited to organizing and staffing, business planning, raising capital, acquiring and developing our platform and technology and identifying and beginning to advance preclinical testing of potential product candidates. All of our current programs are still in the research or preclinical stage of development and their risk of failure is high. We have not yet demonstrated an ability to initiate or successfully complete any clinical trials, including large-scale, pivotal clinical trials, obtain marketing approvals, manufacture a commercial-scale therapy, arrange for a third party to do so on our behalf or conduct sales and marketing activities necessary for successful commercialization. Typically, it takes about 10 to 15 years to develop a new therapy from the time it is discovered to when it is available for treating patients.

Legacy Korro's limited operating history, particularly in light of the rapidly evolving gene editing field, may make it difficult to evaluate our technology and industry and predict our future performance. Accordingly, any assessment of our future success or viability subject to significant uncertainty. We will encounter risks and difficulties frequently experienced by very early-stage companies in rapidly evolving fields. If we do not address these risks successfully, our business will suffer.

In addition, as a new business, we may encounter other unforeseen expenses, difficulties, complications, delays, and other known and unknown factors. We will need to transition from a company with a research focus to a company capable of supporting commercial activities. We may not be successful in such a transition.

### ***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, 2022, we had federal and state NOLs of \$72.1 million and \$70.3 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, 2020. 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. Our state NOLs expire at various dates from 2038 through 2042. As of December 31, 2022, we had federal research and development tax credit carryforwards of \$3.5 million that expire at various dates from 2040 through 2042. In addition, as of December 31, 2022, we had state research and development tax credit carryforwards of \$2.6 million that expire at various dates from 2034 through 2037.

Under Sections 382 and 383 of 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, the Merger and the Pre-Closing Financing, if consummated, may constitute an ownership change within the meaning of Section 382 of the Code, which could eliminate or otherwise substantially limit 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. Additional limitations on our ability to utilize our NOLs to offset future taxable income may arise as a result of our corporate structure whereby NOLs generated by our subsidiary may not be available to offset taxable income earned by our subsidiary. 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.

***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. 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.

***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 product candidates. It will be many years before we or our collaborators commercialize a product 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.***

The success of our business depends primarily upon our ability to identify, develop and commercialize product candidates. We are very early in our development efforts and have focused our research and development



## [Table of Contents](#)

efforts to date on developing OPERA, our RNA editing platform, and identifying our initial targeted disease indications. 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 our products. 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 product candidates, our product 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 product candidates impractical to manufacture, unmarketable, or unlikely to receive marketing approval.

The pharmacological properties ascribed to the product 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. If our product 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 product 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 product 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 product candidates beyond the initial product candidates we may develop, we have not yet successfully developed any product candidate and our ability to expand our portfolio may never materialize.

Commencing clinical trials in the United States is also subject to acceptance by the FDA of any future investigational new drug, or IND, applications and finalization of trial designs based on discussions with the FDA and other regulatory authorities. 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 any clinical endpoints selected, which may require us to complete additional studies or trials or impose stricter approval conditions than we expect. There are equivalent processes and risks applicable to clinical trial applications, or CTAs, in other countries, including in Europe, the UK and Australia.

Even if we complete the necessary clinical trials, we cannot predict when, or if, we will obtain regulatory approval to commercialize our product candidates in the United States or any other jurisdiction, if at all, 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 conduct one or more of our 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 trials conducted outside of the United States. If the FDA does not accept the data from any 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

## Table of Contents

our development of the applicable product 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 product candidate testing and validation and additional administrative review periods.

Commercialization of any product candidates we may develop will also require obtaining manufacturing supply, capacity and expertise; building of a commercial organization; and significant marketing efforts. If we do not successfully commercialize any product candidates we may develop, we could experience a material harm to our business.

***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.***

We are focused on developing therapies 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 been clinically tested, nor are we aware of any clinical trials for safety or efficacy having been completed by third parties using RNA editing or similar technologies. The scientific evidence to support the feasibility of developing product candidates based on these technologies is both preliminary and limited. Successful development of product candidates by us will require solving a number of issues, including optimizing the efficiency and specificity of such product candidates, and ensuring the therapeutic selectivity of such product 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 product 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 product 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 the section entitled “—*Risks Related to Intellectual Property*” appearing elsewhere in these Risk Factors for more information.

***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 product candidates or experiences significant delays in doing so, our business will be materially harmed.***

We are very early in our development of product candidates and have focused our efforts to date on platform development, discovery, research, and preclinical development. Currently, all of our programs are still

## [Table of Contents](#)

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 product 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 CTAs in other countries, including countries in the European Union, or EU.

Commercialization of any product candidates we may develop will require preclinical and clinical development; regulatory and marketing approval in multiple jurisdictions, including by the FDA and the EMA; manufacturing supply, capacity and expertise; a commercial organization; and significant marketing efforts. The success of our product 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 product candidates we may develop;
- successful enrollment and completion of clinical trials, including under the FDA's current GCPs, current Good Laboratory Practices, or 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 product candidates we may develop;
- commercial launch of any product candidates we may develop, if approved, whether alone or in collaboration with others;
- acceptance of the benefits and use of the product 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 therapies;
- maintenance of a continued acceptable safety, tolerability and efficacy profile of any product 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 product candidates we may develop, which would materially harm our business.

## [Table of Contents](#)

*Any product 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 product candidates, we must conduct, at our own expense, extensive preclinical studies and clinical trials to demonstrate the safety and efficacy in humans of our product 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 non-human primates to conduct certain preclinical studies. Over the past several years there has been an increasing global shortage of non-human primates available for drug development that has matured into an acute global supply chain issue. The supply of these non-human primates 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 non-human primates 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 product 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 product 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 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 institutional review boards, 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 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 COVID-19 or any other pandemic or other events, such as the Russian invasion of Ukraine or Israeli-Hamas conflict;
- delays in developing and receiving regulatory approval for companion diagnostic tests, to the extent such tests are needed, to identify patients for our clinical trials;
- 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 product candidates similar to ours;
- results from future clinical trials may not confirm positive results, if any, from earlier preclinical studies and clinical trials;
- inability to consistently manufacture, inadequate supply, or unacceptable quality of product candidate materials or other materials necessary for the conduct of our clinical trials;
- greater than anticipated clinical trial costs;

## Table of Contents

- serious and unexpected side effects that may or may not be related to the product candidate being tested that are experienced by participants in our clinical trials or by individuals using drugs similar to our product candidates;
- poor or disappointing effectiveness of our product candidates during clinical trials;
- unfavorable outcome of FDA 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 product 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 product candidates and to 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 product candidates fails or is delayed to a point where such product 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, which is a function of many factors, including the impact of the COVID-19 global pandemic, the proximity of participants to clinical sites, the size of the relevant population, the eligibility criteria for the 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;
- manage the impact of the COVID-19 pandemic or other global health pandemics on our early-stage discovery efforts and clinical trials; open study sites, and enroll, treat, and monitor patients due to local restrictions implemented in response to remaining COVID-19 effects or other global health pandemics;
- develop companion diagnostic tests for use with certain of our product candidates or identify partners with such expertise;
- 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;

## Table of Contents

- 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 product candidates for our research and development and preclinical activities, or manufacture sufficient amounts of our product candidates to meet our clinical requirements and timelines, our business may be materially harmed.***

In order to develop our product candidates, apply for regulatory approvals and commercialize our product 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; the coronavirus outbreak or other similar global disruptions has made access to our existing supply chain difficult and further supply chain disruptions could impact our business. Additionally, our cost of goods development is at an early stage. The actual cost to manufacture and process our product candidates could be greater than expected and could materially and adversely affect the commercial viability of our product candidates.

Moreover, we license the LNP technology used to deliver our AATD product candidate, KRRO-110, from a third party. Although our current partner, Genevant Sciences GmbH, or Genevant, is a well established leader in the LNP space, and our preclinical studies of this LNP delivery technology have shown improved dose-dependent efficacy with reduced clinical chemistry and adverse events, there is no guarantee that this will be replicated in clinical trials. There is also no guarantee that we will continue to source the LNP delivery system for KRRO-110 from Genevant. The process of establishing and maintaining collaborative relationships and identifying and securing access to optimized delivery systems that are fit-for-purpose is difficult, time-consuming, and involves significant uncertainty. If the current arrangement with Genevant is terminated, our clinical development, manufacturing, or commercialization efforts for KRRO-110 could be delayed or terminated, while we secure an alternative delivery system, which could have a material adverse impact on our clinical development plans and business.

***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 product candidates expose us to various manufacturing challenges and risks, which may include delays in manufacturing adequate supply of our product 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 product 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 product 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 product candidate.

Although we continue to build on our experience in manufacturing oligonucleotides, we have limited experience as a company manufacturing product candidates for commercial supply. We may never be successful in manufacturing product 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 product 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 product 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 product 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 product candidate or indication and fail to capitalize on product 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 product 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 product 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 product 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 product candidate, we may relinquish valuable rights to that product 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 product candidate.

***We have not tested any of our proposed delivery methods or gene editing approaches in clinical trials and any favorable results we may have 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 product candidates using our RNA editing technology is both preliminary and limited. We have not tested any of our potential delivery modalities or gene editing approaches in clinical trials and any favorable results we may have may not be predictive of results that may be observed in later preclinical studies or clinical trials. For example, we may use LNPs or other delivery modalities to deliver our product candidates. While LNPs have been validated clinically to deliver oligonucleotides, such as siRNA, they have not been clinically proven to deliver oligonucleotides for RNA editing, such as our product candidates.

In addition, our 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. We have not generated any clinical trial results to date. The design of a clinical trial can determine whether its results will support approval of a product 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 product candidates performed satisfactorily in preclinical studies and clinical trials have nonetheless failed to obtain marketing approval of their product candidates. Many product 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 of the product candidates.

***Our future product 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 not evaluated any product candidates in human clinical trials. Moreover, there have been only a limited number of clinical trials involving the use of gene editing technologies and none involving RNA editing technology similar to our technology. It is impossible to predict when, or if, any product 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 European Commission, the EMA or other regulatory authorities could order us to cease further development of, or deny approval of, any future product 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 product candidates, the commercial prospects of such product candidates may be harmed and our ability to generate product revenues



## [Table of Contents](#)

from any of these product candidates may be delayed or eliminated. Any of these occurrences may harm our ability to develop other product candidates, and may adversely affect our business, financial condition, results of operations and prospects significantly.

Additionally, if any of our future product 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 future product candidates, several potentially significant negative consequences could result, including:

- regulatory authorities may suspend or withdraw approvals of such product candidate;
- we may be required to change the way a product 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 product candidates we develop, or experience significant delays in doing so, we may not realize the full commercial potential of any medicines we may develop.***

Our success may depend, in part, on our ability to identify patients who are likely to benefit from therapy with any medicines 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 product 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 product 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 medicines.

As a result of these factors, we may be unable to successfully develop and realize the commercial potential of any product 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 successfully develop or obtain regulatory approval for companion diagnostic tests for our product candidates, or experience significant delays in doing so, our clinical trials may be delayed and our business could be materially harmed.***

The development programs for some of our product candidates contemplate the development of companion diagnostic tests, which are assays or tests to identify an appropriate patient population. If safe and effective use of any of our product candidates we may develop depends on a companion diagnostic, we may not receive marketing approval, or marketing approval may be delayed, if we are unable to or are delayed in developing, identifying, or obtaining regulatory approval or clearance for the companion diagnostic product for use with our product candidate. Identifying a manufacturer of the companion diagnostic and entering into an agreement with the manufacturer could also delay the development of our product candidates.

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

We currently do not have an organization for the sales, marketing and distribution of any future product 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 product candidates, we may enter into strategic alliances with third parties to develop and commercialize any future product 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 product 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 product 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 product 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 product candidates, the market may not be receptive to our product candidates upon their commercial introduction, which will prevent us from becoming profitable.***

Our product 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 product 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 product 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 product 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

## Table of Contents

- the availability of alternative effective treatments for the diseases that product 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. 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;
- product 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 therapies. 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 product 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.

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 therapies, 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 product 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.

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

We expect that coverage and reimbursement by third-party payors will be essential for most patients to be able to afford any gene therapies for which we are able to successfully complete clinical development. Accordingly, sales of any future products will depend substantially, both domestically and internationally, on the extent to which the costs of any such products will be paid by health maintenance, managed care, pharmacy benefit and similar healthcare management organizations, or will be reimbursed by government authorities, private health coverage insurers and other third-party payors. 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 its investment. If we are unable to establish or sustain coverage and adequate reimbursement for any future product candidates from third-party payors, the adoption of those product candidates and sales revenue will be adversely affected, which, in turn, could adversely affect the ability to market or sell those product candidates, if approved.

There is significant uncertainty related to the insurance coverage and reimbursement of newly approved products in both the United States and globally. Outside the United States, international operations are generally subject to extensive governmental price controls and other market regulations, and we believe the increasing emphasis on cost-containment initiatives in the United States, the EU, Canada and other countries has and will continue to put pressure on the pricing and usage of therapeutics such as its product candidates. Moreover, increasing efforts by governmental and third-party payors, in the United States and internationally, to cap or reduce healthcare costs may cause such organizations to limit both coverage and level of reimbursement for new products approved and, as a result, they may not cover or provide adequate payment for our product candidates. We expect to experience pricing pressures in connection with the sale of any of our product candidates due to the trend toward managed healthcare, the increasing influence of certain third-party payors, such as health maintenance organizations, and additional legislative changes. For an overview and discussion of the regulatory framework for pricing and reimbursement, see “*Our Business—Government Regulation—Patients Rely on Insurance Coverage by Third-Party Payors (third-party payors include Medicare and Medicaid (government payors) and commercial insurance companies such as Blue Cross Blue Shield, Humana, Cigna, etc.) to Pay for Products.*”

***If the market opportunities for any product 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 product 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 product 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 product 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 product 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 product candidates that are designed to encourage the research and development of product 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 product candidates. See “*Our 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 product candidates, there can be no assurance that we will realize their intended benefits.

In the future, we may also seek approval of product candidates under the FDA’s accelerated approval pathway or request priority review. There can be no assurance that FDA would allow any of the product 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 EU, we may seek to participate in The PRIority Medicines, or PRIME scheme for our product 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 EU. There is no guarantee, however, that our product 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 “*Our Business—Government Regulation—Regulation Outside of the United States.*”

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

Our results of operations could be adversely affected by general conditions in the global economy and in the global financial markets. A severe or prolonged economic downturn, or additional global financial crises, could result in a variety of risks to our business, including weakened demand for any future product candidates, if approved, or 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. 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 fears concerning the financial services industry, inflation, rising interest rates and volatile market conditions, and other uncertainties beyond our control.***

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. For example, in March 2023, Silicon Valley Bank Signature Bank and Silvergate Capital Corp. were each swept into receivership by the Federal Deposit Insurance Corporation and then a syndicate of U.S. banks infused \$30 billion in First Republic Bank; and later that same week, the Swiss Central Bank provided \$54 billion in covered loan and short-term liquidity facilities to Credit Suisse Group AG, all in an attempt to reassure depositors and calm fears of a banking contagion.

## [Table of Contents](#)

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, changes in inflation, interest rates and overall economic conditions and uncertainties. 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. Increasing concerns over bank failures and bailouts and their potential broader effects and potential systemic risk on the banking sector generally and on the biotechnology industry and its participants may adversely affect our access to capital and our business and operations more generally. 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.

### ***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 future product 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 2022 a draft 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 homologues of any regulatory filings that we may submit. Moreover, the FDA or other foreign homologues 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 product 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 product 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 product 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.

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

Existing regulatory policies may change and additional government regulations may be enacted that could prevent, limit or delay regulatory approval of our product candidates. We cannot predict the likelihood, nature or extent of government regulation that may arise from future legislation or administrative action, either in the United States or abroad. If we are slow or unable to adapt to changes in existing requirements or the adoption of new requirements or policies, or if we are not able to maintain regulatory compliance, we may lose any marketing approval that we may have obtained and we may not achieve or sustain profitability. For more information, see the section below titled “*Our Business—Governmental Regulation.*”

## [Table of Contents](#)

We cannot predict the ultimate content, timing or effect of any healthcare reform legislation or the impact of potential legislation on us. In addition, other legislative changes have been proposed and adopted since the ACA was enacted. We may choose to seek an expanded access program for our product candidates, or to utilize comparable rules in other countries that allow the use of a drug, on a named patient basis or under a compassionate use program.

We expect that the ACA, as well as other healthcare reform measures that may be adopted in the future, may result in more rigorous coverage criteria and in additional downward pressure on the price that we receive for any approved product. 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. Any reduction in reimbursement from Medicare or other government programs may result in a similar reduction in payments from private payors. The implementation of cost containment measures or other healthcare reforms may prevent us from being able to generate revenue, attain profitability, or commercialize our product candidates.

Legislative and regulatory proposals have been made to expand post-approval requirements and restrict sales and promotional activities for pharmaceutical products. We cannot be sure whether additional legislative changes will be enacted, or whether FDA regulations, guidance or interpretations will be changed, or what the impact of such changes on the marketing approvals of our product candidates, if any, may be. In addition, increased scrutiny by the U.S. Congress of the FDA's approval process may significantly delay or prevent marketing approval, as well as subject us to more stringent product labeling and post-marketing testing and other requirements.

***Because we are developing product candidates in the field of genetic medicines in which there is little clinical experience, there is increased risk that the FDA, the EMA 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 product 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 product 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 product candidates we may develop. As we are initially seeking to identify and develop product 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 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 EU and other countries may make similar comments with respect to these endpoints and data. Any product 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 gene 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, such as uniQure N.V.'s Glybera and

## [Table of Contents](#)

Abecma from Bristol Myers Squibb and bluebird bio, 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.

***If preclinical studies or clinical trials of any product candidates we may identify and develop 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 product candidates.***

Before obtaining marketing approval from regulatory authorities for the sale of any product candidates we may identify and develop, we must complete preclinical development and then conduct extensive clinical trials to demonstrate the safety and efficacy in humans. Clinical testing is expensive, difficult to design and implement, can take many years to complete, and is uncertain as to outcome. A failure of one or more clinical trials can occur at any stage of testing. The outcome of preclinical 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 product candidates performed satisfactorily in preclinical studies and clinical trials have nonetheless failed to obtain marketing approval of their product candidates.

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 product candidates we may identify and develop, including:

- delays in reaching a consensus with regulators on trial design;
- regulators, 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 product 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 of any product candidates we may develop 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 we are targeting in our most advanced programs, 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 product 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;



## Table of Contents

- the cost of clinical trials of any product candidates we may develop may be greater than we anticipate;
- the supply or quality of any product candidates we may develop or other materials necessary to conduct clinical trials of any product candidates we may develop may be insufficient or inadequate, including as a result of delays in the testing, validation, manufacturing, and delivery of any product candidates we may develop 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 product candidates we may develop 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 product candidates we may develop beyond those that we currently contemplate, if we or our collaborators are unable to successfully complete clinical trials or other testing of any product candidates we may develop, 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 product candidates we may develop or not obtain marketing approval at all;
- 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 product 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 product candidates we may develop, any of which may harm our business, financial condition, results of operations, and prospects.

## Table of Contents

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

Clinical trials of a new product candidate require the enrollment of a sufficient number of patients, including patients who are suffering from the disease the product candidate is intended to treat and who meet other eligibility criteria. Rates of patient enrollment are affected by many factors, including the COVID-19 global pandemic or emerging or future variants of COVID-19, the size of the patient population, the age and condition of the patients, 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. 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.

***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 product candidate and the approval may be for a narrower indication than we seek.***

Prior to commercialization, any of our product 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 product candidates involved. Failure to obtain marketing approval for a product candidate will prevent us from commercializing the product candidate. We have not received approval to market any of our product 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 product 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 product candidates may not be effective, may be only moderately effective or may prove to have undesirable or unintended side effects, toxicities or other characteristics that may preclude 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 product candidate.

Approval of any of our product 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 product candidates are safe and effective for any of their proposed indications;
- the results of clinical trials may not meet the level of statistical significance required by the FDA or comparable foreign regulatory authorities for approval;
- We may be unable to demonstrate that our product candidates' clinical and other benefits outweigh their safety risks;

## Table of Contents

- 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 product 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 product 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 product 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 product 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 product candidates. Any of the foregoing scenarios could materially harm the commercial prospects for our product 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 product candidates and our ability to generate revenue will be materially impaired.***

Our product 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 product 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 product 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 product candidate for which we are seeking approval. Furthermore, any regulatory approval to

## [Table of Contents](#)

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 product candidate 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 product candidates, when and if any of them are approved.***

Our product 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 product 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 product candidates, manufacturers or manufacturing processes, or failure to comply with regulatory requirements, may yield various results, including:

- restrictions on such product 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;

## Table of Contents

- refusal to approve pending applications or supplements to approved applications that we may submit;
- recall of product candidates;
- fines, restitution or disgorgement of profits or revenues;
- suspension or withdrawal of marketing approvals;
- refusal to permit the import or export of our product 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 product 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, 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 product 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 product 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 product 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.

## [Table of Contents](#)

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.

***Any drugs we develop may become subject to unfavorable pricing regulations, third-party reimbursement practices or healthcare reform initiatives, thereby harming our business.***

Because our product 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 product 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.

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 product 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.

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.

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. A number of legislative and regulatory changes in the healthcare system in the United States and other major healthcare markets have been proposed and/or adopted in recent years, and such efforts have expanded substantially in recent years. For more information on these changes, see the section below titled “*Our Business—Governmental Regulation—Affordable Care Act and Legislative Reform Measures.*” It is unclear how any additional healthcare reform measures may increase the pressure on drug pricing or limit the availability of coverage and adequate reimbursement for our future candidates. We expect ongoing initiatives in the United States to increase pressure on drug pricing and reimbursement. Such reforms could have an adverse effect on anticipated revenues from product candidates that we may successfully develop and for which we may obtain regulatory approval and may affect our overall financial condition and ability to develop product candidates.

***We may not be able to obtain orphan drug exclusivity for one or more of our product 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 product 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 product candidates by the EMA in the EU. 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 product candidate 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 EU. The exclusivity period in the EU 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 product candidates, the agency must find that the product candidate is indicated for the treatment of a condition or disease that affects fewer than

## Table of Contents

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 product 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 product candidate, that exclusivity may not effectively protect the product candidate from competition because different product candidates can be approved for the same condition. In addition, even after an orphan drug is approved, the FDA can subsequently approve the same product candidate for the same condition if the FDA concludes that the later product candidate 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 new legislation 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. 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 violates 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, or may in the future, be subject to federal, state, local, and comparable foreign healthcare laws and regulations relating to areas such as fraud and abuse and patients' rights. These laws may constrain the business or financial arrangements and relationships through which we conduct our operations, including how we research, market, sell and distribute our products for which we obtain marketing approval. For more information on these laws, see the section below titled "*Our Business—Governmental Regulation—Other Healthcare Laws.*"



## Table of Contents

If our operations are found to be in violation of any such requirements, we may be subject to penalties, including civil or criminal penalties, criminal prosecution, monetary damages, the curtailment or restructuring of our operations, loss of eligibility to obtain approvals from the FDA, exclusion from participation in federal healthcare programs including Medicare and Medicaid, the imposition of a corporate integrity agreement with the Office of Inspector General of the Department of Health and Human Services, disgorgement, individual imprisonment, contractual damages, reputational harm, and diminished profits and future earnings, any of which could adversely affect our financial results and adversely affect our ability to operate our business. We intend to develop and implement a comprehensive corporate compliance program prior to the commercialization of our product candidates. Although effective compliance programs can mitigate the risk of investigation and prosecution for violations of these laws, these risks cannot be entirely eliminated. Any action against us for an alleged or suspected violation could cause us to incur significant legal expenses, could divert our management's attention from the operation of our business, and could harm our reputation, even if our defense is successful. In addition, achieving and sustaining compliance with applicable laws and regulations may be costly to us in terms of money, time and resources.

If we or our collaborators, manufacturers or service providers fail to comply with applicable federal, state or foreign laws or regulations, we could be subject to enforcement actions, which could affect our ability to develop, market and sell our products successfully and could harm our reputation and lead to reduced acceptance of our products by the market. These enforcement actions include, among others:

- adverse regulatory inspection findings;
- warning and/or untitled letters;
- voluntary or mandatory product recalls or public notification or medical product safety alerts to healthcare professionals;
- restrictions on, or prohibitions against, marketing our products;
- restrictions on, or prohibitions against, importation or exportation of our products;
- suspension of review or refusal to approve pending applications or supplements to approved applications;
- exclusion from participation in government-funded healthcare programs;
- exclusion from eligibility for the award of government contracts for our products;
- suspension or withdrawal of product approvals;
- product seizures;
- injunctions;
- consent decrees; and
- civil and criminal penalties, up to and including criminal prosecution resulting in fines, exclusion from healthcare reimbursement programs and imprisonment.

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.

## [Table of Contents](#)

### ***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 product candidates we may develop and will face an even greater risk if we commercially sell any medicines that we may develop. If we cannot successfully defend ourselves against claims that our product 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 product candidates or medicines 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 medicine. 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. While we have not experienced any such material system failure, or accident, and are unaware of any security breach to date, if such an event were to occur and cause interruptions in

our operations, it could result in a material disruption of our development programs and our business operations, 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 product candidates could be significantly delayed.

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

Cyberattacks are increasing in their frequency, sophistication and intensity, and have become increasingly difficult to detect. Cyberattacks could include wrongful conduct by hostile foreign governments, industrial espionage, wire fraud and other forms of cyber fraud, the deployment of harmful malware, denial-of-service, social engineering fraud or other means to threaten data confidentiality, integrity and availability. A successful cyberattack 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. To date, we have not experienced a material compromise of our data or information systems. However, although we devote resources to protect our information systems, we realize that cyberattacks are a threat, and there can be no assurance that our efforts will prevent information security breaches that would 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.

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

To market and sell our future product 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 product 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 product 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 product candidates by regulatory authorities in another country may significantly diminish the commercial prospects of that product candidate and our business prospects could decline.

***Disruptions at the FDA and other government agencies caused by 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 government budget and funding levels, statutory, regulatory, and policy changes, the FDA's ability to

## [Table of Contents](#)

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. Disruptions at the FDA and other agencies may also slow the time necessary for new drugs or modifications to approved drugs to be reviewed and/or approved by necessary government agencies, which would adversely affect our business. For example, the U.S. government has shut down several times and certain regulatory agencies, such as the FDA, have had to furlough critical FDA employees and stop critical activities.

***We are subject to a variety of privacy and data security laws, 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 constantly evolving. The collection, use, disclosure, transfer or other processing of personal data originating from the European Economic Area, or EEA, and United Kingdom, or UK, 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 "*Our 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.

### ***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 product 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 a third party to supply LNPs, or to conduct some of our preclinical animal experiments. 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.

## [Table of Contents](#)

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 future product candidates or successfully commercializing or competing in the market for certain indications.***

In the future, we may decide to collaborate with non-profit organizations, universities, pharmaceutical and biotechnology companies for the development and potential commercialization of existing and new product candidates. We face significant competition in seeking appropriate collaborators. Whether we reach a definitive agreement for a collaboration will depend, among other things, upon our assessment of the collaborator's resources and expertise, the terms and conditions of the proposed collaboration and the proposed collaborator's evaluation of a number of factors. Those factors may include the design or results of clinical trials, the likelihood of approval by the FDA or similar regulatory authorities outside the United States, the potential market for the subject product candidate, the costs and complexities of manufacturing and delivering such product candidate to patients, the potential of competing 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 product candidates or technologies for similar indications that may be available to collaborate on and whether such a collaboration could be more attractive than the one with us for its product candidate. 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 product 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 product candidates or bring them to market and generate product revenue.

The success of any potential collaboration arrangements will depend heavily on the efforts and activities of our collaborators. Collaborators generally have significant discretion in determining the efforts and resources that they will apply to these collaborations. Disagreements between parties to a collaboration arrangement regarding clinical development and commercialization matters can lead to delays in the development process or commercializing the applicable product candidate and, in some cases, termination of 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;
- 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 product 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 our 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

## Table of Contents

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 product candidates for our research, preclinical and clinical activities, and may do the same for commercial supplies of our product candidates.***

We have not yet manufactured our product candidates on a commercial scale, and may not be able to do so for any of our product 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 product candidate. 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 product 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 product 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 product 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 ourselves, 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 product 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 product candidates or materials. In some cases, the technical skills or technology required to manufacture our product candidates may be unique or proprietary to the original manufacturer and we may have difficulty, 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 product candidates. If we are required to change manufacturers for any reason, we will be required to verify that the new manufacturer maintains facilities and procedures that comply with quality standards and with all applicable regulations and guidelines. The delays associated with the verification of a new manufacturer could negatively affect our ability to develop product candidates in a timely manner or within budget.

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 product candidates. If we are unable to obtain or maintain third-party manufacturing for product candidates, or to do so on commercially reasonable terms, we may not be able to develop and commercialize our product 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.

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

Healthcare providers, physicians, and third-party payors play a primary role in the recommendation and prescription of any product candidates that we may develop for which we obtain marketing approval. Our future arrangements with third-party payors and customers may expose us to broadly applicable fraud and abuse and other healthcare laws and regulations that may constrain the business or financial arrangements and relationships through which we market, sell, and distribute our medicines for which we obtain marketing approval. Restrictions under applicable federal and state healthcare laws and regulations listed in the section above titled “*Risks Related to Regulatory, Legal, and Clinical Trials*”, including certain laws and regulations applicable only if we have marketed products.

Some state laws also require pharmaceutical companies to comply with specific compliance standards, restrict financial interactions between pharmaceutical companies and healthcare providers or require pharmaceutical companies to report information related to payments to health care providers or marketing expenditures.

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. If our operations are found to be in violation of any of the laws described above or any other government regulations that apply to us, we may be subject to penalties, including civil and criminal penalties, damages, fines, exclusion from participation in government health care programs, such as Medicare and Medicaid, imprisonment, and the curtailment or restructuring of our operations, any of which could adversely affect our business, financial condition, results of operations, and prospects.

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



## [Table of Contents](#)

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.

### ***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. In addition, 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. Failure to successfully recruit and retain personnel could impact our anticipated development plans and timelines. For example, as a result of the COVID-19 pandemic, 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 product 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 product candidates and implement our business plan will be limited.

***We expect 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 growth, which could disrupt our operations.***

Immediately after completion of the Merger, we had 95 full-time employees, including 32 who hold Ph.D. degrees, and one part-time employee; 72 employees are engaged in research and development and 24 employees in management or general and administrative activities. In connection with the growth and advancement of our pipeline and becoming a public company through the Merger, we expect to increase the number of our

## Table of Contents

employees and the scope of our operations, particularly in the areas of drug development, regulatory affairs 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. 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 expansion of our operations or recruit and train additional qualified personnel. Moreover, our current physical laboratory space may be insufficient for our near-term research and development hiring plans, and the expected physical expansion of our operations may lead to significant costs and may divert our management and business development resources. Any inability to manage growth could delay the execution of our business plans or disrupt our operations.

As a growing biotechnology company, we are actively pursuing new platforms and product candidates in many therapeutic areas and across a wide range of diseases. Successfully developing product 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, we may not be able to effectively manage this simultaneous execution and the expansion of our operations or 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, 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 product 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 product 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 product candidates, development and commercialization of our product 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 product candidates and platform technologies, as well as for methods used to manufacture our product candidates, and methods for treating patients for approved indications using our product 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. § 271(e)(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., a New Drug Application, or NDA, in the United States). Therefore, the risk that a third party might allege patent infringement may increase as our product 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

## [Table of Contents](#)

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 product candidates. Further, if we encounter delays in regulatory approvals, the period of time during which we could market a product 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 product 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 product 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 product 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 product 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 product 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.

## [Table of Contents](#)

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 product 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 product 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 product 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 product candidates and RNA editing technology. While we will endeavor to try to protect our product 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 and our product candidates and issued patents may not provide.***

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 product 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 result in issued patents with claims that cover our product 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 their inventorship, validity, enforceability or scope, including through opposition, revocation, reexamination, post-grant and *inter partes* review proceedings. An adverse determination in any such submission, 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 product 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 product candidates is threatened, it could dissuade companies from collaborating with us to develop, and threaten our ability to commercialize our product candidates. Further, if we encounter delays in development, testing, and regulatory review of new product candidates, the period of time during which we could market our product 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 products.***

Other parties have developed technologies that may be related or competitive to our, and such parties may have filed or may file patent applications, or may have received or may receive patents, claiming inventions that may overlap or conflict with those claimed in our own patent applications or issued patents, with respect to either the same methods or formulations or the same subject matter, in either case, that we may rely upon to dominate our patent position in the market. Publications of discoveries in the scientific literature often lag behind the actual discoveries, and patent applications in the United States and other jurisdictions are typically not published until 18 months after filing, or in some cases not at all. Therefore, we cannot know with certainty whether we were the first to make the inventions claimed in our owned or licensed 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, we are also possible that prior art may exist that we are aware of but does 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 file infringement claims, which can be expensive and time-consuming. If we initiate legal proceedings against a third party to enforce a patent covering one of our product candidates, the defendant could counterclaim that the patent covering our product or product candidate 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 following legal allegations of invalidity and unenforceability during patent litigation is 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 defendant 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 product candidates. The outcome following legal assertions of invalidity and unenforceability is unpredictable. With respect to the validity question, for example, we cannot be certain that there is no invalidating prior art, of which we, our patent counsel and the patent examiner were unaware during prosecution. If a defendant were to prevail on a legal assertion of invalidity and/or unenforceability, we would lose at least part, and perhaps all, of the patent protection on our product 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.

An unfavorable outcome could require us to cease using the related technology or force us to take a license under the patent rights of the prevailing party, if available. Furthermore, our business could be harmed if the

prevailing party does not offer a license on commercially reasonable terms. Our defense of litigation or interference proceedings may fail and, even if successful, may result in substantial costs and distract our management and other employees. We may not be able to prevent misappropriation of our intellectual property rights, particularly in countries where the laws may not protect those rights as fully as in the United States.

Even if we establish infringement of any of our patents by a competitive product, 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 product 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 interference, derivation, *inter partes* review, post grant review, and reexamination proceedings before the USPTO or oppositions and other comparable proceedings in foreign jurisdictions. We may be exposed to, or threatened with, future litigation by third parties having patent or other intellectual property rights alleging that our product candidates and/or proprietary technologies infringe, 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 product candidates. As the biotechnology and pharmaceutical industries expand and more patents are issued, the risk increases that our product candidates may give rise to claims of infringement of the patent rights of others. Moreover, it is not always clear to industry participants,

## [Table of Contents](#)

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 product 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 product 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 product candidate or technology at issue infringes on or violates the third party's rights, and, if the court finds that the infringement was willful, we could be ordered to pay treble damages plus the patent owner's attorneys' fees;
- a court prohibiting us from developing, manufacturing, marketing or selling our product candidates, or from using our proprietary technologies, unless the third party licenses its product rights to us, which it is not required to do, 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 product candidates;
- the requirement that we redesign our product 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 its product 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 product candidates may infringe. In addition, third parties may obtain patents in the future and claim that use of our technologies infringes upon these patents.

If any third-party patents were held by a court of competent jurisdiction to cover the manufacturing process of our product candidates, 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 product candidate 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



## [Table of Contents](#)

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 product 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 product 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 product candidates.

Parties making claims against us may seek and obtain injunctive or other equitable relief, which could effectively block our ability to further develop and commercialize our product candidates. Defense of these claims, regardless of their merit, would involve substantial litigation expense and would be a substantial diversion of employee 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 product 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 product candidates, which could significantly harm our business.

Likewise, our patents and patent applications, if issued as patents, directed to our proprietary technologies and our product candidates are expected to expire from 2040 through 2044, 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 product 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 product 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 product 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 product 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 product 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 product 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 product 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. 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.

## Table of Contents

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 product candidate, 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,

## [Table of Contents](#)

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 in a partial or complete loss of patent rights in the relevant jurisdiction. Were a non-compliance 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 product candidates in all countries throughout the world would be prohibitively expensive, and our intellectual property rights in some countries outside the United States can be less extensive than those in the United States. In addition, the laws of 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 product 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 and product 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 product candidates or 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.

## [Table of Contents](#)

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. For example, the United States and foreign government actions related to Russia's invasion of Ukraine may limit or prevent filing, prosecution and maintenance of patent applications in Russia. Government actions may also prevent maintenance of issued patents in Russia. These actions could result in abandonment or lapse of patents or patent applications, resulting in partial or complete loss of patent rights in Russia. If such an event were to occur, it could have a material adverse effect on our business. In addition, a decree was adopted by the Russian government in March 2022, allowing Russian companies and individuals to exploit inventions owned by patentees that have citizenship or nationality in, are registered in, or have predominately primary place of business or profit-making activities in the United States and other countries that Russia has deemed unfriendly without consent or compensation. Consequently, we would not be able to prevent third parties from practicing our inventions in Russia or from selling or importing products made using our inventions in and into Russia. 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 or applications, 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 and product 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

## [Table of Contents](#)

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 regards 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 product candidates for an adequate amount of time.***

Patents have a limited lifespan. The terms of individual patents depends 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 PTE and PTA, may be available, but the life of a patent, and the protection it affords, is limited. For more information regarding PTA and PTE, please see "*Our Business—Intellectual Property*". Even if patents covering our product candidates are obtained, once the patent life has expired, we may be open to competition from competitive products, including generics. Given the amount of time required for the development, testing and regulatory review of new product candidates, patents protecting our product 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 product candidates we may develop, our business may be materially harmed.***

Depending upon the timing, duration and specifics of any FDA marketing approval of any product candidates we may develop, one or more of our U.S. patents may be eligible for limited 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 product 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 product 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 product 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;



## Table of Contents

- the claims of our issued patents or patent applications, if and when issued, may not cover our product 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 might conduct research and development activities in countries where we do not have patent rights and then use the information learned from such activities to develop competitive products for sale in our major commercial markets;
- we have engaged in scientific collaborations in the past 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 product 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;
- our competitors may conduct research and development activities in countries where we do not have enforceable patent rights and then use the information learned from such activities to develop competitive products for sale in our major commercial markets;
- 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 product candidates.***

Our use of open source software could impose limitations on our ability to commercialize our product 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

## [Table of Contents](#)

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 product candidates. We could be required to seek licenses from third parties in order to continue offering our product candidates, to re-engineer our product candidates or to discontinue the sale of our product 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.

***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 product 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.

### ***General Risk Factors***

***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 ourselves 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.

**Risks Related to Our Operations Following the Merger**

If any of the events described in “*Risks Related to Our Business*” occur, those events could cause potential benefits of the Merger not to be realized. To the extent any of the events in the risks described in that section occurs, the potential benefits of the Merger may not be realized and our results of operations and financial condition could be adversely affected in a material way. This could cause the market price of our common stock to decline.

***The market price of our common stock is expected to be volatile, and the market price of our common stock may drop following the Merger.***

The market price of our common stock following the Merger could be subject to significant fluctuations. 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 product 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;
- if we do not achieve the perceived benefits of the Merger as rapidly or to the extent anticipated by financial or industry analysts;
- 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 product 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 product candidates;
- trading volume of our common stock;

## Table of Contents

- 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 product 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.

### ***Following the Merger, we may be unable to successfully integrate Frequency's and our businesses and realize the anticipated benefits of the Merger.***

The Merger involved the combination of two companies that operated as independent companies. Following the Merger, we are required to devote significant management attention and resources to integrating our business practices and operations. We may fail to realize some or all of the anticipated benefits of the Merger if the integration process takes longer than expected or is more costly than expected. Potential difficulties we may encounter in the integration process include the following:

- the inability to successfully combine our businesses in a manner that permits us to achieve the anticipated benefits from the Merger, which would result in the anticipated benefits of the Merger not being realized partly or wholly in the time frame currently anticipated or at all;
- creation of uniform standards, controls, procedures, policies and information systems; and
- potential unknown liabilities and unforeseen increased expenses, delays or regulatory conditions associated with the Merger.

In addition, prior to the Merger, we operated independently. It is possible that the integration process also could result in the diversion of our management's attention, the disruption or interruption of, or the loss of momentum in our ongoing businesses or inconsistencies in standards, controls, procedures and policies, any of which could adversely affect our ability to maintain our business relationships or the ability to achieve the anticipated benefits of the Merger, or could otherwise adversely affect our business and financial results.

### ***We will incur additional costs and increased demands upon management as a result of complying with the laws and regulations affecting public companies.***

We will incur significant legal, accounting and other expenses operating Legacy Korro's business as a public company that it did not incur as a private company, including costs associated with public company reporting obligations under the Securities Exchange Act of 1934, as amended, or the Exchange Act. Our new post-Merger 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

## [Table of Contents](#)

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 Legacy Korro's 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 an emerging growth company, 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 an emerging growth company, 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 as well as an exemption from the "say on pay" voting requirements pursuant to the Dodd-Frank Wall Street Reform and Consumer Protection Act of 2010. We will no longer qualify as an emerging growth company after December 31, 2023. After we no longer qualify as an emerging growth company, we expect to still qualify as a "smaller reporting company," as such term is defined in Rule 12b-2 under the Exchange Act, in at least the near term, which will allow us to take advantage of many of the same exemptions from disclosure requirements, including not being required to comply with the auditor attestation requirements of Section 404 of the Sarbanes-Oxley Act and reduced disclosure obligations regarding executive compensation in our periodic reports and proxy statements. Once we are no longer an emerging growth company or 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 controls 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.

## [Table of Contents](#)

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 unaudited pro forma condensed combined financial information included in this prospectus are preliminary, and our actual financial position and operations after the Merger may differ materially from the unaudited pro forma financial information included in this prospectus.***

Our unaudited pro forma financial information included herein is presented for illustrative purposes only and is not necessarily indicative of our actual financial condition or results of operations of future periods, or the financial condition or results of operations that would have been realized had the entities been combined during the period presented. Our actual results and financial position after the Merger may differ materially and adversely from the unaudited pro forma financial information included in this prospectus. See “*Unaudited Pro Forma Condensed Combined Financial Information*” of this prospectus.

***Our restated certificate of incorporation, as amended, or Charter, and amended and restated bylaws, or 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 the Charter 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 the Charter or Bylaws.

Moreover, because we are incorporated in Delaware, we are governed by the provisions of Section 203 of the Delaware General Corporation Law, or DGCL, which prohibits stockholders owning in excess of 15% of our

## Table of Contents

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.

The 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.

The 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, Charter or 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. The 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, the 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 its 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 the 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 develop and our stockholders may not be able to resell their shares of common stock for a profit, if at all.***

An active trading market for our shares of common stock may never develop or be sustained. If an active market for our common stock does not 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 after legal restrictions on resale discussed in this prospectus lapse, the trading price of our

## [Table of Contents](#)

common stock could decline. Based on shares outstanding as of November 3, 2023, after giving effect to the Merger and the 1-for-50 reverse stock split effected immediately prior thereto, we have outstanding a total of approximately 8,001,283 shares of common stock as of immediately following the completion of the Merger. Of the shares of common stock, approximately 5,063,049 shares will be available for sale in the public market beginning 180 days after the closing of the Merger as a result of the expiration of certain lock-up agreements. All other outstanding shares of common stock, other than shares held by our affiliates and shares issued in exchange for shares of Legacy Korro's common stock issued in the Pre-Closing Financing will be freely tradable, without restriction, in the public market. In addition, shares of common stock that are subject to our outstanding options or warrants will become eligible for sale in the public market to the extent permitted by the provisions of various vesting agreements and Rules 144 and 701 under the Securities Act. If these shares are sold, the trading price of our common stock could decline.

### ***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 following the Merger, 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 the proceeds from the Pre-Closing Financing and may invest or spend the proceeds 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, including the proceeds from the Pre-Closing Financing. You may not agree with our decisions, and our use of the proceeds 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 of these net proceeds. You will not have the opportunity to influence our decisions on how to use our cash resources.

### ***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.



## [Table of Contents](#)

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. 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 use NOL carryforwards and other tax attributes may be limited, including as a result of the Merger.***

Our ability to utilize NOL carryforwards and other tax attributes to offset future taxable income or tax liabilities may be limited as a result of ownership changes, including, as discussed below, in connection with the Merger or other transactions. Similar rules may apply under state tax laws. If we earn taxable income, such limitations could result in increased future income tax liability to us, and our future cash flows could be adversely affected.

For a more complete discussion of the risks related to the net operating loss carryforwards and certain of our other tax attributes, please see the discussion under “*Risk Factors—Risks Related to Our Financial Position and Need for Capital—Our ability to utilize our net operating loss, or NOL, carryforwards and certain other tax attributes may be limited.*”

### ***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 product candidates and our ability to raise additional capital when needed on acceptable terms, if at all. A weak or declining economy could also strain our suppliers, possibly resulting in supply disruption, or cause our customers to delay making payments for our services. Any of the foregoing could harm our business and we cannot anticipate all of the ways in which the current economic climate and financial market conditions could adversely impact our business.

## USE OF PROCEEDS

This prospectus relates to the potential resale from time to time of some or all of 1,714,570 shares of our common stock. The selling stockholders will receive all of the proceeds from any sale of such shares. We will not receive any proceeds from any sales of shares of our common stock by the selling stockholders.

We have agreed to bear the expenses in connection with the registration of the shares of common stock to be offered by this prospectus by the selling stockholders other than any underwriting discounts and commissions or transfer taxes relating to the sale of common stock, which will be borne by the selling stockholders.

## MARKET INFORMATION FOR COMMON STOCK AND DIVIDEND POLICY

### Market Information

Our common stock is currently listed on the Nasdaq Capital Market under the symbol “KRRO.” Prior to the consummation of the Merger, the Common Stock was listed on the Nasdaq Capital Market under the symbol “FREQ.”

As of November 29, 2023, we had approximately 8,011,438 shares of Common Stock issued and outstanding held of record by 119 registered 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.

### Dividends

We have never declared or paid cash dividends on our capital stock. We intend to retain all available funds and any future earnings for use in the operation of our business and do not anticipate paying any cash dividends on our capital stock in the foreseeable future. Notwithstanding the foregoing, any determination to pay cash dividends will be at the discretion of our board of directors and will depend upon a number of factors, including our results of operations, financial condition, future prospects, contractual restrictions, restrictions imposed by applicable law and other factors our board of directors deems relevant.

## UNAUDITED PRO FORMA CONDENSED COMBINED FINANCIAL INFORMATION

The unaudited pro forma condensed combined balance sheet data assumes that the Merger took place on September 30, 2023, and combines the historical balance sheets of Frequency and Legacy Korro as of such date. The unaudited pro forma condensed combined statements of operations and comprehensive loss for the nine-month period ended September 30, 2023 and for the year ended December 31, 2022 assumes that the Merger took place as of January 1, 2022 and combines the historical results of Frequency and Legacy Korro for the period then ended. The unaudited pro forma condensed combined financial information was prepared pursuant to the rules and regulations of Article 11 of SEC Regulation S-X.

The unaudited pro forma condensed combined financial information is provided for illustrative purposes only, does not necessarily reflect what the actual consolidated results of operations would have been had the acquisition occurred on the dates assumed and may not be useful in predicting the future consolidated results of operations or financial position. The unaudited pro forma condensed combined financial information is based on the assumptions and adjustments that are described in the accompanying notes. Accordingly, the pro forma adjustments are preliminary, subject to further revision as additional information becomes available and additional analyses are performed and have been made solely for the purpose of providing unaudited pro forma condensed combined financial information. Differences between these preliminary estimates and the final accounting, expected to be completed after the closing of the Merger, will occur and these differences could have a material impact on the accompanying unaudited pro forma condensed combined financial information and the combined company's future results of operations and financial position. Differences between the preliminary estimates and final amounts will likely occur as a result of the amount of cash used for Frequency's operations, changes in the fair value of Frequency common stock, or other changes in Frequency's assets and liabilities.

The unaudited pro forma condensed combined financial information does not give effect to the potential impact of current financial conditions, regulatory matters, operating efficiencies or other savings or expenses that may be associated with the integration of the two companies. The actual results reported in periods following the Merger may differ significantly from those reflected in the unaudited pro forma condensed combined financial information presented herein for a number of reasons, including, but not limited to, differences in the assumptions used to prepare this unaudited pro forma condensed combined financial information.

The unaudited pro forma condensed combined financial information, including the notes thereto, should be read in conjunction with the separate historical financial statements of each of Legacy Korro and Frequency, as well as the disclosures contained in the sections entitled "*Korro Bio Management's Discussion and Analysis of Financial Condition and Results of Operations*" and "*Frequency Management's Discussion and Analysis of Financial Condition and Results of Operations*."

Accounting rules require evaluation of certain assumptions, estimates, or determination of financial statement classifications. The accounting policies of Frequency may materially vary from those of Legacy Korro. During preparation of the unaudited pro forma condensed combined financial information, management has performed a preliminary analysis and is not aware of any material differences, and accordingly, this unaudited pro forma condensed combined financial information assumes no material differences in accounting policies. Management is in the process of conducting a final review of Frequency's accounting policies in order to determine if differences in accounting policies require adjustment or reclassification of Frequency's results of operations or reclassification of assets or liabilities to conform to Legacy Korro's accounting policies and classifications. As a result of this review, management may identify differences that, when conformed, could have a material impact on these unaudited pro forma condensed combined financial statements.

### **Description of the Merger**

On July 14, 2023, Frequency Therapeutics, Inc., a Delaware corporation, or Frequency, entered into an Agreement and Plan of Merger, or the Merger Agreement, with Korro Bio, Inc., a Delaware corporation, or Legacy Korro, and Frequency Merger Sub, Inc., a Delaware corporation and wholly owned subsidiary of Frequency, or Merger Sub. On November 3, 2023, Merger Sub merged with and into Legacy Korro, with Legacy Korro surviving

## [Table of Contents](#)

the Merger as a wholly owned subsidiary of Frequency, or the Merger. The Merger qualifies as a “reorganization” within the meaning of Section 368(a) of the Code. In connection with the closing of the Merger, the combined company changed its name to “Korro Bio, Inc.” and Legacy Korro changed its name to “Korro Bio Ops, Inc.”.

On November 3, 2023 at the time the certificate of merger was filed with and accepted by the Secretary of State of the State of Delaware, or the Effective Time, (i) each share of Legacy Korro common stock was converted into the right to receive a number of shares of Frequency common stock determined at the closing of the Merger equal to the total number of shares of Frequency common stock issued in the Merger multiplied by the applicable Legacy Korro stockholder’s percentage interest in Legacy Korro as set forth in the allocation certificate provided by Legacy Korro, or the Allocation Certificate, at closing. Each option to purchase shares of Legacy Korro common stock that was outstanding as of immediately prior to the Effective Time was automatically converted into an option to acquire the number of shares of Frequency common stock equal to the number of shares of Legacy Korro common stock subject to such option as of immediately prior to the Effective Time multiplied by the option exchange ratio provided for in the Merger Agreement and rounding that result down to the nearest whole number of shares. Each warrant to purchase shares of Legacy Korro common stock that was outstanding and unexercised as of immediately prior to the Effective Time and after giving effect to the automatic conversion of the Legacy Korro preferred stock was converted into and became a warrant to purchase Frequency common stock, and Frequency assumed each Legacy Korro warrant.

Immediately prior to the Merger, all then issued and outstanding shares of Legacy Korro’s preferred stock automatically converted into shares of Legacy Korro common stock, and no shares of Legacy Korro preferred stock were outstanding at the Effective Time. In addition, immediately prior to the Merger, Legacy Korro issued approximately \$117.3 million of its common stock in a private placement, or the Pre-Closing Financing.

The stockholders of Frequency immediately prior to the Effective Time own approximately 9% of the aggregate number of outstanding shares of Frequency common stock immediately after the Effective Time, and the stockholders of Legacy Korro immediately prior to the Effective Time own approximately 91% of the aggregate number of outstanding shares of Frequency common stock immediately after the Effective Time on a fully-diluted basis, subject to certain assumptions, including, but not limited to (a) a valuation for Frequency equal to its net cash as of the business day immediately prior to the closing date of the Merger, plus \$16.9 million, (b) a valuation for Legacy Korro equal to \$325.6 million and (c) Legacy Korro issuing approximately \$117.3 million of Legacy Korro common stock in the Pre-Closing Financing.

The following unaudited pro forma condensed combined financial information gives effect to the Merger, which has been accounted for as a reverse recapitalization under United States Generally Accepted Accounting Principles, or U.S. GAAP. Legacy Korro is considered the accounting acquirer for financial reporting purposes. This determination was based on the fact that, immediately following the Merger: (i) Legacy Korro stockholders own a substantial majority of the voting rights of the combined organization; (ii) Legacy Korro designated a majority (four of six) of the initial members of the board of directors of the combined organization (and has the right to designate an additional director); and (iii) Legacy Korro’s senior management hold all key positions in senior management of the combined organization. The transaction was accounted for as a reverse recapitalization of Frequency by Legacy Korro because on the effective date of the Merger, the pre-combination assets of Frequency were primarily cash and other non-operating assets. The fair value of any in process research and development assets potentially still remaining as of the combination were de-minimis when compared to the cash and investments obtained through the transaction.

As a result of Legacy Korro being treated as the accounting acquirer, Legacy Korro’s assets and liabilities were recorded at their pre-combination carrying amounts. Frequency’s assets and liabilities were measured and recognized at their fair values, which approximated their carrying values as of the effective date of the Merger, and combined with the assets, liabilities, and results of operations of Legacy Korro after the consummation of the Merger. As a result, upon consummation of the Merger, the historical financial statements of Legacy Korro became the historical consolidated financial statements of the combined company.

**Unaudited Pro Forma Condensed Combined Balance Sheets**  
**As of September 30, 2023**  
(in thousands)

	Frequency Therapeutics, Inc.	Korro Bio, Inc.	Pro Forma Accounting Adjustments	Notes	Pro Forma Combined
<b>Assets</b>					
Current assets:					
Cash and cash equivalents	\$ 41,723	\$ 46,119	\$ 111,961	<b>A</b>	\$ 199,803
Prepaid expenses and other current assets	777	3,026	—		3,803
Total current assets	42,500	49,145	111,961		203,606
Property and equipment, net	543	12,892	—		13,435
Advance payments for property and equipment	—	351	—		351
Operating lease right-of-use assets	1,339	26,425	(1,339)	<b>L</b>	26,425
Restricted cash, less current portion	1,967	3,406	—		5,373
Other non-current assets	—	3,612	(3,597)	<b>A,B</b>	15
<b>Total assets</b>	<b>\$ 46,349</b>	<b>\$ 95,831</b>	<b>\$ 107,025</b>		<b>\$ 249,205</b>
<b>Liabilities, convertible preferred stock, and stockholders' equity (deficit)</b>					
Current liabilities:					
Accounts payable	\$ 338	\$ 2,836	\$ —		\$ 3,174
Accrued expenses and other current liabilities	7,847	5,711	9,648	<b>A,B,C,D</b>	23,206
Operating lease liabilities, current portion	1,427	992	(1,427)	<b>L</b>	992
Total current liabilities	9,612	9,539	8,221		27,372
Operating lease liabilities, net of current portion	—	30,228	—	<b>L</b>	30,228
Total liabilities	9,612	39,767	8,221		57,600
Convertible preferred stock	—	209,321	(209,321)	<b>E</b>	—
Stockholders' equity (deficit):					
Common stock	1	7	392	<b>E,F,G</b>	400
Additional paid-in capital	340,344	4,315	8,084	<b>H</b>	352,743
Accumulated other comprehensive income	10	—	(10)	<b>G</b>	—
Accumulated deficit	(303,618)	(157,579)	299,659	<b>I</b>	(161,538)
Total stockholders' equity (deficit)	36,737	(153,257)	308,125		191,605
<b>Total liabilities, and stockholders' equity (deficit)</b>	<b>\$ 46,349</b>	<b>\$ 95,831</b>	<b>\$ 107,025</b>		<b>\$ 249,205</b>

The accompanying notes are an integral part of this unaudited pro forma condensed combined financial information.

**Unaudited Pro Forma Condensed Combined Statement of Operations and Comprehensive Loss**  
**For the Nine Month Period Ended September 30, 2023**  
**(in thousands, except share and per share data)**

	<u>Frequency Therapeutics, Inc.</u>	<u>Korro Bio, Inc.</u>	<u>Pro Forma Accounting Adjustments</u>	<u>Notes</u>	<u>Pro Forma Combined</u>
Operating expenses:					
Research and development	\$ 18,509	\$ 41,828	\$ —		\$ 60,337
General and administrative	26,498	15,813	—		42,311
Total operating expenses	<u>45,007</u>	<u>57,641</u>	<u>—</u>		<u>102,648</u>
Loss from operations	(45,007)	(57,641)	—		(102,648)
Other income (expense), net					
Interest income	1,317	1,727	—		3,044
Interest expense	(284)	—	—		(284)
Other income (expense), net	2,043	168	—		2,211
Total other income (expense), net	<u>3,076</u>	<u>1,895</u>	<u>—</u>		<u>4,971</u>
Loss before income taxes	(41,931)	(55,746)	—		(97,677)
Income Tax	(22)	—	—		(22)
Net loss	<u>\$ (41,953)</u>	<u>\$ (55,746)</u>	<u>\$ —</u>		<u>\$ (97,699)</u>
Unrealized gain on available-for-sale investments	208	5	—		213
Comprehensive loss	<u>\$ (41,745)</u>	<u>\$ (55,741)</u>	<u>\$ —</u>		<u>\$ (97,486)</u>
Net loss per share, basic and diluted	<u>\$ (58.26)</u>	<u>\$ (9.98)</u>	<u>\$ —</u>		<u>\$ (12.26)</u>
Weighted-average shares used in computing net loss per share, basic and diluted	<u>720,105</u>	<u>5,583,496</u>	<u>1,668,432</u>	<b>K</b>	<u>7,972,033</u>

The accompanying notes are an integral part of this unaudited pro forma condensed combined financial information.

**Unaudited Pro Forma Condensed Combined Statement of Operations and Comprehensive Loss  
For the Year Ended December 31, 2022  
(in thousands, except share and per share data)**

	Frequency Therapeutics, Inc.	Korro Bio, Inc.	Pro Forma Accounting Adjustments	Notes	Pro Forma Combined
Operating expenses:					
Research and development	\$ 49,418	\$ 42,201	\$ 405	D,J	\$ 92,024
General and administrative	33,584	16,797	3,553	D,J	53,934
Total operating expenses	<u>83,002</u>	<u>58,998</u>	<u>3,958</u>		<u>145,958</u>
Loss from operations	(83,002)	(58,998)	(3,958)		(145,958)
Other income (expense), net					
Interest income	1,327	947	—		2,274
Interest expense	(961)	(118)	—		(1,079)
Other income (expense), net	1,054	147	—		1,201
Total other income (expense), net	<u>1,420</u>	<u>976</u>	<u>—</u>		<u>2,396</u>
Loss before income taxes	<u>(81,582)</u>	<u>(58,022)</u>	<u>(3,958)</u>		<u>(143,562)</u>
Tax benefit (provision)	2	(10)	—		(8)
Net loss	<u>\$ (81,580)</u>	<u>\$ (58,032)</u>	<u>\$ (3,958)</u>		<u>\$ (143,570)</u>
Unrealized gain (loss) on available-for-sale investments	(136)	2	—		(134)
Comprehensive loss	<u>\$ (81,716)</u>	<u>\$ (58,030)</u>	<u>\$ (3,958)</u>		<u>\$ (143,704)</u>
Net loss per share, basic and diluted	<u>\$ (116.29)</u>	<u>\$ (11.30)</u>	<u>\$ —</u>		<u>\$ (18.10)</u>
Weighted-average shares used in computing net loss per share, basic and diluted	<u>701,518</u>	<u>5,135,554</u>	<u>2,094,117</u>	K	<u>7,931,189</u>

The accompanying notes are an integral part of this unaudited pro forma condensed combined financial information.



## NOTES TO THE UNAUDITED PRO FORMA CONDENSED COMBINED FINANCIAL INFORMATION

### 1. Description of the Transaction

Legacy Korro, Frequency, and Merger Sub, Inc. entered into the Merger Agreement, pursuant to which Merger Sub, a wholly owned subsidiary of Frequency, merged with and into Legacy Korro, with Legacy Korro surviving as the surviving company. As a result of the Merger, Legacy Korro is a wholly owned subsidiary of Frequency. Upon the Effective Time, all shares of Legacy Korro's common stock (including Korro common stock issued upon the conversion of Legacy Korro preferred stock prior to the Effective Time and in the Pre-Closing Financing, which closed immediately prior to the Effective Time) outstanding and issuable upon exercise of outstanding warrants and option to purchase common stock immediately prior to the Effective Time were converted into the right to receive approximately 7,848,776 shares of Frequency's common stock. Any Legacy Korro common stock outstanding immediately prior to the Effective Time that was unvested or was subject to a repurchase option or a risk of forfeiture under any applicable agreement with Legacy Korro, then the shares of Frequency common stock issued in exchange for such shares of Legacy Korro common stock were to the same extent unvested and subject to the same repurchase option or risk of forfeiture, and such shares of Frequency common stock were marked with appropriate legends.

Frequency assumed outstanding and unexercised options to purchase shares of Legacy Korro common stock, and in connection with the Merger they were converted into options to purchase shares of Frequency common stock based on the exchange ratio formula in the Merger Agreement.

Legacy Korro determined that the aggregate value of the consideration paid in the Merger to be \$8.9 million. The fair value of consideration transferred is based on the number of common shares Frequency stockholders owned upon consummation of the Merger, multiplied by the closing price of Frequency common stock on October 31, 2023. The fair value of consideration transferred is not indicative of the combined entities enterprise value upon consummation of the Merger.

At the Effective Time, each person who as of immediately prior to the Effective Time was a stockholder of record of Frequency or had the right to receive Frequency's common stock received a contractual contingent value right, or CVR, issued by Frequency subject to and in accordance with the terms and conditions of a Contingent Value Rights Agreement between Frequency, the holder's representative and the Rights Agent, or the CVR Agreement, representing the contractual right to receive cash consideration from the post-closing combined company upon the receipt of certain proceeds from a disposition of Frequency's pre-merger assets, calculated in accordance with the CVR Agreement.

### 2. Basis of Pro Forma Presentation

The unaudited pro forma condensed combined financial information has been prepared in accordance with SEC Regulation S-X Article 11, or Article 11. The unaudited pro forma condensed combined statements of operations and comprehensive loss for the nine-month period ended September 30, 2023 and for the year ended December 31, 2022, give effect to the Merger as if it had been consummated on January 1, 2022.

The unaudited pro forma condensed combined balance sheet as of September 30, 2023 gives effect to the Merger and combines the historical balance sheets of Frequency and Legacy Korro as of such date. Based on Legacy Korro's preliminary review of Legacy Korro's and Frequency's summary of significant accounting policies and preliminary discussions between management teams of Legacy Korro and Frequency, the nature and amount of any adjustments to the historical financial statements of Frequency to conform its accounting policies to those of Legacy Korro are not expected to be material. Upon completion of the Merger, further review of Frequency's accounting policies may result in additional revisions to Frequency's accounting policies and classifications to conform to those of Legacy Korro.

## Table of Contents

For accounting purposes, Legacy Korro is considered to be the acquiring company and the Merger has been accounted for as a reverse recapitalization of Frequency by Legacy Korro because on the Merger date, the pre-combination assets of Frequency are primarily cash and other non-operating assets.

The unaudited pro forma condensed combined balance sheet does not reflect contingent consideration with respect to the CVR because the value of the corresponding in-process research and development assets value is not expected to be material to Legacy Korro.

For purposes of these unaudited pro forma condensed combined financial statements, the purchase price consideration consists of the following (in thousands, except share and per share amounts):

	<u>Amount</u>
Estimated number of shares of the combined company to be owned by Frequency's stockholders (i)	738,526
Multiplied by the assumed price per share of Frequency's common stock (ii)	\$ 12.00
Estimated purchase price	\$ 8,862
Estimated fair value of Frequency equity awards based on pre-combination service (iii)	\$ 55
Total estimated purchase price (iv)	<u>\$ 8,917</u>

- (i) Reflects the estimated number of shares of common stock of the combined company that Frequency equity holders would own as of the closing pursuant to the Merger Agreement. This amount is calculated, for purposes of this unaudited pro forma condensed combined financial information, based on shares of Frequency's common stock outstanding as of October 31, 2023. The number of shares reflects the impact of the Frequency 1:50 reverse stock split that was effected prior to consummation of the Merger.
- (ii) Reflects the price per share of Frequency common stock, which is the closing trading price of Frequency's common stock on October 31, 2023, adjusted to reflect the impact of the Frequency 1:50 reverse stock split.
- (iii) Reflects the fair value of the assumed Frequency's equity awards attributable to pre-combination service (which amount is determined based on the closing trading price of Frequency common stock on October 31, 2023, the number of Frequency equity awards outstanding as of the Effective Time, and the period of service provided by the holders of the awards prior to the Effective Time). The following table presents, on a weighted average basis, the assumptions used in the Black-Scholes option-pricing model to determine the acquisition-date fair value of the assumed Frequency's equity awards:

Expected term (in years)	0.25
Volatility	48%
Risk free interest rate	5.6%
Dividend yield	0%

Under reverse recapitalization accounting, the assets and liabilities of Frequency were recorded, as of the completion of the Merger, at their fair value. Any difference between the consideration transferred and the fair value of the net assets of Frequency following determination of the actual purchase consideration for Frequency were reflected as an adjustment to additional paid-in capital. Consequently, under reverse recapitalization accounting, the subsequent financial statements of Legacy Korro will reflect the operations of the acquirer for accounting purposes together with a deemed issuance of shares, equivalent to the shares held by the former stockholders of the legal acquirer and a recapitalization of the equity of the accounting acquirer. The accompanying unaudited pro forma condensed combined financial information is derived from the historical financial statements of Frequency and Legacy Korro and include adjustments to give pro forma effect to reflect the accounting for the transaction in accordance with U.S. GAAP. The historical financial statements of Legacy Korro shall become the historical financial statements of the combined company.

## [Table of Contents](#)

Legacy Korro and Frequency may incur significant costs associated with integrating the operations of Legacy Korro and Frequency after the Merger is completed. The unaudited pro forma condensed combined financial information does not reflect the costs of any integration activities or benefits that may result from realization of future cost savings from operating efficiencies expected to result from the Merger.

### 3. Shares of Frequency Common Stock Issued to Legacy Korro Stockholders upon closing of the Merger

Prior to the Merger, all outstanding shares of Legacy Korro's preferred stock were converted into Legacy Korro common stock, which was exchanged for shares of Frequency common stock based on the exchange ratio determined in accordance with the Legacy Korro Merger Shares formula described in the Merger Agreement. For purposes of the unaudited pro forma condensed combined financial information, the shares of Frequency common stock to be issued to holders of the Legacy Korro common stock was derived on a fully-diluted basis as of October 31, 2023 using the following stipulated valuations:

	Valuation (in thousands)	Allocation Percentage
Legacy Korro	\$ 325,639	66.9195%
Pre-Closing Financing	117,250	24.0951
Legacy Frequency	43,724	8.9854
Aggregate valuation	\$ 486,613	100.0000%

Immediately prior to the closing, Legacy Frequency had a total of 774,869 outstanding shares (as defined in the Merger Agreement). Based upon Legacy Frequency's outstanding shares, the table above and the terms of the Merger Agreement, a total of 8,623,645 shares of Frequency common stock (774,869 divided by 8.9854%) of which 7,848,776 was to be allocated to Legacy Korro securityholders, and Pre-Closing Financing securityholders as follows (ignoring rounding of fractional shares):

	Post-Merger Frequency Shares	Allocation Percentage	Post-Merger Shares of Frequency Common Stock Issued or Reserved for Issuance
Legacy Korro common stock, convertible preferred stock and common stock issuable upon the exercise of outstanding options and warrants	8,623,645	66.9195%	5,770,900
Shares of Korro common stock to be issued upon consummation of Pre-Closing Financing	8,623,645	24.0951%	2,077,876
Shares of Frequency common stock issued (or reserved) to Legacy Korro stockholders upon closing of the Merger			7,848,776

The shares of Frequency common stock issued to Legacy Korro's securityholders have been adjusted to give effect to the Frequency 1:50 reverse stock split.

### 4. Adjustments to Unaudited Pro Forma Condensed Combined Financial Statements

Adjustments included in the column under the heading "Pro Forma Accounting Adjustments" are primarily based on information contained within the Merger Agreement.

Given Legacy Korro's history of net losses and valuation allowance, management assumed a statutory tax rate of 0%. Therefore, the pro forma adjustments to the condensed combined statements of operations and comprehensive loss resulted in no additional income tax adjustment to the unaudited pro forma financials.

## [Table of Contents](#)

The unaudited pro forma adjustments included in the unaudited pro forma condensed combined financial information are as follows:

- A. To reflect net cash proceeds of \$112.0 million from the sale and issuance of 42,176,255 shares of Legacy Korro common stock at a purchase price of \$2.78 per share in the Pre-Closing Financing. Legacy Korro expects to incur \$6.2 million of direct and incremental transaction costs in connection with the Pre-Closing Financing. Of the \$6.2 million of Pre-Closing Financing costs, \$5.2 million relate to amounts netted against cash proceeds. As \$0.7 million of pre-closing financing costs were included in the historical balance sheet within other non-current assets as of September 30, 2023, an adjustment was recorded to decrease other non-current assets by \$0.7 million. Adjustments were recorded to increase accrued liabilities by \$0.3 million, and to decrease additional paid in capital by \$6.2 million in the unaudited pro forma condensed combined balance sheet. As the Merger has been accounted for as a reverse recapitalization equivalent to the issuance of equity for the net assets, primarily cash and investments, of Frequency, these direct and incremental costs are treated as a reduction of the proceeds received resulting in an adjustment to additional paid in capital of \$111.0 million.
- B. To reflect transaction costs of \$6.5 million that have been incurred by Legacy Korro in connection with the Merger, such as legal fees, accounting expenses and consulting fees. As \$2.9 million of these costs were included in the historical balance sheet within other non-current assets as of September 30, 2023, of which \$2.0 million of these transaction costs were paid during the period, \$0.2 million has been included in accounts payable and \$0.7 million has been included in accrued expenses, adjustments were recorded to decrease other non-current assets by \$2.9 million, to increase accrued liabilities by \$3.6 million, and to decrease additional paid-in capital by \$6.5 million in the unaudited pro forma condensed combined balance sheet. As the Merger has been accounted for as a reverse recapitalization equivalent to the issuance of equity for the net assets, primarily cash and investments, of Frequency, these direct and incremental costs are treated as a reduction of the net proceeds received within additional paid-in capital. Note there are additional transaction costs related to Pre-Closing Financing further discussed in Note A.
- C. To reflect transaction costs of \$6.1 million that have been incurred by Frequency in connection with the Merger, such as adviser fees, audit and legal fees, and printing fees. As \$4.1 million of these transaction costs were included in the historical balance sheet as of September 30, 2023, of which \$3.5 million of these transaction costs has been included in accrued expenses and \$0.6 million were paid during the period, adjustments were recorded of \$2.0 million as an increase in accrued liabilities and accumulated deficit in the unaudited pro forma condensed combined balance sheet (see Note G). The \$6.1 million of expenses are not reflected in the unaudited pro forma condensed combined income statement as they were not recorded by Legacy Korro as the accounting acquirer.
- D. Compensation expense of \$3.7 million related to severance resulting from employment agreements entered into by Frequency in contemplation of the Merger is reflected as a non-recurring increase to accumulated deficit and accrued liabilities in the unaudited pro forma condensed combined balance sheet. In the unaudited pro forma condensed combined statement of operations and comprehensive loss for the year ended December 31, 2022, \$0.3 million and \$3.4 million is reflected as research and development and general and administrative expense, respectively.
- E. To reflect the conversion of 97,714,516 shares of Legacy Korro's convertible preferred stock into shares of Legacy Korro's common stock immediately prior to the Merger on a one-to-one basis. The conversion of Legacy Korro's convertible preferred stock into common stock results in an increase of \$0.1 million common stock par value and an increase of \$209.2 million to additional paid-in capital.
- F. To reflect the exchange of 6,006,125 outstanding shares of Legacy Korro's common stock, 97,714,516 shares of converted preferred stock into common stock, and 42,176,255 shares of Legacy Korro common stock issued in the Pre-Closing Financing into 7,249,325 shares of Frequency's common stock as of September 30, 2023, based on the assumed exchange ratio for purposes of these unaudited pro forma condensed combined financial information. The exchange of Legacy Korro common stock for Frequency common stock results in an increase of \$0.3 million common stock par value and a decrease of \$0.3 million to additional paid-in capital.

## Table of Contents

- G. To reflect the elimination of Frequency's historical equity, including 738,526 outstanding shares of common stock, adjusted to give effect to the Frequency 1:50 reverse stock split, at their par value of \$0.001, \$305.7 million of accumulated deficit, including Frequency's transaction costs of \$2.0 million (see Note C), \$340.3 million additional paid-in capital, less than \$0.1 million of accumulated other comprehensive income for the period ended September 30, 2023, and record the effect of the reverse recapitalization of Frequency for a total of \$34.7 million, which is the net assets of Frequency as of the time of the Merger.

	<u>Amount</u>
Pre-combination Frequency additional paid-in capital:	
Historical Frequency additional paid-in capital	\$(340,344)
Total pre-combination Frequency additional paid-in capital	(340,344)
Pre-combination Frequency accumulated deficit:	
Frequency transaction costs (Note C)	2,033
Historical Frequency accumulated deficit	303,618
Total pre-combination Frequency accumulated deficit	305,651
Frequency common stock	(1)
Frequency accumulated other comprehensive income	(10)
Total adjustment to historical equity (net assets of Frequency)	<u>\$ (34,704)</u>

- H. The pro forma adjustments recorded to additional paid-in capital as noted above, include:

	<u>Amount</u>
Elimination of pre-combination Frequency additional paid-in capital (Note G)	\$(340,344)
Record purchase of Frequency historical net assets (Note G)	34,704
Transaction costs of Legacy Korro (Note B)	(6,554)
Conversion of Legacy Korro common stock (Note E & F)	208,928
Acceleration of post-combination stock compensation expense (Note J)	232
Pre-Closing Financing (Note A)	111,030
Frequency lease adjustment (Note L)	88
Total adjustment to additional paid-in capital	<u>\$ 8,084</u>

- I. The pro forma adjustments recorded to accumulated deficit as noted above, include:

	<u>Amount</u>
Elimination of historical Frequency accumulated deficit (Note G)	\$305,651
Severance costs of Frequency employees (Note D)	(3,727)
Acceleration of post-combination stock compensation expense (Note J)	(232)
Frequency transaction costs (Note C)	(2,033)
Total adjustment to accumulated deficit	<u>\$299,659</u>

## Table of Contents

- J. To reflect the non-recurring stock-based compensation of \$0.3 million, which is reflected as an increase in additional paid-in capital and accumulated deficit in the unaudited pro forma condensed combined balance sheet related to the acceleration of vesting upon the change of control and termination of employment for certain awards. In the unaudited pro forma condensed combined statement of operations and comprehensive loss for the year ended December 31, 2022, \$0.1 million and \$0.2 million is reflected as research and development and general and administrative expense, respectively.
- K. The pro forma combined basic and diluted earnings per share have been adjusted to reflect the pro forma net income for the year ended December 31, 2022, and the nine-months ended September 30, 2023. In addition, the number of shares used in calculating the pro forma combined basic and diluted net loss per share has been adjusted to reflect the total number of shares of common stock of the combined company for the respective periods. As the combined organization is in a net loss position for both periods presented, any adjustment for potentially dilutive shares would be anti-dilutive, and as such basic and diluted loss per share are the same for both periods presented. The exchange ratio and shares of Frequency common stock issued to Legacy Korro's securityholders have been adjusted to give effect to the Frequency 1:50 reverse stock split. For the year ended December 31, 2022, and the nine-months ended September 30, 2023, the pro forma weighted average shares outstanding has been calculated as follows:

	<u>September 30, 2023</u>	<u>December 31, 2022</u>
Legacy Korro weighted-average shares of common stock outstanding-basic and diluted	5,583,496	5,135,554
Impact of Legacy Korro's convertible preferred stock assuming conversion as of January 1, 2022	97,714,516	97,714,516
Impact of Legacy Korro pre-closing financing shares assuming consummation as of January 1, 2022	42,176,255	42,176,255
Total prior to exchange ratio	145,474,267	145,026,325
Application of exchange ratio to historical Legacy Korro weighted-average shares outstanding	0.049688	0.049688
Adjusted Legacy Korro weighted-average shares outstanding	7,228,325	7,206,068
Historical Frequency weighted-average shares of common stock outstanding, effected for reverse stock-split	720,105	701,518
Impact of Frequency common shares related to stock awards assuming accelerated vesting as of January 1, 2022	23,603	23,603
Total pro forma combined weighted average shares of common stock outstanding-basic and diluted	<u>7,972,033</u>	<u>7,931,189</u>

- L. To reflect Frequency's modification of its existing lease agreement with HCP/KING 75 Hayden LLC on August 11, 2023 to terminate the lease effective January 31, 2024. As the remaining lease term at closing of the Merger is less than 12 months, Legacy Korro, as the accounting acquirer, applied its practical expedient to account for the lease as a short-term lease. For the purpose of the unaudited pro forma condensed balance sheet, Frequency's modification of its lease is reflected with adjustments to decrease operating lease right-of-use assets by \$1.3 million, decrease operating lease liabilities, current portion by \$1.4 million, and increase additional paid-in capital by \$0.1 million as of September 30, 2023.

## KORRO BIO MANAGEMENT'S DISCUSSION AND ANALYSIS OF FINANCIAL CONDITION AND RESULTS OF OPERATIONS

*Throughout this section, unless otherwise noted, "we," "us," "Korro Bio" and the "Company" refer to Legacy Korro and its consolidated subsidiaries.*

*The following discussion and analysis provides information which our management believes is relevant to an assessment and understanding of our results of operations and financial condition. This discussion and analysis should be read together with the section entitled "Unaudited Pro Forma Condensed Combined Financial Information" and our financial statements and notes thereto included elsewhere in this prospectus. In addition to historical financial information, this discussion contains forward-looking statements based upon our current expectations that involve risks and uncertainties. See the section entitled "Cautionary Note Regarding Forward-Looking Statements." Our actual results could differ materially from such forward-looking statements as a result of various factors, including those set forth under "Risk Factors" and elsewhere in this prospectus.*

### Overview

We are a biopharmaceutical company creating transformative genetic medicines targeted to treat both rare and highly prevalent diseases. Our initial focus is to bring additional precision and tunability to genetic medicines by developing therapies based on editing RNA instead of DNA, which is expected to lead to an improved safety profile and increased clinical activity and specificity.

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 single base 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. Using an oligonucleotide-based approach, we expect to bring our medicines to patients by leveraging our proprietary platform with precedented delivery modalities, manufacturing know-how, and established regulatory pathways of approved oligonucleotide drugs. However, the scientific evidence to support the feasibility of developing product candidates based on 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 no clinical data has been generated to date.

The versatility of RNA editing combined with our OPERA platform broadens the therapeutic target space significantly. While our approach can be used to repair pathogenic single nucleotide variants, or SNVs, as demonstrated by our most advanced program, our Alpha-1 Antitrypsin Deficiency, or AATD, product candidate, we can also engineer de novo SNVs and change amino acids on proteins to endow them with desired properties while preserving their broader functional capabilities, as exemplified by three of our other programs (severe Alcoholic Hepatitis, or SAH, amyotrophic lateral sclerosis, or ALS, Pain). In preclinical studies, we have demonstrated that single RNA changes can disrupt protein-protein interactions, prevent protein aggregation, selectively modulate ion channels and activate kinases. These modification approaches can unlock validated target classes that have historically been difficult to drug, enabling us to pursue a broad range of diseases traditionally out-of-scope for other genetic medicine approaches and current traditional drug modalities.

Our most advanced program, KRRO-110, is a product candidate in development as a potential treatment for AATD where, using our proprietary RNA editing approach, we are repairing a pathogenic variant on RNA. KRRO-110 has the potential to be disease-modifying and provide a differentiated therapeutic option.

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 product 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

## [Table of Contents](#)

gross proceeds from the sale of our convertible preferred stock, and \$117.3 million from the sale of shares of common stock issued in a private placement that closed immediately prior to the Merger (as defined below), or the Pre-Closing Financing.

We have incurred significant operating losses since inception. Our net losses were \$55.7 million and \$42.0 million for the nine months ended September 30, 2023 and 2022, respectively, and \$58.0 million and \$22.0 million for the years ended December 31, 2022 and 2021, respectively. We had an accumulated deficit of \$157.6 million as of September 30, 2023. 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 product candidates through clinical stages, and seek regulatory approvals for our pipeline candidates. As a result of the Merger (as defined below), we also expect to incur additional costs associated with maintaining compliance with Nasdaq listing rules and the requirements of the U.S. Securities and Exchange Commission, or SEC, director and officer liability insurance, investor and public relations activities and other expenses associated with operating as a public company. 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 product 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 obtains regulatory approval for our product candidates, if ever, and as appropriate, move pipeline candidates into the clinic and complete clinical development. We have yet to commence clinical trials on any of our program candidates. If we obtain regulatory approval for our product 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**

### ***Merger Agreement & Pre-Closing Financing***

On July 14, 2023, we entered into the Merger Agreement with Frequency Therapeutics, Inc., or Frequency, and Frequency Merger Sub, Inc., or Merger Sub. Pursuant to the Merger Agreement, on November 3, 2023, or the Closing Date, following approval by our stockholders and Frequency, Merger Sub merged with and into us, or the Merger, with us continuing as a wholly owned subsidiary of Frequency and the surviving corporation of the Merger. The Merger is intended to qualify as a “reorganization” within the meaning of Section 368(a) of the Internal Revenue Code of 1986, as amended. The Merger Agreement was approved by the members of our board of directors and Frequency.

Immediately prior to the execution of the Merger Agreement, certain new and current investors agreed to purchase shares of our common stock at \$2.78 per share for the aggregate amount of \$117.3 million in the Pre-Closing Financing. The Pre-Closing Financing was contingent on and closed immediately prior to consummation of the Merger.

Subject to the terms and conditions of the Merger Agreement, immediately prior to the Closing Date, each then outstanding share of our common stock (including common stock issued upon the conversion of our preferred stock but excluding the common stock issued in the Pre-Closing Financing) converted into the right to



## [Table of Contents](#)

receive 5,161,114 shares of Frequency's common stock calculated in accordance with the Merger Agreement (which takes into account the 1-for-50 reverse stock split of Frequency's common stock effected immediately prior to the Merger).

Shares of our common stock issued pursuant to the Pre-Closing Financing were converted into the right to receive 2,077,864 shares of Frequency common stock calculated in accordance with Merger Agreement at the effective time of the Merger (which takes into account the 1-for-50 reverse stock split of Frequency's common stock effected immediately prior to the Merger).

### **Financial Operations Overview**

#### ***Operating Expenses***

##### *Research and Development Expenses*

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

- employee-related expenses, including salaries, bonuses, benefits, stock-based compensation and other related costs for those employees involved in research and development efforts;
- external research and development expenses incurred under agreements with contract research organizations, or CROs as well as with consultants;
- laboratory supplies and research materials;
- 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 or other services performed. Significant judgment and estimates are made in determining the accrued expense balances at the end of any reporting period.

Our external research and development expenses consist primarily of fees paid to CROs and outside consultants in connection with our preclinical development activities. Our external research and development expenses also include fees incurred under license agreements. As a pre-clinical company, we do not yet track these external research and development costs on a program-by-program basis. We plan to track program costs upon nomination of a development candidate or filing of an Investigational New Drug, or IND, application.

We characterize research and development costs incurred prior to the identification of a product candidate as discovery costs. We use internal resources primarily to conduct our research and discovery activities as well as for managing our preclinical development activities.

The successful development of our product candidates is highly uncertain. Our plan to substantially increase our research and development expenses for the foreseeable future as we continues the development of our product candidates, conducts discovery and research activities for our preclinical programs, and expands 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 product 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 product candidates to pursue and how much funding to direct to each product candidate on an ongoing basis in response to the results of ongoing and future preclinical studies and clinical

## Table of Contents

trials, regulatory developments and our ongoing assessments as to each product 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 product 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 product 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 product candidates;
- commercializing product 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 product candidates in preclinical and clinical development could mean a significant change in the costs and timing associated with the development of these product candidates. We may never succeed in achieving regulatory approval for any of our product candidates. We may obtain unexpected results from our clinical trials. We may elect to discontinue, delay or modify clinical trials of some product candidates or focus on other product candidates. For example, if the U.S. Food and Drug Administration, or FDA, European Medicines Agency, or EMA, 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 product 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, accounting, auditing, tax services 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 increase in the future as we increase our headcount to support our continued research activities and development of our product candidates. We also anticipate that we will incur significantly increased accounting, audit, legal, regulatory, compliance and director and officer insurance costs as well as investor and public relations expenses associated with operating as a public company.

### *Other Income, Net*

Other income, net primarily consists of interest income on our short-term investments. For the year ended December 31, 2021, we also recorded a gain pertaining to a change in the fair value of the preferred stock tranche liability that was originally recognized in 2020 and subsequently extinguished in July 2021 in connection with the purchase of additional shares of Series A convertible preferred stock, or the Series A Preferred Stock, by existing investors.

[Table of Contents](#)**Results of Operations****Comparison of the Nine Months Ended September 30, 2023 and 2022**

The following table summarizes our results of operations for the nine months ended September 30, 2023 and 2022:

<i>(in thousands)</i>	Nine Months Ended September 30,		Change
	2023	2022	
Operating expenses:			
Research and development	\$ 41,828	\$ 30,052	\$ 11,776
General and administrative	15,813	12,485	3,328
Total operating expenses	57,641	42,537	15,104
Loss from operations	(57,641)	(42,537)	(15,104)
Other income, net	1,895	539	1,356
Net loss	<u><u>\$ (55,746)</u></u>	<u><u>\$ (41,998)</u></u>	<u><u>\$ (13,748)</u></u>

**Research and Development Expenses**

The following table summarizes our research and development expenses for the nine months ended September 30, 2023 and 2022:

<i>(in thousands)</i>	Nine Months Ended September 30,		Change
	2023	2022	
External research and development	\$12,768	\$ 9,375	\$ 3,393
Personnel-related expenses	10,882	7,482	3,400
Lab supplies & consumables	5,865	6,938	(1,073)
Facilities costs	6,377	3,269	3,108
Sponsored research and license fees	2,564	281	2,283
Consulting	2,017	1,761	256
Other	1,355	946	409
Total research and development expenses	<u><u>\$41,828</u></u>	<u><u>\$30,052</u></u>	<u><u>\$11,776</u></u>

Research and development expenses increased by \$11.8 million from \$30.1 million for the nine months ended September 30, 2022 to \$41.8 million for the nine months ended September 30, 2023. The increase in research and development expenses was primarily driven by:

- \$3.4 million of increased external research and development expense due to increased CRO support and in vivo studies;
- \$3.4 million of increased personnel-related expenses driven by an increase in headcount to support the expansion of our research and development function;
- \$3.1 million of increased facilities-related costs primarily due to the expansion of our mixed-use office spaces and depreciation of lab equipment; and
- \$2.3 million of increased sponsored research and license fees primarily attributable to an upfront cash payment made to a third-party in March 2023 upon execution of a collaboration and license agreement.

## [Table of Contents](#)

### *General and Administrative Expenses*

The following table summarizes our general and administrative expenses for the nine months ended September 30, 2023 and 2022:

<i>(in thousands)</i>	Nine Months Ended September 30,		Change
	2023	2022	
Personnel-related expenses	\$ 7,037	\$ 6,808	\$ 229
Professional services	5,701	3,237	2,464
Facilities costs	1,833	1,167	666
Other	1,242	1,273	(31)
Total general and administrative expenses	<u>\$15,813</u>	<u>\$12,485</u>	<u>\$3,328</u>

General and administrative expenses increased by \$3.3 million from \$12.5 million for the nine months ended September 30, 2022 to \$15.8 million for the nine months ended September 30, 2023. The increase in general and administrative expenses was primarily driven by \$2.5 million of increased professional service fees, including intellectual property costs, audit and advisory fees, and recruiting fees.

### *Other Income, Net*

Other income, net increased by approximately \$1.4 million from \$0.5 million for the nine months ended September 30, 2022 to \$1.9 million for the nine months ended September 30, 2023. The increase in other income, net was primarily attributable to increased rates of return on our short-term investments as a result of rising interest rates.

### *Comparison of the Years Ended December 31, 2022 and 2021*

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

<i>(in thousands)</i>	Year Ended December 31,		Change
	2022	2021	
Operating expenses:			
Research and development	\$ 42,201	\$ 23,805	\$ 18,396
General and administrative	16,797	11,689	5,108
Total operating expenses	<u>58,998</u>	<u>35,494</u>	<u>23,504</u>
Loss from operations	(58,998)	(35,494)	(23,504)
Other income, net			
Change in fair value of preferred stock tranche liability	—	13,505	(13,505)
Other income, net	976	32	944
Total other income, net	<u>976</u>	<u>13,537</u>	<u>(12,561)</u>
Loss before provision for income taxes	<u>(58,022)</u>	<u>(21,957)</u>	<u>(36,065)</u>
Provision for income taxes	10	2	8
Net loss	<u>\$ (58,032)</u>	<u>\$ (21,959)</u>	<u>\$ (36,073)</u>

## [Table of Contents](#)

### *Research and Development Expenses*

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

<i>(in thousands)</i>	Year Ended December 31,		Change
	2022	2021	
External research and development	\$13,868	\$ 8,050	\$ 5,818
Personnel-related expenses	9,960	6,178	3,782
Lab supplies & consumables	9,123	4,748	4,375
Facilities costs	4,588	2,372	2,216
Consulting	2,931	1,585	1,346
Sponsored research and license fees	376	298	78
Other	1,355	574	781
Total research and development expenses	<u>\$42,201</u>	<u>\$23,805</u>	<u>\$18,396</u>

Research and development expenses increased by \$18.4 million from \$23.8 million for the year ended December 31, 2021 to \$42.2 million for the year ended December 31, 2022. The increase in research and development expenses was primarily attributable to the following:

- \$5.8 million of increased external research and development expenses primarily attributable to increased oligonucleotide synthesis costs, screening and sequencing expenses and *in vivo* studies;
- \$3.8 million of increased personnel-related expenses driven by an increase in headcount to support the expansion of our research and development function;
- \$4.4 million of increased lab supplies and consumables, primarily attributable to consumables purchased for screening and sequencing;
- \$2.2 million of increased facility-related expense due to the depreciation of lab equipment and leasehold improvements and the expansion of our mixed-use office space;
- \$1.3 million of increased consulting costs to support the overall growth in research and development activities; and
- \$0.8 million of increased other research and development expenses, including lab maintenance, shipping fees and software licensing fees.

### *General and Administrative Expenses*

The following table summarizes our general and administrative expenses for the years ended December 31, 2022 and 2021:

<i>(in thousands)</i>	Year Ended December 31,		Change
	2022	2021	
Personnel-related expenses	\$ 8,970	\$ 6,260	\$2,710
Professional services	4,529	3,230	1,299
Facilities expenses	1,600	1,108	492
Other	1,698	1,091	607
Total general and administrative expenses	<u>\$16,797</u>	<u>\$11,689</u>	<u>\$5,108</u>

## [Table of Contents](#)

General and administrative expenses increased by \$5.1 million from \$11.7 million for the year ended December 31, 2021 to \$16.8 million for the year ended December 31, 2022. The increase in general and administrative expenses was primarily attributable to the following:

- \$2.7 million of increased personnel-related expenses driven by an increase in headcount;
- \$1.3 million of increased professional service fees primarily attributable to recruiting efforts and increased intellectual property legal fees;
- \$0.6 million of increased other general and administrative expense primarily attributable to increased software licensing fees and corporate expenses; and
- \$0.5 million of increased facilities expenses primarily attributable to the expansion of our mixed-use office space.

### *Other Income, Net*

Total other income, net decreased by \$12.5 million from \$13.5 million for the year ended December 31, 2021 to \$1.0 million for the year ended December 31, 2022. This decrease was primarily attributable to the recognition of a \$13.5 million gain pertaining to a change in the fair value of the preferred stock tranche liability that was originally recognized in 2020 and subsequently extinguished in July 2021 in connection with the purchase of Series A Preferred Stock by existing investors.

## **Liquidity and Capital Resources**

### ***Sources of Liquidity***

Since our inception, it has generated recurring net losses. 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. 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 our convertible preferred stock and \$117.3 million from the sale of shares of common stock issued in the Pre-Closing Financing. As of September 30, 2023, we had cash, cash equivalents and short-term investments of \$46.1 million.

### ***Going Concern***

Since inception, we have incurred significant operating losses and, as of September 30, 2023, had an accumulated deficit of \$157.6 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.

As of September 30, 2023, we had cash and cash equivalents of \$46.1 million. On November 3, 2023, we issued additional shares of common stock in the Pre-Closing Financing for aggregate proceeds of \$117.3 million. We expect that our cash and cash equivalents outstanding as of September 30, 2023, together with the proceeds from the sale of shares of common stock issued in the Pre-Closing Financing on November 3, 2023, and cash received from the Merger of \$26.9 million will be sufficient to fund our operating expenses and capital expenditure requirements at least into 2026. We have based this estimate on assumptions that may prove to be wrong, and we could expend our capital resources sooner than we expect. Korro Bio may also pursue additional cash resources through public or private equity, collaborations or debt financings.

### ***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

## Table of Contents

candidates into the clinic and through clinical trials, seek regulatory approval of our product candidates and pursue commercialization of any approved product candidates. In addition, as a result of the Merger, we expect to incur additional costs associated with operating as a public company.

Because of the numerous risks and uncertainties associated with research, development and commercialization of our product 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 cost of continuing to build our OPERA platform and discover additional novel genetic medicines;
- the scope, progress, results, and costs of discovery, preclinical development, laboratory testing, manufacturing and clinical trials for the product candidates we may develop;
- the extent to which we partners our programs, acquires or in-licenses other product candidates and technologies or enters 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;
- Our headcount growth and associated costs as 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 product candidates;
- the costs and timing of future commercialization activities, including product manufacturing, marketing, sales and distribution, for any product 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 product 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 product candidates even if we would otherwise prefer to develop and market such product candidates ourselves.

## [Table of Contents](#)

### *Cash Flows*

#### *Comparison of the Nine Months Ended September 30, 2023 and 2022*

The following table summarizes our cash flows for the nine months ended September 30, 2023 and 2022:

<i>(in thousands)</i>	<b>Nine Months Ended September 30,</b>	
	<b>2023</b>	<b>2022</b>
Net cash used in operating activities	<u>\$ (46,176)</u>	<u>\$ (38,612)</u>
Net cash provided by investing activities	12,819	7,971
Net cash provided by financing activities	43,173	4
Net increase (decrease) in cash, cash equivalents and restricted cash	<u>\$ 9,816</u>	<u>\$ (30,637)</u>

#### *Cash Used in Operating Activities*

Net cash used in operating activities for the nine months ended September 30, 2023 was \$46.2 million, compared to net cash used in operating activities of \$38.6 million for the nine months ended September 30, 2022. Cash used in operating activities increased by \$7.6 million. The increase in cash used was primarily due to the overall increase in our operating expenses during that same period, including a \$2.5 million upfront payment made upon the execution of a collaboration and license agreement, as well as an increase in payments made for other external research and development activities.

#### *Cash Provided by Investing Activities*

Net cash provided by investing activities for the nine months ended September 30, 2023 was \$12.8 million, compared to net cash provided by investing activities of \$8.0 million for the nine months ended September 30, 2022. This change of \$4.8 million was primarily due to increased proceeds from the maturities of investments and decreased purchases of investments during the nine months ended September 30, 2023 as compared to the nine months ended September 30, 2022.

#### *Cash Provided by Financing Activities*

Net cash provided by financing activities for the nine months ended September 30, 2023 was \$43.2 million, compared to net cash provided in financing activities of less than \$0.1 million for the nine months ended September 30, 2022. This change of \$43.2 million was primarily due to \$45.5 million of net cash proceeds received from the sale of Series B-2 convertible preferred stock during the nine months ended September 30, 2023 offset by \$2.6 million of financing costs incurred in connection with the Pre-Closing Financing and Merger that closed on November 3, 2023. No comparable proceeds were received from financing activities during the nine months ended September 30, 2022.

#### *Comparison of the Years Ended December 31, 2022 and 2021*

The following table summarizes our cash flows for the years ended December 31, 2022 and 2021:

<i>(in thousands)</i>	<b>Year Ended December 31,</b>	
	<b>2022</b>	<b>2021</b>
Net cash used in operating activities	<u>\$ (53,645)</u>	<u>\$ (32,094)</u>
Net cash provided by (used in) investing activities	11,060	(39,501)
Net cash provided by financing activities	18	115,945
Net (decrease) increase in cash, cash equivalents and restricted cash	<u>\$ (42,567)</u>	<u>\$ 44,350</u>



## [Table of Contents](#)

### *Cash Used in Operating Activities*

Net cash used in operating activities for the year ended December 31, 2022 was \$53.6 million, compared to net cash used in operating activities of \$32.1 million for the year ended December 31, 2021. Cash used in operating activities increased by \$21.6 million. The increase in cash used was primarily due to the overall increase in our operating expenses during that same period, including an increase in payments made for external research and development activities.

### *Cash Provided by (Used in) Investing Activities*

Net cash provided by investing activities for the year ended December 31, 2022 was \$11.1 million, compared to net cash used in investing activities of \$39.5 million for the year ended December 31, 2021. This change of \$50.6 million was primarily due to proceeds from the maturities of investments during the year ended December 31, 2022 to which there were no comparable maturities during the year ended December 31, 2021.

### *Cash Provided by Financing Activities*

Net cash provided by financing activities for the year ended December 31, 2022 was less than \$0.1 million, compared to \$115.9 million for the year ended December 31, 2021. Cash provided by financing activities decreased by \$115.9 million due to net cash proceeds received from the sale of Series A convertible preferred stock and Series B-1 convertible preferred stock during the year ended December 31, 2021. No comparable proceeds were received from financing activities during the year ended December 31, 2022.

## **Critical Accounting Policies and Estimates**

Our consolidated financial statements have been prepared in accordance with generally accepted accounting principles in the United States. 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 estimates 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 and in Note 2 to our unaudited condensed consolidated financial statements both included in this prospectus, we believe that the following accounting policies are those most critical to the judgments and estimates used in the preparation of its consolidated financial statements.

### *Accrued Research and Development Expenses*

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

## [Table of Contents](#)

We recognize expenses related to preclinical studies and other studies on our estimates of the services performed pursuant to contracts with research institutions and clinical research organizations that conduct and manage preclinical studies and other studies on our behalf. The financial terms of these agreements are subject to negotiation, vary from contract to contract and may result in uneven payment flows. There may be instances in which payments made to our vendors will exceed the level of services provided and result in a prepayment of the expense. In accruing service fees, we estimate the time period over which services will be performed and the level of effort to be expended in each period. If the actual timing of the performance of services or the level of effort varies from the estimate, we adjust the accrual or prepaid expense accordingly. Although we do not expect our estimates to be materially different from amounts actually incurred, our understanding of the status and timing of services performed relative to the actual status and timing of services performed may vary and may result in reporting amounts that are too high or too low in any particular period. To date, we have not made any material adjustments to our prior estimates of accrued research and development expenses.

### ***Stock-based Compensation***

We recognize stock-based compensation expense in an amount equal to the estimated grant date fair value of each stock-based payment, including stock options and restricted common stock, on a straight-line basis over the estimated period of service and vesting. This estimation of the fair value of each stock-based payment on the date of grant involves numerous assumptions by management. Although we calculate the fair value under the Black-Scholes option-pricing model, which is a standard option pricing model, this model still requires the use of numerous estimates, including, the expected term of the award, the volatility of the underlying equity security, a risk-free interest rate, fair value of common stock, and expected dividends. The use of different values by management in connection with these estimates in the Black-Scholes option-pricing model could produce substantially different results.

For more information on our stock-based payments, refer to Note 2 and Note 11 to Legacy Korro's audited consolidated financial statements included in this prospectus.

### **Off-Balance Sheet Arrangements**

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

### **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 Legacy Korro's audited consolidated financial statements and in Note 2 to its unaudited condensed consolidated financial statements both included in this prospectus.

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

*You should read the following discussion and analysis of Frequency's financial condition and results of operations together with the section titled "Unaudited Pro Forma Combined Financial Data" and Frequency's consolidated financial statements and related notes included elsewhere in this proxy statement/prospectus. This discussion and other parts of this proxy statement/prospectus contain forward-looking statements that involve risks and uncertainties, such as its plans, objectives, expectations, intentions, and beliefs. Frequency's actual results could differ materially from those discussed in these forward-looking statements. Factors that could cause or contribute to such differences include, but are not limited to, those identified below and those discussed in the section titled "Risk Factors" included elsewhere in this prospectus.*

### Overview

Frequency's business has focused on developing therapeutics that activate a person's innate regenerative potential through its proprietary progenitor cell activation, or PCA, approach. Frequency first applied its PCA approach for the restoration of the cochlea, with a focus on treating sensorineural hearing loss, or SNHL. Beginning in 2019, Frequency ran five clinical studies of FX-322 aimed at understanding safety as well as severities and etiologies that FX-322 might treat and the appropriate dose regime. In 2021, Frequency commenced its sixth study, or the FX-322-208 study, and introduced a second hearing program, FX 345, which Frequency believed might expand the opportunity to treat different types of SNHL. In February 2023, Frequency announced that the FX-322-208 study failed to achieve its primary endpoint of an improvement in speech perception. Frequency decided to discontinue the FX-322 development program and, given the similarities between the mechanisms of FX-322 and FX 345, decided to discontinue the FX-345 development program as well. Following this decision, Frequency decided to focus its efforts on developing a product candidate designed to activate oligodendrocyte precursor cells with the goal of inducing remyelination and functional recovery for individuals living with multiple sclerosis, or the MS Program, and to explore strategic alternatives for the MS Program, including the sale of the MS Program. On July 14, 2023, Frequency and Korro Bio entered into the Merger Agreement.

On April 8, 2022, Frequency announced a reduction in force of approximately 30% of its workforce to better align the workforce with the near-term needs of the business and focus more of Frequency's capital resources on research and development programs for hearing and remyelination in MS. On February 13, 2023, in connection with the discontinuation of the hearing program, Frequency announced a restructuring of its business including a downsizing of personnel by approximately 55%. On May 31, 2023, Frequency announced a reduction in force of approximately 55% of its workforce to better align its workforce with the needs of its business.

On August 11, 2023, Frequency entered into a lease termination agreement with its landlord to terminate the lease for its Lexington, MA office on January 31, 2024. Also on August 11, 2023, it entered into a sublease termination agreement with its sublessee to terminate the sublease of its Lexington, MA office on January 31, 2024. Frequency is not subject to any payments or costs pursuant to the lease or sublease termination agreements.

Since formation in 2014, Frequency has devoted substantially all its resources to developing its PCA approach, conducting research and development activities, including product candidate development, recruiting skilled personnel, establishing its intellectual property portfolio, and providing general and administrative support for these operations. Frequency has financed its operations primarily through private and public securities financings, a term loan, and amounts received under a collaboration agreement.

Since inception, Frequency has incurred significant operating losses and has not generated any revenue from the sale of products. Frequency's net losses were \$11.6 million, \$42 million and \$81.6 million for the three and nine months ended September 30, 2023 and year ended December 31, 2022, respectively. As of September 30, 2023, Frequency had an accumulated deficit of \$303.6 million.

## [Table of Contents](#)

Frequency's operating expenses discussed in this section reflect its development programs around FX-322, FX-345, the MS Program and contemplated future programs, as well as its operations as a public company. Following the Merger, the business of Korro Bio will be the business of the combined company, and Frequency does not expect any further development of its product candidates or programs.

### **License and collaboration agreements**

#### ***Astellas Pharma Inc.***

In July 2019, Frequency entered into a license and collaboration agreement, or the Astellas Agreement with Astellas Pharma, Inc., or Astellas, under which Frequency granted Astellas an exclusive, royalty-bearing, sub-licensable, nontransferable license to certain patent rights to research, develop, manufacture, have manufactured, use, seek, and secure regulatory approval for, commercialize, offer for sale, sell, have sold and import, and otherwise exploit licensed products containing both a GSK-3 inhibitor and an HDAC inhibitor, including Frequency's product candidate FX-322, outside of the United States. On April 14, 2023, the Astellas Agreement was terminated. Frequency is not subject to any payments or costs as a result of this termination.

#### ***Massachusetts Institute of Technology***

In December 2016, Frequency entered into an Exclusive Patent License Agreement, or the MIT License, with the Massachusetts Institute of Technology, or MIT, under which Frequency received an exclusive, worldwide, royalty-bearing license to certain patent rights to develop, make, have made, use, sell, offer to sell, lease, and import products and to develop and perform processes that incorporate the licensed technology for the treatment of disease, including but not limited to the prevention and remediation of hearing loss. Frequency was required to pay certain annual license maintenance fees ranging from \$30 thousand to \$0.1 million to MIT under the MIT License. On July 6, 2023, the MIT License Agreement was terminated. Frequency is not subject to any payments or costs as a result of this termination.

#### ***Massachusetts Eye and Ear (Formerly Massachusetts Eye and Ear Infirmary)***

In February 2019, Frequency entered into a Non-Exclusive Patent License Agreement, or the MEE License, with the Massachusetts Eye and Ear, or MEE, under which Frequency received a non-exclusive, non-sub-licensable, worldwide, royalty-bearing license to certain patent rights to develop, make, have made, use, sell, offer to sell, lease, and import products, and to develop and perform processes that incorporate the licensed technology for the treatment or prevention of hearing loss. Frequency was obligated to pay certain annual license maintenance fees between \$5 thousand and \$7.5 thousand per each MEE patent family case number included in the licensed MEE patent rights under the MEE License. On April 4, 2023, the MEE License was terminated. Frequency is not subject to any payments or costs as a result of this termination.

#### ***The Scripps Research Institute (California Institute for Biomedical Research)***

In September 2018, Frequency entered into a license agreement, or the CALIBR License, with the California Institute for Biomedical Research, or CALIBR, a division of Scripps, under which Frequency received an exclusive, worldwide, royalty-bearing license to certain patent rights to make, have made, use, sell, offer to sell, and import products that incorporate licensed technology for the treatment of MS. On April 28, 2023, the CALIBR License was terminated. Frequency is not subject to any payments or costs as a result of this termination.

## **Components of Frequency's results of operations**

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

Research and development expenses presented in this section consist primarily of costs related to activities largely focused on hearing restoration and MS. These expenses include the following:

- salaries, benefits and other related costs, including stock-based compensation expense, for personnel engaged in research and development functions;
- expenses incurred under agreements with third parties, including contract research organizations, or CROs, and other third parties that conduct preclinical research and development activities and clinical trials on Frequency's behalf;
- costs to manufacture Frequency's clinical trial material for use in Frequency's preclinical studies and clinical trials;
- costs of outside consultants, including their fees and related travel expenses;
- costs of laboratory supplies and acquiring, developing and manufacturing preclinical study and clinical trial materials;
- option and license payments made to third parties, including MIT, CALIBR, and MEE for intellectual property used in research and development activities; and
- facility-related expenses, which include direct depreciation costs and expenses for rent and maintenance of facilities and other operating costs if specifically, identifiable to research activities.

Frequency tracks external research and development costs, including the cost of services, outsourced research and development, clinical trials, contract manufacturing, laboratory equipment and maintenance, and certain other development costs, by product candidate when the costs are specifically identifiable to a product candidate. Internal and external costs associated with infrastructure resources, other research and development costs, facility-related costs, and depreciation and amortization that are not identifiable to a specific product candidate are included in the platform development, early-stage research, and unallocated expenses category.

In connection with the Merger, Frequency focused on pursuing strategic alternatives for its MS Program. We closed the sale of Frequency's MS program after the closing of the Merger.

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

General and administrative expenses consist primarily of salaries and other related costs, including stock-based compensation, for personnel in Frequency's executive, finance, business development, and administrative functions. General and administrative expenses also include legal fees relating to intellectual property and corporate matters; professional fees for accounting, auditing, tax and consulting services; investor and public relations costs; insurance costs; travel expenses; and facility-related expenses, which include direct depreciation costs and expenses for rent and maintenance of facilities, and other operating costs that are not specifically attributable to research and development activities.

### ***Interest income***

Interest income consists of interest earned on cash equivalents and marketable securities.

### ***Interest expense***

Interest expense consists of interest paid on Frequency's term loan.

## [Table of Contents](#)

### ***Other income, net***

Other income, net consists of amortization expense and accretion income on investments as well as sublease income.

### ***Income taxes***

Frequency's total provision is based on the United States statutory rate of 21%, increased by state taxes and reduced by a full valuation allowance on Frequency's deferred tax assets. The income tax expense for the three and six months ended June 30, 2023 and 2022 represents state taxes on interest income earned by Frequency's subsidiary, Frequency Therapeutics Securities Corporation, a Massachusetts Securities Corporation.

ASC 740 requires a valuation allowance to reduce the deferred tax assets reported if, based on the weight of the evidence, it is more likely than not that some portion or all of the deferred tax assets will not be realized. After consideration of all the evidence, both positive and negative, Frequency has recorded a valuation allowance against its deferred tax assets at December 31, 2022 because Frequency has determined that it is more likely than not that it will not recognize the benefits of its federal and state deferred tax assets primarily due to Frequency's cumulative loss position and, as a result, a valuation allowance has been established.

Since its inception in 2014, Frequency has generated cumulative federal and state net operating loss and research and development credit carryforwards for which Frequency has not recorded any net tax benefit due to uncertainty around utilizing these tax attributes within their respective carryforward periods.

## **Results of operations**

### ***Comparison of three months ended September 30, 2023 and 2022***

The following table summarizes Frequency's results of operations for the three months ended September 30, 2023 and 2022:

	Three Months Ended September 30,		Increase (Decrease)
	2023	2022	
	(in thousands)		
Operating expenses:			
Research and development	\$ 2,560	\$ 11,715	\$ (9,155)
General and administrative	10,105	8,560	1,545
Total operating expenses	12,665	20,275	(7,610)
Loss from operations	(12,665)	(20,275)	7,610
Interest income	448	351	97
Interest expense	—	(263)	263
Other income, net	596	617	(21)
Loss before income taxes	(11,621)	(19,570)	7,949
Income tax	7	23	(16)
Net loss	<u><u>\$ (11,614)</u></u>	<u><u>\$ (19,547)</u></u>	<u><u>\$ 7,933</u></u>

**Research and development expenses**

	Three Months Ended September 30,		
	2023	2022	Increase (Decrease)
	(in thousands)		
Direct research and development expenses by therapeutic area and product candidate:			
FX-322	\$ —	\$ 2,922	\$ (2,922)
FX-345	—	1,011	(1,011)
Multiple Sclerosis	175	1,128	(953)
Platform development, early-stage research and unallocated expenses:			
Employee-related costs	1,607	4,431	(2,824)
Laboratory supplies	2	49	(47)
Outsourced research and development	7	67	(60)
Facility-related costs	615	1,523	(908)
Depreciation and amortization	119	392	(273)
Other research and development costs	35	192	(157)
Platform development, early-stage research and unallocated expenses total	<u>2,385</u>	<u>6,654</u>	<u>(4,269)</u>
Total research and development expenses	<u>\$2,560</u>	<u>\$11,715</u>	<u>\$ (9,155)</u>

There were no costs incurred related to FX-322 for the three months ended September 30, 2023 as the program was discontinued in the first quarter of 2023 and all remaining expense was accelerated at that time. The \$3.0 million of costs related to FX-322 incurred for the three months ended September 30, 2022 consisted primarily of \$2.7 million of clinical costs associated with trials, including the Phase 2b clinical trial (FX-322-208), and \$0.1 million of drug development and manufacturing costs.

There were no costs incurred related to FX-345 for the three months ended September 30, 2023 as the program was discontinued in the first quarter of 2023 and all remaining expense was accelerated at that time. The \$1.0 million of costs related to FX-345 incurred for the three months ended September 30, 2022 consisted primarily of \$0.6 million of clinical costs associated with the Phase 1b trial and \$0.4 million of drug development and manufacturing costs.

The \$0.2 million of costs related to the MS development program incurred for the three months ended September 30, 2023 consisted primarily of clinical and regulatory costs. The \$1.1 million of costs related to the MS development program incurred for the three months ended September 30, 2022 consisted primarily of \$0.8 million of chemistry and compound characterization costs and \$0.2 million of drug development costs.

The \$2.4 million of platform development, early-stage research and unallocated expenses incurred for the three months ended September 30, 2023, consisted primarily of \$1.6 million in employee-related costs, including \$0.8 million of stock-based compensation expense, and \$0.6 million in facility-related costs. The decrease in platform development, early-stage research and unallocated expenses of \$4.3 million during the three months ended September 30, 2023, compared to the three months ended September 30, 2022, is primarily attributable to a decrease of \$2.8 million in employee-related costs, including salary, bonus, and stock-based compensation costs, as a result of the reductions in force implemented in April 2022 and February 2023, as well as a \$0.9 million decrease in facility-related costs due to a combination of reduced headcount and the initiation of cost sharing with Frequency's sublessee in connection with its sublease.

## [Table of Contents](#)

### **General and administrative expenses**

The \$10.1 million of general and administrative expenses for the three months ended September 30, 2023 consisted primarily of \$2.9 million in employee-related costs, including \$2.2 million of stock-based compensation, \$1.5 million in facility-related costs, \$5.4 million in professional services costs, and \$0.3 million in depreciation expense. General and administrative expenses increased by \$1.5 million from the three months ended September 30, 2022 due primarily to an increase in professional service fees, particularly legal fees.

### **Interest income**

Interest income was \$0.4 million for the three months ended September 30, 2023 and 2022.

### **Interest expense**

There was no interest expense for the three months ended September 30, 2023 compared to interest expense of \$0.3 million for the three months ended September 30, 2022. The decrease is due to the loan prepayment in April 2023.

### **Other income, net**

Other income, net was \$0.6 million for the three months ended September 30, 2023 and 2022.

### **Income tax**

Income tax benefit was \$7 thousand for the three months ended September 30, 2023 as compared to income tax benefit of \$23 thousand for the three months ended September 30, 2022.

### **Comparison of nine months ended September 30, 2023 and 2022**

The following table summarizes Frequency's results of operations for the nine months ended September 30, 2023 and 2022:

	Nine Months Ended September 30,		Increase (Decrease)
	2023	2022	
	(in thousands)		
Operating expenses:			
Research and development	\$ 18,509	\$ 38,769	\$(20,260)
General and administrative	26,498	26,037	461
Total operating expenses	<u>45,007</u>	<u>64,806</u>	<u>(19,799)</u>
Loss from operations	(45,007)	(64,806)	19,799
Interest income	1,317	871	446
Interest expense	(284)	(649)	365
Other income, net	2,043	357	1,686
Loss before income taxes	<u>(41,931)</u>	<u>(64,227)</u>	<u>22,296</u>
Income tax	(22)	9	(31)
Net loss	<u><u>\$(41,953)</u></u>	<u><u>\$(64,218)</u></u>	<u><u>\$ 22,265</u></u>



**Research and development expenses**

	Nine Months Ended September 30,		Increase (Decrease)
	2023	2022	
(in thousands)			
Direct research and development expenses by therapeutic area and product candidate:			
FX-322	\$ 1,081	\$ 8,583	\$ (7,502)
FX-345	647	3,493	(2,846)
Multiple Sclerosis	2,956	3,194	(238)
Platform development, early-stage research and unallocated expenses:			
Employee-related costs	9,206	15,834	(6,628)
Laboratory supplies	74	223	(149)
Outsourced research and development	73	620	(547)
Facility-related costs	3,151	4,934	(1,783)
Depreciation and amortization	1,079	1,233	(154)
Other research and development costs	242	655	(413)
Platform development, early-stage research and unallocated expenses total	<u>13,825</u>	<u>23,499</u>	<u>(9,674)</u>
Total research and development expenses	<u>\$18,509</u>	<u>\$38,769</u>	<u>\$ (20,260)</u>

The \$1.1 million of costs related to FX-322 incurred for the nine months ended September 30, 2023 consisted of clinical costs associated with the Phase 2b clinical trial (FX-322-208) which concluded in the first quarter 2023. The \$8.6 million of costs related to FX-322 incurred for the nine months ended September 30, 2022 consisted primarily of \$7.8 million of clinical costs associated with clinical trials, including the Phase 2b clinical trial (FX-322-208), and \$0.5 million of drug development and manufacturing costs.

The \$0.6 million of costs related to FX-345 incurred for the nine months ended September 30, 2023 consisted of clinical trial costs associated with the planned Phase 1b trial (FX-345-101), which was discontinued in the first quarter of 2023. The \$3.5 million of costs related to FX-345 incurred for the nine months ended September 30, 2022 consisted primarily of \$2.4 million of drug development and manufacturing costs, \$0.5 million in clinical trial costs associated with the Phase 1b trial, and \$0.2 million in regulatory fees related to the investigational new drug filing.

The \$3.0 million of costs related to the MS development program incurred for the nine months ended September 30, 2023 consisted primarily of \$1.2 million of chemistry and compound characterization costs, \$0.6 million of drug development and manufacturing costs, \$0.2 million of clinical and regulatory costs, and \$0.8 million of preclinical safety costs. The \$3.2 million of costs related to the MS development program incurred for the nine months ended September 30, 2022 consisted primarily of \$1.9 million of chemistry and compound characterization costs, \$0.4 million of preclinical safety costs, and \$0.3 million of drug development and manufacturing costs.

The \$13.8 million of platform development, early-stage research and unallocated expenses incurred for the nine months ended September 30, 2023, consisted primarily of \$9.2 million in employee-related costs, including \$1.8 million of stock-based compensation expense, and \$3.2 million in facility-related costs. The decrease in platform development, early-stage research and unallocated expenses of \$9.7 million during the nine months ended September 30, 2023, compared to the nine months ended September 30, 2022, is primarily attributable to a decrease of \$6.6 million in employee-related costs, including salary, bonus, and stock-based compensation costs, as a result of the reductions in force implemented in April 2022 and February 2023, as well as a \$1.8 million decrease in facility-related costs due to a combination of reduced headcount and the initiation of cost sharing with Frequency's sublessee in connection with its sublease.

## [Table of Contents](#)

### **General and administrative expenses**

The \$26.5 million of general and administrative expenses for the nine months ended September 30, 2023 consisted primarily of \$12.4 million in employee-related costs, including \$7.5 million of stock-based compensation, \$4.3 million in facility-related costs, \$9.0 million in professional services costs, and \$0.8 million in depreciation expense. General and administrative expenses increased by \$0.5 million from the nine months ended September 30, 2022 due primarily to an increase in professional service fees, particularly legal fees, partially offset by decreases in employee-related costs as a result of the reductions in force implemented in April 2022 and February 2023.

### **Interest income**

Interest income was \$1.3 million for the nine months ended September 30, 2023 compared to interest income of \$0.9 million for the nine months ended September 30, 2022. This increase is due to the changes in investment balances from the previous year.

### **Interest expense**

Interest expense was \$0.3 million for the nine months ended September 30, 2023 compared to interest expense of \$0.6 million for the nine months ended September 30, 2022. The decrease is due to the loan prepayment in April 2023.

### **Other income, net**

Other income, net was \$2.0 million for the nine months ended September 30, 2023 as compared to \$0.4 million for the nine months ended September 30, 2022. This increase is due to the sublease income generated in the nine months ended September 30, 2023.

### **Income tax**

Income tax expense was \$22 thousand for the nine months ended September 30, 2023 as compared to income tax benefit of \$9 thousand for the nine months ended September 30, 2022.

### **Comparison of years ended December 31, 2022 and 2021**

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

	Years ended December 31,	
	2022	2021
Revenue	\$ —	\$ 14,068
Operating expenses:		
Research and development	49,418	60,923
General and administrative	33,584	37,176
Total operating expenses	83,002	98,099
Loss from operations	(83,002)	(84,031)
Interest income	1,327	397
Interest expense	(961)	(764)
Realized gain (loss) on investments	3	(23)
Foreign exchange (loss) gain	(5)	16
Other income (expense), net	1,056	(266)
Loss before income taxes	(81,582)	(84,671)
Tax benefit (provision)	2	(15)
Net loss	\$(81,580)	\$(84,686)

## [Table of Contents](#)

### **Revenue**

No revenue was recognized for the year ended December 31, 2022 compared to \$14.1 million for the year ended December 31, 2021. In July 2019, Frequency entered into the Astellas Agreement and received an upfront license fee payment of \$80.0 million. In accordance with ASC 606, Frequency recognized the \$80.0 million as revenue over the period that research and development services were provided and the Phase 2a clinical study for FX-322 was carried out using the input method. These research and development services concluded in June 2021.

### **Research and development expenses**

	Years ended December 31,		Increase (Decrease) (in thousands)
	2022	2021	
Direct research and development expenses by therapeutic area and product candidate:			
FX-322	\$10,855	\$10,334	\$ 521
FX-345	4,217	5,471	(1,254)
Multiple Sclerosis	4,782	6,627	(1,845)
Platform development, early-stage research and unallocated expenses:			
Employee-related	20,015	25,557	(5,542)
Laboratory supplies	272	716	(444)
Outsourced research and development	403	2,305	(1,902)
Facility-related	6,403	6,898	(495)
Depreciation and amortization	1,618	1,599	19
Other research and development	853	1,416	(563)
Platform development, early-stage research and unallocated expenses total	29,564	38,491	(8,927)
Total research and development expenses	\$49,418	\$60,923	\$ (11,505)

The \$10.9 million of costs related to FX-322 incurred for the year ended December 31, 2022 consisted primarily of \$10.0 million of clinical costs associated with ongoing trials, including the recently completed Phase 2b clinical trial (FX-322-208), and \$0.6 million of drug development and manufacturing costs. The \$10.3 million of costs related to FX-322 incurred for the year ended December 31, 2021 consisted primarily of \$8.4 million of clinical costs associated with ongoing trials and \$1.9 million of drug development and manufacturing costs. The overall increase from the year ended December 31, 2021 is due primarily to the FX-322-208 clinical trial activity in the year ended December 31, 2022.

The \$4.2 million of costs related to FX-345 incurred for the year ended December 31, 2022 consisted primarily of \$2.6 million of drug development and manufacturing costs, \$1.2 million in clinical costs associated with the FX-345-101 trial, which Frequency initiated in 2022, and \$0.4 million in preclinical safety costs. The \$5.5 million of costs related to FX-345 incurred for the year ended December 31, 2021 consisted of \$3.1 million in preclinical safety costs and \$2.3 million in drug development and manufacturing costs. The overall decrease from the year ended December 31, 2021 is due primarily to the conclusion of preclinical safety work partially offset by costs related to the initiation of the FX-345-101 trial in the year ended December 31, 2022.

The \$4.8 million of costs related to MS incurred for the year ended December 31, 2022 consisted primarily of \$2.6 million of chemistry and compound characterization costs, \$0.7 million in drug development and manufacturing costs, \$0.6 million in preclinical safety costs, and \$0.4 million in *in vitro* and *in vivo* testing costs. The \$6.6 million of costs related to MS incurred for the year ended December 31, 2021 consisted of \$3.0 million

## [Table of Contents](#)

in preclinical safety costs, \$1.6 million in chemistry and compound characterization costs, \$0.9 million in *in vitro* and *in vivo* testing costs, and \$0.8 million in drug development and manufacturing costs. The overall decrease from the year ended December 31, 2021 is due primarily to a reduction in development and testing costs as Frequency progressed from exploratory activities to identification of specific proprietary compounds that act as Frequency's novel target for remyelination in MS.

The \$29.6 million of platform development, early-stage research and unallocated expenses incurred for the year ended December 31, 2022 consisted primarily of \$20.0 million in employee related costs, including \$7.7 million in stock-based compensation expense, \$6.4 million of facility-related costs, and \$1.6 million of depreciation expense. The decrease from the year ended December 31, 2021 is primarily attributable to a \$5.5 million decrease in employee-related expenses due predominantly to Frequency's April 2022 reduction in force, a \$1.9 million decrease in outsourced research and development expenses as Frequency decreased sponsored research, and a \$0.6 million decrease in other research and development expenses as Frequency reduced its reliance on third-party consulting.

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

The \$33.6 million of general and administrative expenses for the year ended December 31, 2022 consisted primarily of \$20.6 million of employee-related costs, including \$12.1 million in stock-based compensation expense, \$5.6 million of professional services costs, \$2.7 million in directors' and officers' insurance costs, \$1.6 million in rent expense, including utilities and common area maintenance, or CAM, charges, and \$1.1 million in depreciation expense. General and administrative expenses decreased \$3.6 million from December 31, 2021 due to a \$2.1 million decrease in professional services costs as Frequency reduced its reliance on third-party consulting and public relations vendors, a \$0.6 million decrease in directors' and officers' insurance costs, and a \$0.5 million decrease in employee-related costs due primarily to the April 2022 reduction in force.

### ***Interest income***

Interest income was \$1.3 million for the year ended December 31, 2022 compared to \$0.4 million for the year ended December 31, 2021, due to increases in interest rates from the previous year.

Interest expense was \$1.0 million for the year ended December 31, 2022 compared to \$0.8 million for the year ended December 31, 2021, due to increases in the interest rate on Frequency's loan.

### ***Realized gain (loss) on investments***

Realized gain on investments was \$3,000 for the year ended December 31, 2022 compared to a loss of \$23,000 for the year ended December 31, 2021 due to changes in the composition of investments year over year.

### ***Foreign exchange (loss) gain***

Foreign exchange loss was \$5,000 for the year ended December 31, 2022 compared to a gain of \$16,000 for the year ended December 31, 2021. The decrease was due to differences in foreign exchange remeasurement of the financial statements of Frequency's foreign subsidiaries.

### ***Other income (expense), net***

Other income, net was \$1.1 million for the year ended December 31, 2022 compared to expense of \$0.3 million for the year ended December 31, 2021. The change from the prior year is due to the inclusion of sublease income beginning in the third quarter of 2022.

## [Table of Contents](#)

### ***Income taxes***

Income tax benefit was \$2,000 for the year ended December 31, 2022 compared to expense of \$15,000 for the year ended December 31, 2021.

### **Liquidity and capital resources**

Since its inception, Frequency has incurred significant operating losses. Frequency does not currently have any approved products and has never generated any revenue from product sales. Frequency has financed its operations primarily through proceeds from private and public securities financings, a term loan, and amounts received under a collaboration agreement. To date, Frequency has raised approximately \$378.3 million, including from grants and option exercises. Frequency's cash, cash equivalents and marketable securities totaled \$41.7 million as of September 30, 2023.

In December 2020, Frequency entered into a Loan and Security Agreement with a commercial bank for a term loan with a principal balance of \$15.0 million. Frequency made monthly interest only payments through November 30, 2022. On April 3, 2023, Frequency prepaid the remaining \$11.7 million due under the term loan. Frequency was not subject to any prepayment premium as the prepayment occurred after the second anniversary of the closing date.

In December 2021, Frequency entered into an Equity Distribution Agreement with Oppenheimer & Co. Inc., or Oppenheimer, to sell shares of its common stock, having an aggregate offering price of up to \$125.0 million, from time to time, through an "at the market" equity offering program under which Oppenheimer acted as sales agent and/or principal, or the ATM Program. During the year ended December 31, 2022, Frequency sold 255 shares of common stock under the ATM Program for net proceeds of approximately \$50 thousand and paid \$2 thousand to Oppenheimer in sales agent fees. No shares of common stock have been sold under the ATM Program in 2023. On September 26, 2023 the ATM Program was terminated.

On April 8, 2022, Frequency announced a reduction in force of approximately 30% of its workforce to better align its workforce with the needs of Frequency's business and focus more of its capital resources on its research and development programs. The total costs related to this reduction in force are approximately \$1.0 million in research and development expense and \$0.2 million in general and administrative expense, primarily related to severance costs and related expenses.

On February 13, 2023, in connection with the discontinuation of the FX-322 and FX-345 hearing programs, Frequency announced a restructuring that included downsizing personnel by approximately 55%. These changes are expected to preserve capital, ensuring that Frequency is appropriately resourced to complete a first clinical trial of its MS development program. The total costs related to this restructuring are approximately \$4.3 million, of which \$3.8 million is related to severance costs and related expenses, \$0.4 million is related to accelerated depreciation, and \$0.1 million is related to accelerated hearing program costs.

On May 31, 2023, Frequency announced a reduction in force of approximately 55% of its workforce. This reduction in force was to better align its workforce with the needs of its business. The total costs related to this reduction in force are approximately \$1.1 million in research and development expense and \$22 thousand in general and administrative expense, primarily related to severance costs and related expenses.

On July 14, 2023, Frequency entered into the Merger Agreement. Following the Merger, the business of Korro Bio will be the business of the combined company, and Frequency does not expect any further development of its product candidates or programs.

## [Table of Contents](#)

### **Cash flows**

The following table summarizes Frequency's sources and uses of cash for the periods presented:

	Nine Months Ended September 30,	
	2023	2022
	(in thousands)	
Net cash used in operating activities	\$(27,358)	\$(42,618)
Net cash provided by investing activities	31,528	6,573
Net cash (used in) provided by financing activities	(14,133)	256
Decrease in cash and cash equivalents	<u>\$ (9,963)</u>	<u>\$(35,789)</u>

### **Cash flows for the nine months ended September 30, 2023**

#### **Operating activities**

Net cash used in operating activities for the nine months ended September 30, 2023 was \$27.4 million, consisting of a net loss of \$42.0 million. In addition, Frequency had non-cash charges of \$12.8 million for depreciation, stock-based compensation expense, non-cash lease expense, and non-cash gain on investments. Net cash used in operating activities was also impacted by changes in operating assets and liabilities, including a \$4.0 million decrease prepaid expenses and other current assets, a \$2.8 million decrease in accounts payable, and a \$1.6 million decrease in lease liabilities, partially offset by a \$2.2 million increase in accrued expenses.

The decrease in net cash used in operating activities for the nine months ended September 30, 2023 compared to the nine months ended September 30, 2022 was primarily due to a \$22.3 million decrease in net loss. This decrease was partially offset by a \$6.2 million decrease in stock based compensation expense and various changes in operating assets and liabilities year over year.

#### **Investing activities**

Net cash provided by investing activities for the nine months ended September 30, 2023 was \$31.5 million, which was primarily attributable to \$33.5 million in redemptions of marketable securities, partially offset by \$2.0 million purchases of marketable securities.

The increase in net cash provided by investing activities for the nine months ended September 30, 2023 compared to the nine months ended September 30, 2022 was primarily due to a \$45.0 million decrease in the purchase of marketable securities partially offset by a \$19.9 million decrease in redemptions of marketable securities.

#### **Financing activities**

Net cash used in financing activities for the nine months ended September 30, 2023 was \$14.1 million, primarily attributable to term loan repayments. This represents an increase in net cash used in financing activities when compared to the nine months ended September 30, 2022 as no such repayments were made in nine months ended September 30, 2022.

### **Cash flows for the nine months ended September 30, 2022**

#### **Operating activities**

Net cash used in operating activities for the nine months ended September 30, 2022 was \$42.6 million, consisting of a net loss of \$64.2 million as Frequency incurred expenses associated with its FX-322 program, FX-345 program, MS program, platform development and early-stage research, and general and administrative

## [Table of Contents](#)

expenses. In addition, Frequency had non-cash charges of \$19.7 million for depreciation, stock-based compensation expense, non-cash lease expense, and non-cash interest expense. Net cash used in operating activities was also impacted by a net \$4.5 million decrease in operating assets and liabilities, including a \$3.2 million decrease in prepaid expenses and other current assets, a \$1.4 million decrease in lease liabilities, and a \$0.4 million decrease in accrued expenses, partially offset by a \$0.5 million increase in accounts payable.

### ***Investing activities***

Net cash provided by investing activities for the nine months ended September 30, 2022 was \$6.6 million, which was attributable to \$53.4 million in redemptions of marketable securities and \$18 thousand sales of property and equipment, partially offset by \$46.9 million purchases of marketable securities.

### ***Financing activities***

Net cash provided by financing activities for the nine months ended September 30, 2022 was primarily attributable to \$0.3 million in proceeds from the issuance of common stock and the sale of shares of common stock under the Employee Stock Purchase Plan.

The following table summarizes Frequency's sources and uses of cash for the years ended December 31, 2021 and 2022:

	Year Ended December 31,	
	2022	2021
	(in thousands)	
Net cash used in operating activities	\$(58,237)	\$ (76,059)
Net cash provided by (used in) investing activities	31,133	(66,126)
Net cash (used in) provided by financing activities	(577)	1,358
Net decrease in cash and cash equivalents	\$(27,681)	\$(140,827)

### ***Cash flows for the year ended December 31, 2022***

#### ***Operating activities***

Net cash used in operating activities for the year ended December 31, 2022 was \$58.2 million, consisting of a net loss of \$81.6 million. The net loss was partially offset by non-cash items related to normal business operations including stock-based compensation expense of \$19.8 million, depreciation expense of \$2.8 million, non-cash lease expense of \$2.4 million and non-cash interest expense of \$0.4 million. Net cash used in operating activities was also impacted by a net \$2.0 million decrease in operating assets and liabilities, primarily the result of the continued reduction of lease liabilities over the term of the Frequency leased office space.

The decrease in net cash used in operating activities for the year ended December 31, 2022 compared to the year ended December 31, 2021 is primarily due to changes in operating assets and liabilities year over year. Specifically, deferred revenue decreased \$14.1 million in the year ended December 31, 2021 due to the recognition of revenue related to the Astellas Agreement. No such decrease occurred in the year ended December 31, 2022. The decrease from December 31, 2021 is also partially due to a \$3.1 million decrease in net loss.

#### ***Investing activities***

Net cash provided by investing activities for the year ended December 31, 2022 was \$31.1 million, which was attributable to \$85.3 million in redemptions of marketable securities and \$17 thousand in sales of property and equipment partially offset by \$54.2 million of purchases of marketable securities.

## [Table of Contents](#)

The increase in net cash provided by investing activities for the year ended December 31, 2022 compared to the year ended December 31, 2021 is primarily due to a \$56.1 million increase in the redemption of marketable securities and a \$38.2 million decrease in the purchase of marketable securities. The increase is also due to a \$2.9 million decrease in purchases of property and equipment from the year ended December 31, 2021 as Frequency furnished its new office and laboratory space in 2021 and did not incur such expenditures in 2022.

### ***Financing activities***

Net cash used in financing activities for the year ended December 31, 2022 was \$0.6 million, primarily attributable to \$0.8 million in term loan repayments partially offset by \$0.2 million in proceeds from the Employee Stock Purchase Plan and \$60 thousand in proceeds from the issuance of common stock under the ATM and exercises of common stock.

The increase in net cash used in financing activities for the year ended December 31, 2022 compared to December 31, 2021 is primarily attributable to the \$1.2 million decrease in proceeds from the issuance of common stock. Additionally, Frequency began making principle repayments on its term loan in the year ended December 31, 2022.

### ***Cash flows for the year ended December 31, 2021***

#### ***Operating activities***

Net cash used in operating activities for the year ended December 31, 2021 was \$76.1 million, consisting of a net loss of \$84.7 million. The net loss was partially offset by non-cash items related to normal business operations including stock-based compensation expense of \$21.8 million, depreciation expense of \$2.8 million, non-cash lease expense of \$1.1 million and non-cash interest expense of \$0.4 million. Net cash used in operating activities was also impacted by a net \$17.3 million decrease in operating assets and liabilities, primarily due to the \$14.1 million reduction in deferred revenue as all remaining revenue related to the Astellas Agreement was recognized in the year ended December 31, 2021 as well as a \$2.3 million decrease in accounts payable due to the timing of invoice receipt and payment.

#### ***Investing activities***

Net cash used in investing activities for the year ended December 31, 2021 was \$66.1 million, which was attributable to \$92.4 million of purchases of marketable securities and \$2.9 million of purchases of property and equipment, partially offset by \$29.2 million in redemptions of marketable securities.

#### ***Financing activities***

Net cash provided by financing activities for the year ended December 31, 2021 was \$1.4 million, primarily attributable to \$1.3 million in proceeds from the exercise of Frequency Options and \$60 thousand in proceeds from the Employee Stock Purchase Plan.

#### ***Funding requirements***

Following the Merger, the business of Legacy Korro became our business, and Frequency does not expect any further development of its product candidates or programs that would require additional funding. The funding requirements of the combined company will reflect the funding requirements for the development of Korro Bio's product candidates and programs. A discussion of our funding requirements can be found in the section titled "*Korro Bio Management's Discussion and Analysis of Financial Condition and Results of Operations—Liquidity and Capital Resources—Funding Requirements*" in this prospectus.



### **Critical accounting policies and use of estimates**

Frequency's management's discussion and analysis of financial condition and results of operations is based on Frequency's unaudited consolidated financial statements, which have been prepared in accordance with accounting principles generally accepted in the United States. The preparation of Frequency's consolidated financial statements and related disclosures requires us to make estimates and assumptions that affect the reported amounts of assets and liabilities, costs and expenses, and the disclosure of contingent assets and liabilities in Frequency's consolidated financial statements. Frequency bases its estimates on historical experience, known trends and events, and various other factors that Frequency believes 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. Frequency evaluates its estimates and assumptions on an ongoing basis. Frequency's actual results may differ from these estimates under different assumptions or conditions.

Frequency's significant accounting policies are described in more detail in the notes to Frequency's audited consolidated financial statements for the years ended December 31, 2021 and 2022 and unaudited consolidated financial statements for the three and nine months ended September 30, 2022 and 2023 included elsewhere in this prospectus.

### **Recent accounting pronouncements**

A description of recent accounting pronouncements that may potentially impact Frequency's financial position, results of operations, or cash flows is disclosed in Note 2 to Frequency's unaudited consolidated financial statements for the three and nine months ended September 30, 2022 and 2023 included in this prospectus.

### **Emerging growth company status**

The Jumpstart Our Business Startups Act of 2012 permits an "emerging growth company," such as us, to take advantage of an extended transition period to comply with new or revised accounting standards applicable to public companies until those standards would otherwise apply to private companies. Frequency has elected to take advantage of this extended transition period.

## BUSINESS

*On November 3, 2023, we completed the business combination with the privately held Delaware corporation, Korro Bio, Inc., or Legacy Korro, in accordance with the terms of the Agreement and Plan of Merger dated as of July 14, 2023, or the Merger Agreement, among our company, Legacy Korro and a wholly-owned merger subsidiary. We refer to this business combination throughout this Business Section as the Merger. Immediately after the Merger the former Legacy Korro securityholders owned approximately 91% of our fully diluted common stock, and our pre-Merger securityholders owned the remaining approximately 9%. As a result of the Merger, our business is now substantially comprised of the business of Legacy Korro, and although we are considered the legal acquiror of Legacy Korro, for accounting purposes, Legacy Korro is considered to have acquired our company in the Merger. Consequently, the Merger is accounted for as a reverse recapitalization. Upon completion of the Merger, we changed our name from “Frequency Therapeutics, Inc.” to “Korro Bio, Inc.,” our common stock began trading on The Nasdaq Capital Market under a new ticker symbol “KRRO” on November 6, 2023 and our financial statements became those of Legacy Korro.*

*As used in this Business Section, the words “we,” “us,” “our,” the “Company,” and “Korro Bio” refer to Korro Bio, Inc. and its consolidated subsidiaries following completion of the Merger.*

### 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 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 single base 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. Using an oligonucleotide-based approach, we expect to bring our medicines to patients by leveraging our proprietary platform with precedented delivery modalities, manufacturing know-how, and established regulatory pathways of approved oligonucleotide drugs. However, the scientific evidence to support the feasibility of developing product 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 no clinical data has been generated to date.

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 its 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 SNVs on RNA, we believe we will be able to address unmet patient need by transiently modifying gene function.

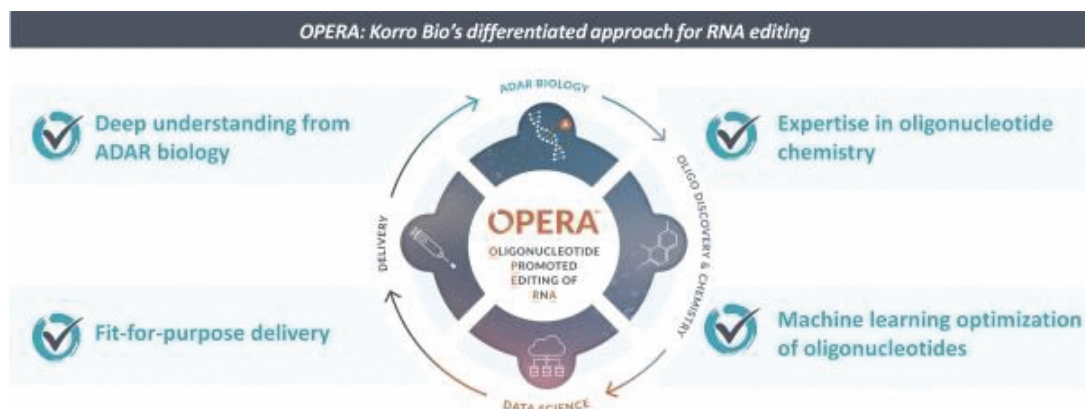
As our understanding of genetic drivers of disease has increased, significant advances have been made in technologies designed to introduce specific yet permanent changes at the DNA level to treat diseases. While these DNA editing approaches offer great promise for the treatment of certain rare diseases, 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 bases on RNA, referred to as RNA editing. RNA editing is a natural physiological process that occurs in cells,

## Table of Contents

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 a proprietary engineered oligonucleotide to introduce precise edits to RNA. We iteratively optimize the editing efficiency of our product candidates 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 SNV and affect biology in meaningful ways.

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 product candidates:

- Deep understanding from 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 in different species and disease states, allowing us to develop novel product 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 oligonucleotides with drug-like properties, thereby increasing the editing and translational efficiency of our product candidates.
- Machine learning optimization of oligonucleotides, driven by data science and computational capabilities for rapid design and iteration resulting in optimal product candidates for each disease being pursued.
- Fit-for-purpose delivery, made possible by tissue-specific delivery technologies that can enhance biodistribution, specificity, durability and editing efficiency of product candidates for each given disease.

The versatility of RNA editing combined with our OPERA platform broadens the therapeutic target space significantly. While our approach can be used to repair pathogenic SNVs, as demonstrated by our most advanced program, our AATD product candidate, KRRO-110, we can also engineer *de novo* SNVs and change amino acids on proteins to endow them with desired properties while preserving their broader functional capabilities as exemplified by three of our other programs (sAH, ALS, Pain). In preclinical studies, we have demonstrated that single RNA changes can disrupt protein-protein interactions, prevent protein aggregation, selectively modulate ion channels and activate kinases. These modification approaches can unlock validated target classes that have historically been difficult to drug, enabling us to pursue a broad range of diseases traditionally out-of-scope for other genetic medicine approaches and current traditional drug modalities.

## Table of Contents

Each of our programs demonstrate the versatility of the oligonucleotide-based ADAR-mediated RNA editing approach to bring additional precision and tunability to address a broad range of rare and highly prevalent diseases.

- **Repairing pathogenic variants:** An SNV that is a G to A mutation on DNA, leading to an aberrant amino acid on a protein can be repaired using RNA editing. Such an approach is relevant when the patient population has a spectrum of disease manifestations from mild-to-severe.
- **Disrupting protein-protein interactions:** 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 variant transiently using our RNA editing product candidates, thereby engineering a *de novo* SNV.
- **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.

The pipeline chart below demonstrates the breadth of indications and applications enabled by our OPERA platform, with an initial focus on four programs that are all wholly-owned. In addition, we have two other wholly-owned programs not reflected in the pipeline chart below: one for an undisclosed target for sAH, and one for a kinase target for cardiometabolic disease. All of our programs are still in the research or preclinical stage of development and their risk of failure is high.

Concept	Indication	Target	Discovery	Preclinical development	Phase 1	Phase 2	Phase 3	Wholly owned?
Repairing a pathogenic variant	Alpha-1 anti-trypsin deficiency	A1AT	Regulatory filing expected in 2H'24					✓
Repairing a pathogenic variant	Parkinson disease	LRRK2						✓
Preventing protein aggregation	Amyotrophic lateral sclerosis	TDP43						✓
Selectively modulating ion channels	Subsets of pain	Na <sub>v</sub> 1.7						✓

1 Subject to submission of regulatory filing and authorization to proceed

Our most advanced program, KRRO-110, is a product candidate in development as a potential treatment for Alpha-1 Antitrypsin Deficiency, or AATD, where, using our proprietary RNA editing approach, we are repairing a pathogenic variant on RNA. KRRO-110 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 alpha-1 antitrypsin protein, or A1AT, caused by SNV mutations in the SERPINA1 gene. There are an estimated 3.4 million individuals with deficiency allele combinations worldwide. Despite being minimally effective and not fully addressing the needs of many AATD patients, augmentation therapy currently represents ~\$1.4 billion in annual sales worldwide. KRRO-110 has the potential to elevate the standard of care and expand the number of patients on treatment and potential to be a leader with a large market opportunity worldwide. However, we have yet to conduct any human clinical trials, KRRO-110 is in early stages of development and there is no guarantee we will be successful.

KRRO-110 is a proprietary oligonucleotide that utilizes an established lipid nanoparticle, or LNP, based delivery system administered intravenously to transiently restore production of normal A1AT in liver hepatocytes. By correcting the pathogenic G to A SNV in the SERPINA1 gene, we aim to bring individuals with the Z mutation to a phenotype where over 50% of RNA has been corrected to produce normal A1AT protein, preserving lung and liver function and preventing further damage. However, this delivery system has not yet been finalized and while LNPs have been validated clinically to deliver oligonucleotides, such as siRNA, they have not been clinically proven to deliver oligonucleotides for RNA editing, such as our product candidates.

We believe our approach for treating AATD has multiple potential advantages:

- Provides a disease modifying therapy for both lung and liver manifestations by transiently editing over 50% of RNA transcripts in hepatocytes to restore normal A1AT 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 A1AT using endogenous ADAR, thereby increasing normal A1AT production during inflammation
- Fit-for-purpose delivery using a proven LNP to maximize editing efficiency, leading to greater potential clinical benefit

We have generated compelling preclinical data demonstrating proof of concept across multiple RNA editing oligonucleotides that have the potential to become the lead development candidate. These potential development candidates have each achieved targeted durability, high editing efficiency (>50% editing in hepatocytes) and increased expression of normal A1AT protein (>85% of total A1AT protein in circulation) in an *in vivo* mouse model. We have also shown that our product candidates have high translation of RNA editing efficiency from mice to non-human primates, or NHPs, demonstrating the potential applicability of our approach in humans. 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.

Preclinical development of KRRO-110 is ongoing in preparation for a potential regulatory filing in the second half of 2024.

### **Our Team**

We were launched in 2018 and were co-founded by Nesson Bermingham, Jean-Francois Formela, Joshua Rosenthal and Andrew Fraley. Our science was based on pioneering research from the laboratory of Joshua Rosenthal, Ph.D., at the Marine Biological Laboratory, or MBL in Woods Hole. Dr. Rosenthal's work includes landmark discoveries in RNA editing based on adenosine deamination.

We are led by an experienced team with deep expertise in genetic medicines, development of oligonucleotide-based therapeutics, building novel therapeutic platforms, and bringing multiple therapeutics to market. In addition, our executive leadership team has a successful track record of company building and leading biotech companies including Ram Aiyar, Ph.D., President and Chief Executive Officer, an experienced executive and company builder with 20 years of diverse industry experience including research, business and strategy; Steve Colletti, Ph.D., Chief Scientific Officer who brings nearly 30 years of drug discovery and development experience covering a broad range of therapeutic areas and modalities; and Vineet Agarwal, Chief Financial Officer, who brings more than 14 years of financial and industry experience as a biotech investment banker with J.P. Morgan Chase & Co. We also have an accomplished scientific advisory board comprised of leading experts in the fields of ADAR biology, chemistry, translation medicine, and nucleic acid therapeutics.

We are a mission-driven organization and thrives through a strong culture of scientific innovation and behavior that embodies our core values and principles. We are actively working to rewrite the future of medicine by remaining on the cutting edge of science and research. We believe our success is enabled by working better together and embracing diversity, leading us to employ a dynamic team with varied expertise, enabled by kindness and integrity.

We have attracted a talented team of industry experts and experienced scientists as part of a high-performing, nimble organization. Our research and development organization is comprised of individuals with expertise in DNA editing technologies, liver biology, CNS biology, medicinal chemistry, biochemistry and drug delivery, translational medicine and conducting preclinical studies.

Since inception, we have raised \$226 million in capital before the Pre-Closing Financing and Merger. If this transaction is completed, we will raise an additional \$117 million from premier venture capital funds, healthcare-dedicated funds, major mutual funds and other leading investors that share our vision of creating transformative genetic medicines for diseases with high prevalence.

### **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 RNA editing platform, OPERA, which combines our unique expertise in ADAR biology and oligonucleotide chemistry with machine learning-driven optimization and fit-for-purpose delivery. Our novel RNA editing product candidates are designed to harness the body's natural RNA editing processes to make a precise single base edit. However, this has only been observed in preclinical studies as we have yet to submit an IND to the FDA or commence a clinical trial. Our goal is to develop a portfolio of RNA editing product candidates with best-in-class properties across a range of diseases by executing on the following key pillars of our strategy:

- **Develop a novel class of RNA editing therapies using learnings from a combination of genetics and approved medicines.** We are leveraging significant advances in the understanding of the correlation between DNA, RNA and disease phenotypes to develop novel therapeutic approaches across a range of validated biological targets. This 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. In addition, our oligonucleotide editing product candidates are structurally similar to other clinically and commercially validated drug modalities such as antisense oligonucleotides, or ASOs, and small-interfering siRNAs, conferring potential advantages in manufacturing, regulatory review and clinical adoption.
- **Develop and advance into the clinic a differentiated disease-modifying therapy for patients with AATD.** Our first development candidate, KRRO-110, has the potential to provide a differentiated therapeutic option for AATD by addressing both the liver and lung pathologies. Our RNA editing oligonucleotide product candidates have generated compelling preclinical data that demonstrates restoration of normal A1AT protein while preventing the aggregation of dysfunctional A1AT in the liver. Our preclinical *in vivo* data has demonstrated durability and high editing efficiency in both mice and NHPs, illustrating the potential applicability in humans. Preclinical development of KRRO-110 is ongoing in preparation for a potential regulatory filing in the second half of 2024. Depending on the evidence of efficacy and tolerability, we intend to pursue expedited regulatory pathways. However, regulators have not yet established any definitive guidelines related to overall development considerations for RNA editing therapies and no clinical data has been generated to date.
- **Deploy our versatile OPERA platform to develop a portfolio of programs that modify proteins transiently to expand into highly prevalent diseases.** OPERA has the ability to generate unique RNA editing therapies that can modify protein function or endow proteins with engineered changes that will potentially result in desirable properties to treat disease. In preclinical studies, we have demonstrated that single RNA changes can disrupt a protein-protein interaction, prevent protein aggregation, selectively modulate an ion channel and selectively activate a kinase. These modification approaches 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. We are evaluating potential applications of our OPERA platform for use in other highly prevalent indications including the CNS, liver, and cardiometabolic therapeutic areas.

- **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 oligonucleotide product candidates. In development of our AATD program, we were able to go from “design-to-data” in 5-6 weeks. 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 product 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 currently retain worldwide development and commercialization rights to our programs and platform. We actively collaborate with clinical leaders, academic medical centers of excellence, and patient advocacy groups to continue to enhance our expertise in our focus therapeutic areas. Given the versatility and broad potential of our OPERA platform across therapeutic areas, especially in diseases with high prevalence, we may enter into 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 embracing diversity in employing a dynamic team with varied expertise, enabled by kindness and integrity. 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 expertise in editing technologies, RNA biology, liver biology, CNS biology, medicinal chemistry, biochemistry and delivery, translational medicine, preclinical and clinical development.

### **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 its 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 recently 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 recently emerged as a differentiated approach that can generate product candidates 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.

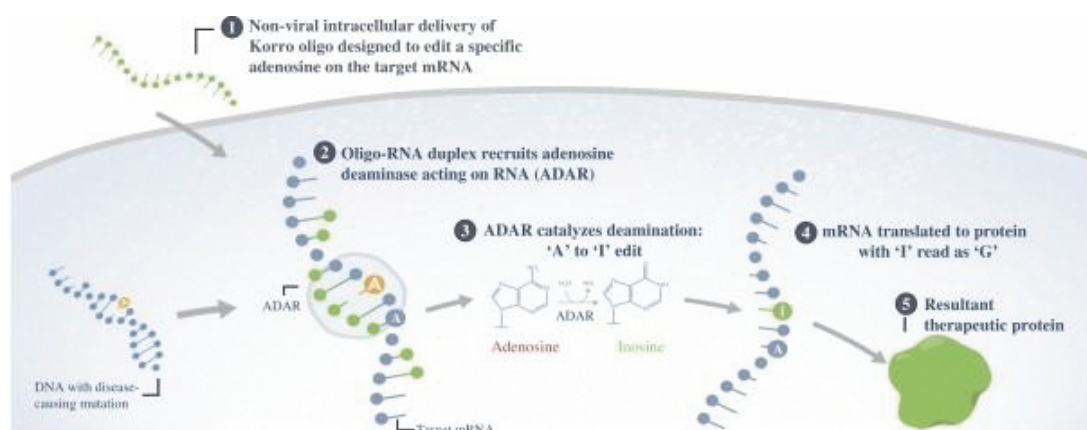

















Figure 1: Mechanism of RNA editing using our proprietary platform



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

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. 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 differentiate ourselves from DNA-editing by leveraging the know-how from approved oligonucleotide therapies in development of our product candidates.

	Oligo-based Therapies	DNA Editing
 Specificity	 High sequence specificity	 Risk of indels and chromosomal integration
 Delivery	 Precedented for oligo-based therapies <sup>1</sup>	 Inefficient <i>in vivo</i>
 Tolerability	 Transient	 Long-term unknown (permanent)
 Manufacturing	 Simple	 Complex
 Regulatory	 Multiple approved oligonucleotide products	 Only <i>ex vivo</i> approved

<sup>1</sup>Includes QNFATTRO<sup>®</sup>, SPINRAZA<sup>®</sup> and LEQVIO<sup>®</sup>

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.

- 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 NGS 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.

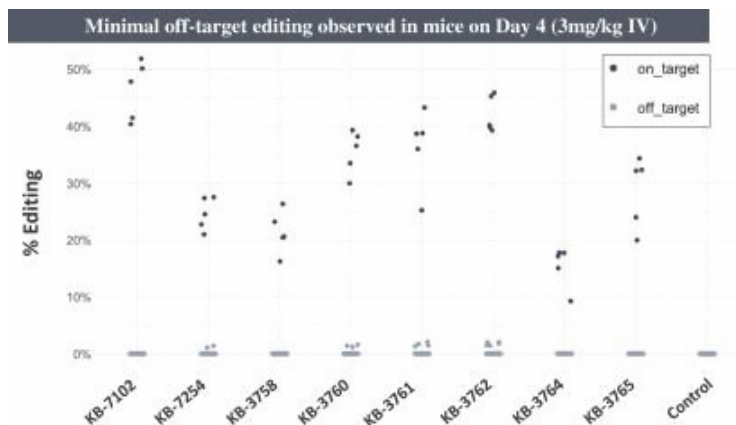


Figure 2. Overview of off-target editing observed in mice across multiple oligonucleotides

- **Delivery:** Oligonucleotide-based ADAR-mediated RNA leverages well established, clinically precedented delivery approaches used in other approved products, such as LNPs and ligand-based approaches. LNP-based delivery of oligonucleotides is a well established and clinically validated delivery approach that provides sustained targeted delivery and editing efficiency, resulting in infrequent dosing and an acceptable tolerability profile. Additionally, LNP delivery of RNA-editing oligonucleotides enhances optimal distribution to targeted cells. 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.
- **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 product 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 on 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 product 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 RNA editing product

candidates are 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 product candidates:

- **Deep understanding from 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 a deep understanding of 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 developed a cell-free *in vitro* RNA editing assay with purified human ADAR1 and ADAR2 that predicts the RNA editing activity with our oligonucleotides. With our cell free assay capability, we are able to limit the number of components implicated in screening (target gene, RNA editing product candidates and ADAR), allowing us to measure the kinetics of RNA editing more accurately. Using only three components including the target RNA, oligonucleotide, and ADAR, we have shown that target editing efficiency is correlated with the chemical modification pattern of an oligonucleotide. Furthermore, we have found that this activity predicts the rank order of oligonucleotides in both *in vitro* cell-based systems and *in vivo* in rodents. This assay capability supports our understanding of the key steps required to edit RNA at a level of detail that is not possible in cells. These platform biology assay capabilities have enabled detailed mechanistic studies into the tissue distribution and subcellular localization of ADAR proteins and our RNA editing product candidates.
- 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 product candidates 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 product candidates are not likely to have any effect on the degree of editing of native RNA molecules.

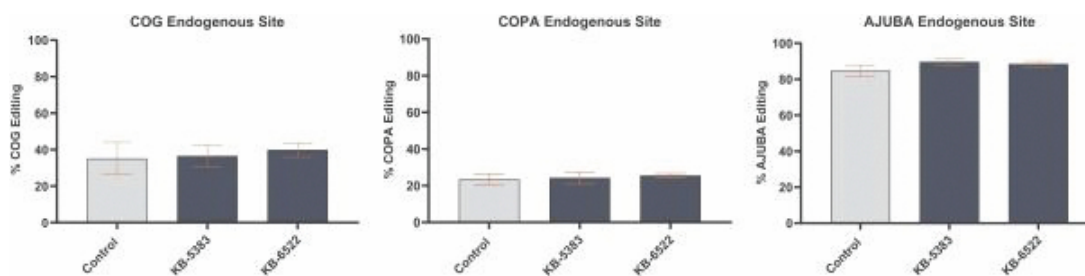


Figure 3. Our RNA editing product candidates show no evidence of interference with endogenous ADAR editing as demonstrated at the above sites

- **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 product candidates. We have identified critical structural, sequence, and chemistry requirements for our product candidates 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 oligonucleotide product candidates. 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:** We have built data science capabilities and a dedicated team to extract lessons from existing and newly generated experimental data to expeditiously design and optimize RNA editing product candidates. 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 product candidates over the last several quarters. 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.

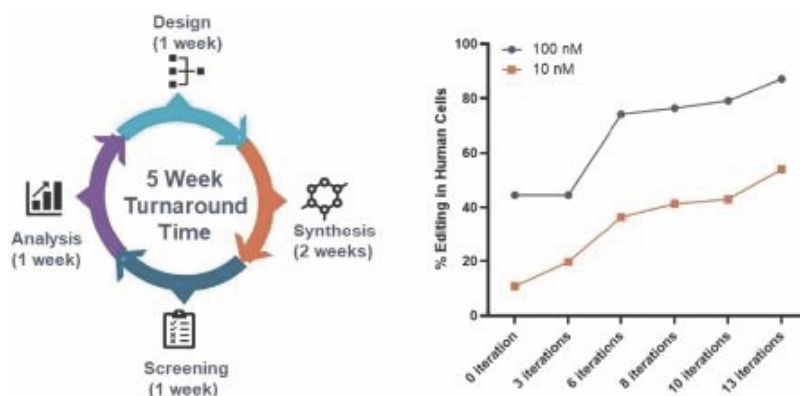


Figure 4. We have shown our ability to rapidly iterate product candidates to maximize editing efficiency

- Structural modeling is another tool that complements our ability to increase the efficiency of our RNA editing candidates. 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 product candidates. 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*.



Figure 5. We have a demonstrated ability to improve editing in target coding regions

- Fit-for-purpose delivery:** Our product candidates utilize short synthetic oligonucleotides, which we believe can be efficiently delivered using technologies such as LNP or GalNAc. These delivery technologies are well established and clinically validated and have been developed for precedented modalities such as siRNAs and ASOs. Each of these delivery vehicles has optimal characteristics suited for a given therapeutic application. We have shown in preclinical studies that LNP can be used in ADAR mediated editing processes to achieve high editing efficiency. Additionally, LNP mediated delivery of RNA editing product candidates provides sustained delivery and an acceptable tolerability profile that have been manufactured at a scale sufficient to serve the target population. In addition to LNP based delivery approach, ligand-based approaches (ex., GalNAc for liver hepatocytes) can also be used for effective delivery and to improve durability with OPERA’s RNA editing product candidates, 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 product candidates 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. However, this delivery system has not yet been finalized and while LNPs have been validated clinically to deliver oligonucleotides, such as siRNA, they have not been clinically proven to deliver oligonucleotides for RNA editing, such as our product candidates.

**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. In addition, we have two other wholly-owned programs not reflected in the pipeline chart below: one for an undisclosed target for sAH, and one for a kinase target for cardiometabolic disease. All of our programs are still in the research or preclinical stage of development and their risk of failure is high.

Concept	Indication	Target	Discovery	Preclinical development	Phase 1	Phase 2	Phase 3	Wholly owned?
Repairing a pathogenic variant	Alpha-1 anti-trypsin deficiency	AIAT	Regulatory filing expected in 2H'24					✓
Repairing a pathogenic variant	Parkinson disease	LRRK2						✓
Preventing protein aggregation	Amyotrophic lateral sclerosis	TDP43						✓
Selectively modulating ion channels	Subsets of pain	Na <sub>v</sub> 1.7						✓

1 Subject to submission of regulatory filing and authorization to proceed

## [Table of Contents](#)

Our proprietary oligonucleotides co-opt endogenous ADAR to perform a single A-to-I base edit on RNA to modify protein function. Delivery of these proprietary oligonucleotides into a cell forms an oligonucleotide-RNA duplex which recruits endogenous ADAR, ultimately editing a target adenosine (A) to inosine (I) on RNA. The location of the edit can lead to a multitude of effects including changes in expression and regulation of mRNA. In the event an edit is made in the coding region of the gene, the mRNA is then translated to a protein with the (I) inosine read as a (G) guanosine, resulting in a modified protein. The resultant therapeutic protein can be applied to go beyond repairing pathogenic SNVs by changing amino acids on proteins implicated in disease biology. Single amino acid changes to non-mutated RNA can create *de novo* modified protein variants with desired altered properties while preserving their broader functional capabilities.

*Repairing pathogenic variants:* Our OPERA platform enables the development of RNA editing therapies that can repair SNVs on mRNA 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.

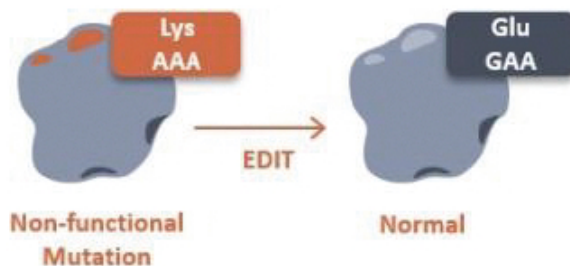


Figure 6. RNA editing of a single nucleotide can restore normal protein expression

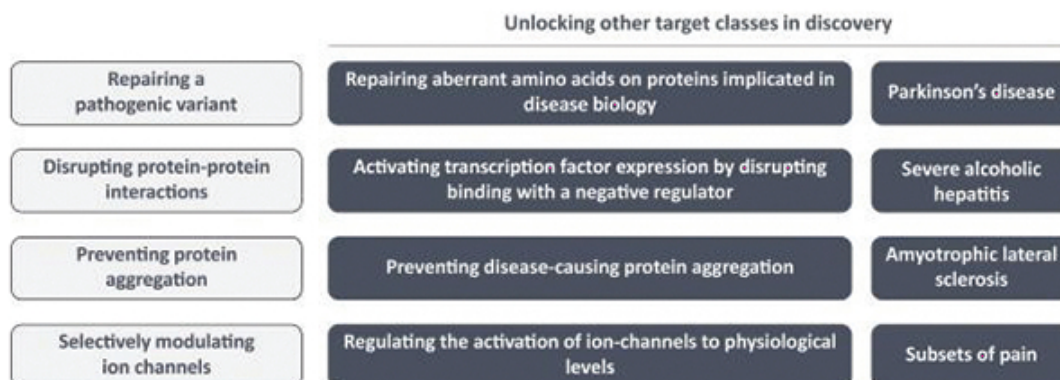
Our lead program for AATD addresses a single genetic SNV in the SERPINA1 gene that causes the development of A1AT deficiency, which has a high unmet medical need and for which there are no disease modifying treatment options. The disease manifests with a heterogenous population having both liver and lung pathologies. By specifically editing a single nucleotide, the normal synthesis of A1AT is restored, resulting in secretion of normal A1AT to levels which are predicted to protect the lung from further decline in function. The correction of a subset of A1AT produced also prevents aggregation of A1AT protein in the liver, thereby potentially alleviating damage to the liver.

Similarly, we are developing a product candidate that addresses a LRRK2 mutation for PD patients. Mutations in LRRK2 that are associated with aberrantly enhanced kinase activity are the most common cause of genetic PD. The G2019S mutation in the LRRK2 protein is the most common pathogenic mutation, accounting for 1–6% of sporadic and 3–19% of familial PD cases. Repairing the G2019S mutated nucleotide can restore the normal LRRK2 protein and return its activity to a physiological state, which we believe may be disease modifying in these patients.

### Other protein modifications

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.

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 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.



*Disrupting Protein-Protein Interaction:* Modulating protein-protein interactions provides a novel modality to target intracellular proteins specifically for increasing the activity of the protein. Single amino acid changes to non-mutated RNA can disrupt binding of inhibitors to target proteins, including transcription factors, promoting enhanced biological activity of the target protein. There are two ways this could provide increasing activation, either through a hyperactive protein, or through the presence of a longer half-life or both. Such an approach highlights the broad capabilities of what an RNA editing platform can accomplish in driving biological change.

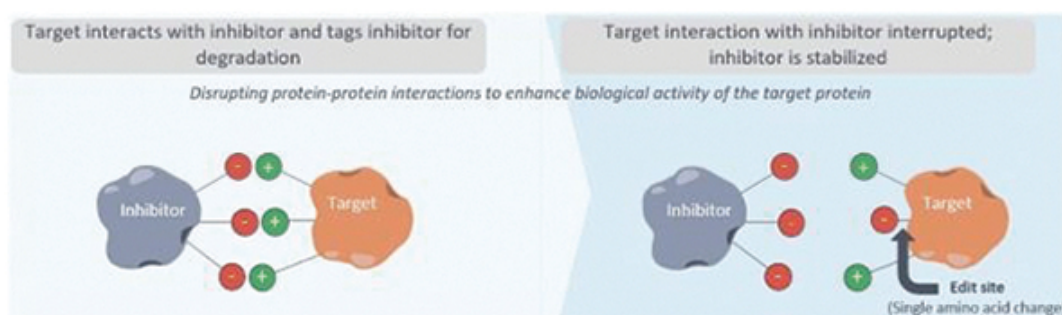


Figure 7. Our oligonucleotides have the ability to disrupt protein-protein interactions using precise edits

One of our programs for disrupting protein-protein interactions is in development for the treatment of severe alcohol-associated hepatitis (sAH). We are selectively modulating a validated transcription factor protein implicated in the disease pathology for sAH. This oligonucleotide product candidate leads to the synthesis of a protein variant that disrupts interaction with its inhibitor and, as a result, increases expression of clinically beneficial downstream target genes. Other approaches have attempted to disrupt the interaction with non-selective small molecules, resulting in unacceptable side effects, or by knocking down the regulatory protein, which is also responsible for regulating other important proteins. In a retrospective analysis of a study looking at sAH patient liver samples, increased expression of these target genes has been shown to have better

prognosis. In addition to sAH, this transcription factor is a validated target for other liver, cardiometabolic and inflammatory diseases, which may provide a “pipeline-in-a-product” opportunity.

*Other Target Classes:* In addition to disrupting protein-protein interactions, we are also advancing product candidates to prevent protein aggregation, selectively modulate ion channels and activate kinases.

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, PD, and ALS. Creating a protein variant that can prevent the aggregation, while preserving its intrinsic function, is a therapeutic approach that has the potential to provide a differentiated therapeutic option over knocking down or silencing the protein through alternate mechanisms.

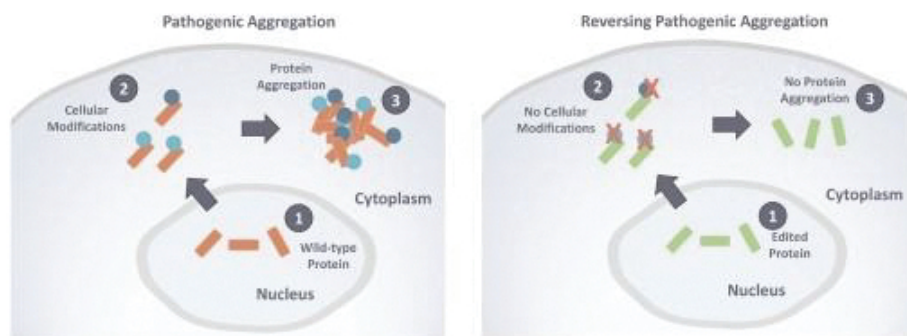


Figure 8. Our product candidates can reduce pathogenic aggregation of undesirable proteins

One of our programs for disrupting protein aggregation is in early-stage discovery for the treatment of ALS. We are selectively modulating 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. In pathological conditions, such as ALS, 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 is predicted to lead to the synthesis of a protein variant that does not aggregate and preserves its normal function. Given TDP-43 is essential for neuronal health, knocking down the protein could be detrimental.

We believe that the elegance and versatility of our RNA editing approach will enable a robust pipeline of potentially disease modifying product 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 AATD Program: RNA Editing to Repair Pathogenic Missense Variant**

Our first development candidate, KRRO-110, is in development as a potential treatment for Alpha-1 Antitrypsin Deficiency, or 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 alpha-1 antitrypsin protein, or A1AT, 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 3.4 million individuals with deficiency allele combinations worldwide. There is a single approved modality, a once-a-week infusion of pooled human plasma derived A1AT, that does not



## [Table of Contents](#)

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.

KRRO-110 is a proprietary RNA editing oligonucleotide that is delivered to liver cells using an established LNP platform to restore production of normal A1AT. KRRO-110 is expected to be delivered via intravenous infusion, where it co-opts endogenous ADAR to repair the pathogenic SNV and restore production of normal A1AT, creating a clinically differentiated benefit for both liver and lung function in affected individuals.

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

- Provides a disease modifying therapy for both lung and liver manifestations by transiently editing over 50% of RNA transcripts in hepatocytes to restore normal A1AT 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 A1AT using endogenous ADAR, thereby increasing normal A1AT production during inflammation
- Fit-for-purpose delivery using a proven LNP to maximize editing efficiency, leading to greater potential clinical benefit

We have generated compelling preclinical data demonstrating proof of concept across multiple RNA editing oligonucleotides that have the potential to become the lead development candidate. These potential development candidates have each achieved targeted durability, high editing efficiency (>50% editing in hepatocytes) and increased expression of normal A1AT protein in an *in vivo* mouse model (>85% of total A1AT protein in circulation). We have also shown that our product candidates have high translation of RNA editing efficiency from mice to non-human primates, or NHPs, demonstrating the potential applicability of our approach in humans. 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.

Preclinical development of KRRO-110 is ongoing in preparation for a potential regulatory filing in the second half of 2024. Depending on the evidence of efficacy and tolerability for our candidate in our first clinical study, we plan to pursue expedited regulatory pathways, including potentially requesting Fast Track Designation and Breakthrough Therapy Designation.

### ***AATD Overview***

#### *A1AT function*

A1AT 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 A1AT 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 A1AT, 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 PiMZ, genotype and an individual with two Z alleles would exhibit a homozygous, or PiZZ, genotype.



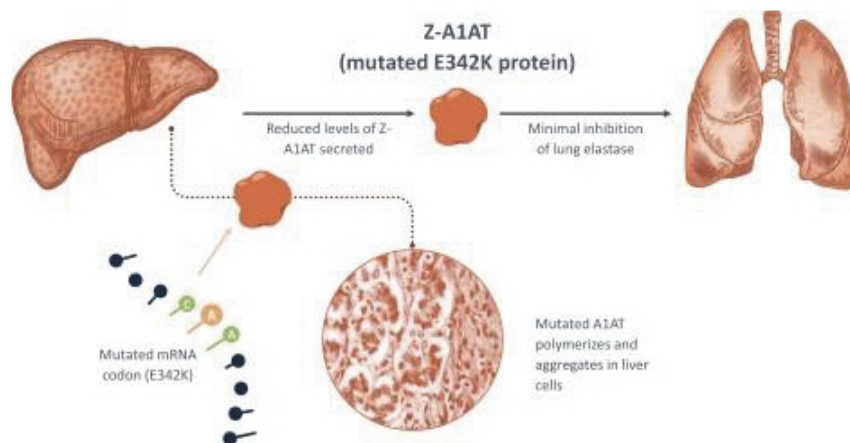
*Figure 9. PiMM genotype (normal liver and lung)*

*Impact of Z mutations on liver and lung function*

The presence of a single Z allele can lead to insufficient production of normal A1AT protein, as well as the production of dysfunctional A1AT protein, 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 A1AT (10%—15% of normal levels), which are insufficient to prevent lung damage post 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 A1AT 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 10. PiZZ genotype that results in fibrotic liver and decreased lung function*

[Table of Contents](#)

Data from the UK Biobank, or UKBB, as well as published literature, have allowed researchers to determine the threshold levels of circulating A1AT that are directly linked to the PiMZ and PiZZ genotypes. In Figure 11 below, the range of A1AT levels associated with normal individuals (PiMM) is compared with the range of A1AT levels observed in mutated PiMZ and PiZZ patients.

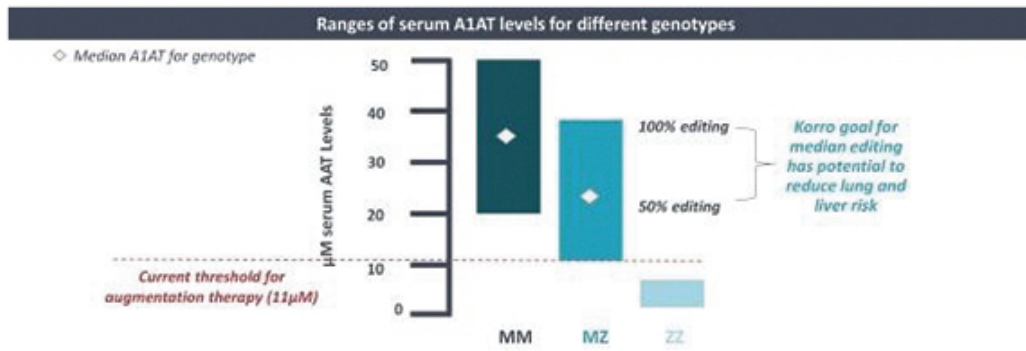


Figure 11. Median Levels of A1AT and link to outcomes in liver and lung

In Figure 12 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

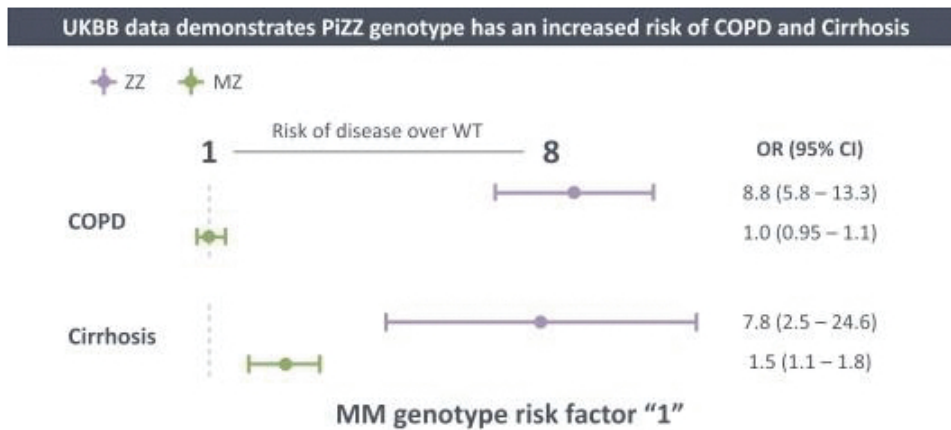


Figure 12. Risk of developing COPD and cirrhosis for different genotypes associated with AATD. Adapted from “The undiagnosed disease burden associated with alpha-1 antitrypsin deficiency genotypes.” by Nakanishi T, Forgetta V, Handa T, et al. Eur Respir J 2020; 56:2001441

Based on these findings, we believe that achieving normal A1AT 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 >50% 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 3.4 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 A1AT protein purified from pooled human plasma. The purified A1AT is administered weekly by intravenous infusion with the goal of maintaining a serum level of A1AT above the 11  $\mu$ M 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 A1AT 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 ~\$1.4 billion in annual sales worldwide. KRRO-110 has the potential to elevate the standard of care and expand the number of patients on treatment and potential to be a leader with a large market opportunity worldwide.

### *Limitations of 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 A1AT 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 A1AT 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 A1AT levels. Lastly, small molecule correctors attempt to promote proper folding of the Z-AAT protein. To date, small molecule correctors have been unable to achieve normal A1AT levels and clinical development is focused only on the liver manifestation of AATD.

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 A1AT 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 KRRO-110 to treat patients with AATD that is designed to leverage endogenous ADAR to make a single base edit in SERPINA1 mRNA, correcting the amino acid codon created by the pathogenic

## [Table of Contents](#)

E342K SNV which stems from a single G-to-A mutation. Our product candidates edit the adenosine (A) to an inosine (I), correcting the faulty amino acid and leading to the production of normal A1AT protein.

Our goal is to bring individuals with the Z mutation to a phenotype where over 50% of RNA has been corrected to produce normal A1AT protein. This would result in levels of A1AT consistent with individuals in the upper half of the PiMZ genotype and the fully healthy PiMM genotype. Through human transgenic mouse models, we have shown our ability to drive the required change in RNA sequence with high efficiency, leading to secretion of A1AT 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 A1AT. 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 50% of RNA transcripts in hepatocytes, we believe we can restore levels of normal A1AT protein consistent with a PiMZ to PiMM phenotype. These levels of normal A1AT have the potential to prevent further lung damage and reduce the risk of dysfunctional A1AT aggregating in the liver.
- **Potential to enable physiologic regulation of A1AT using endogenous ADAR:** Augmentation therapy and other treatments targeting static thresholds for A1AT expression do not address the underlying mechanism of A1AT regulation, which is endogenously regulated by inflammation and can sometimes lead to as much as 90uM of A1AT 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 A1AT production.
- **Uniform distribution of drug to liver cells to maximize editing:** Unlike other modalities that focus on DNA editing, our product candidates have demonstrated a uniform distribution within the liver, including in NHPs. We believe this will allow our therapy to restore production of normal A1AT protein in every cell, reducing reliance on the chance of a survival benefit for edited cells as in DNA editing.
- **Efficient delivery using a proven LNP:** A1AT is the fifth most abundant protein in circulation, with a large number of transcripts that require editing to achieve expression of normal protein. LNPs provide a significant benefit to delivery of RNA-editing oligonucleotides by increasing the likelihood of sufficient distribution into liver cells. In March 2023, we entered into an agreement with Genevant, a well established leader in the LNP space, to provide access to clinically validated LNP technology to optimize delivery of our AATD product candidate, KRRO-110. Preclinical studies of this LNP delivery technology have shown improved dose-dependent efficacy with reduced clinical chemistry and adverse events.

### *Summary of our preclinical studies and data generated to date*

We have generated highly compelling preclinical data that forms the basis for our proof of mechanism. We have affirmed that multiple disease modifying product candidates have demonstrated proof-of-concept in *in vivo* studies and have the potential to be a development candidate.

These potential development candidates have independently achieved clinically meaningful expression of normal A1AT protein consistent with a PiMZ genotype within preclinical *in vivo* animal models while using clinically relevant doses administered on a weekly basis. Given that human protein half-life is much longer than

other species, we believe our therapies will support a longer dose interval in the clinic. We have initiated preclinical dose-limiting toxicity safety studies and nominated our first development candidate, KRRO-110, in December 2023.

***In Vitro* activity in human cells:** Our initial design iterations for RNA-editing oligonucleotides were conducted in *in vitro* human systems, specifically containing human ADAR and human SERPINA1 genes with a Z allele. By leveraging the capabilities of our OPERA platform, we have generated multiple product candidates that achieved increased editing activity in human *in vitro* systems.

In Figure 13 below, we were able to demonstrate greater than 50% editing efficiency at the E342K mutation within stem cell derived hepatocyte like cells, or HLCs, when using the highest dose of drug substance. HLCs harbor both alleles, an important quality that has the potential to be predictive of function *in vivo*. We also demonstrated editing in MZ primary human hepatocytes, or PHH, which harbor a single Z allele.

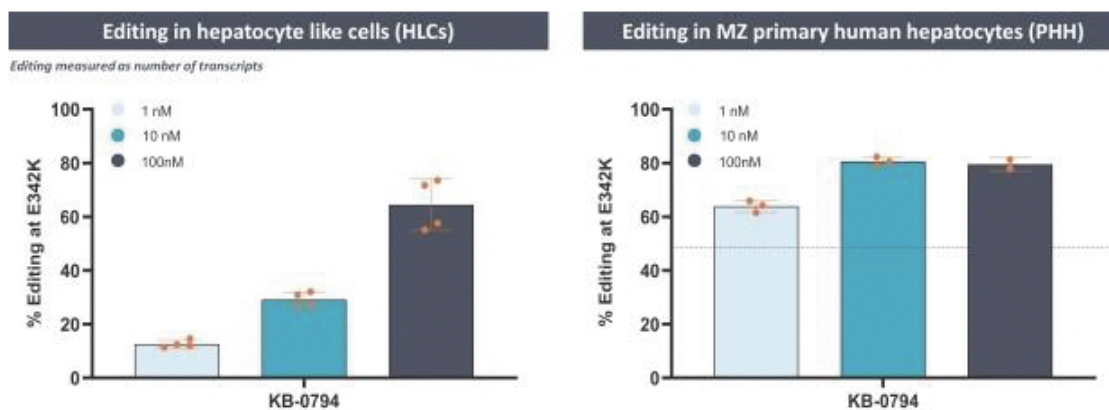


Figure 13. >50% editing achieved in the right system – human gene with human ADAR

***Preclinical in vivo* activity in mice:** Our preclinical pharmacology studies have been conducted using the PiZ mouse model and licensed by us from Dr. Jeff Teckman’s laboratory at St. Louis University School of Medicine. Dr. Teckmann is the preeminent expert on the study of AATD. The PiZ transgenic mouse model replicates many of the phenotypes of human AATD disease, including the presence and utilization of ADAR-based editing. Mice have only 1 allele, either a healthy M allele or mutated Z allele, or PiZ.

As part of our preclinical studies, we have evaluated multiple oligonucleotides in varying doses in PiZ mice. Following intravenous administration of a single 3mg/kg dose using a standard MC3 LNP encapsulating our product candidate, we subsequently evaluated the editing efficiency achieved and levels of A1AT protein after one, four and seven days. Multiple of our optimized lead oligonucleotides demonstrated editing efficiency of greater than 50% editing of the SERPINA1 mRNA at the E342K site, which we believe is a key threshold to achieve clinically meaningful levels of normal A1AT secretion.

Figure 14 below outlines the editing efficiency of one of our lead product candidates, KB-0794, which was measured as demonstrating editing efficiency as high as 63% on day four following the administration of a single 3mg/kg dose. Normal M-A1AT protein was observed at an 18  $\mu$ M concentration on day four, demonstrating the potential relationship between editing efficiency and secretion of normal A1AT.

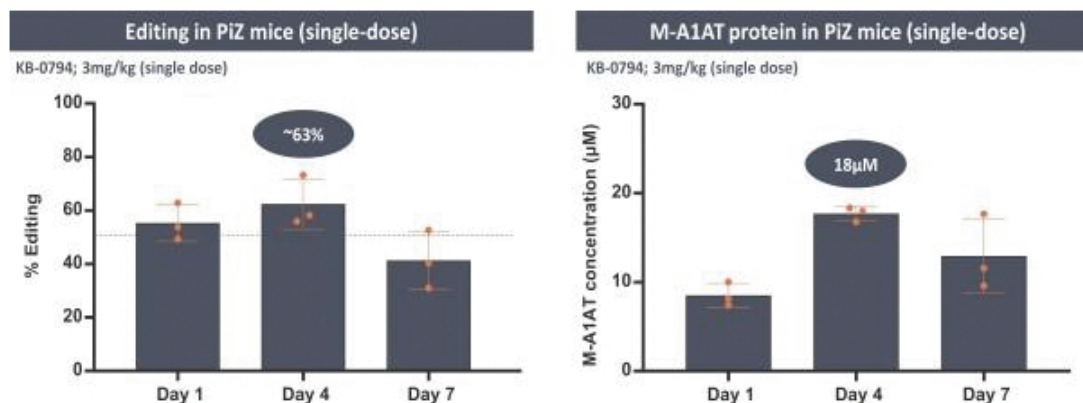


Figure 14. Demonstrated 50% editing of E342k site in PiZ mice model with a single 3mg/kg dose delivered with MC3 LNP

**Durability:** Upon observing the high editing efficiency of KB-0794, we proceeded to conduct an additional preclinical *in vivo* study where four groups of mice were given a lower dose and observed in a multi-dose study that lasted up to four weeks.

Each of the four groups received an initial dose of 2mg/kg of KB-0794, which was administered intravenously using an MC3 LNP as in the single dose study above. Thereafter, each group received weekly doses of KB-0794 for a period of either one, two, three or four weeks. The mice were assessed seven days after the initial dose and seven days after each subsequent dose to observe editing efficiency, normal A1AT protein levels and total A1AT protein levels.

As detailed in Figure 15 below, key takeaways included the following:

- Groups 3 and 4, which received three and four doses of KB-0794, achieved 54% and 47% editing efficiency as measured 7 days after their most recent dose
- Groups 3 and 4 also demonstrated a meaningful increase in both total and normal A1AT, with up to 20 µM of normal A1AT in Group 4
- Group 4 shows that 72% of total protein comprises of normal A1AT in circulation
- Liver polymers associated with the dysfunctional A1AT protein in Group 4 were reduced at day 28 as shown by the histopathology images below, pointing to a potential to provide liver benefit through clearing of aggregates

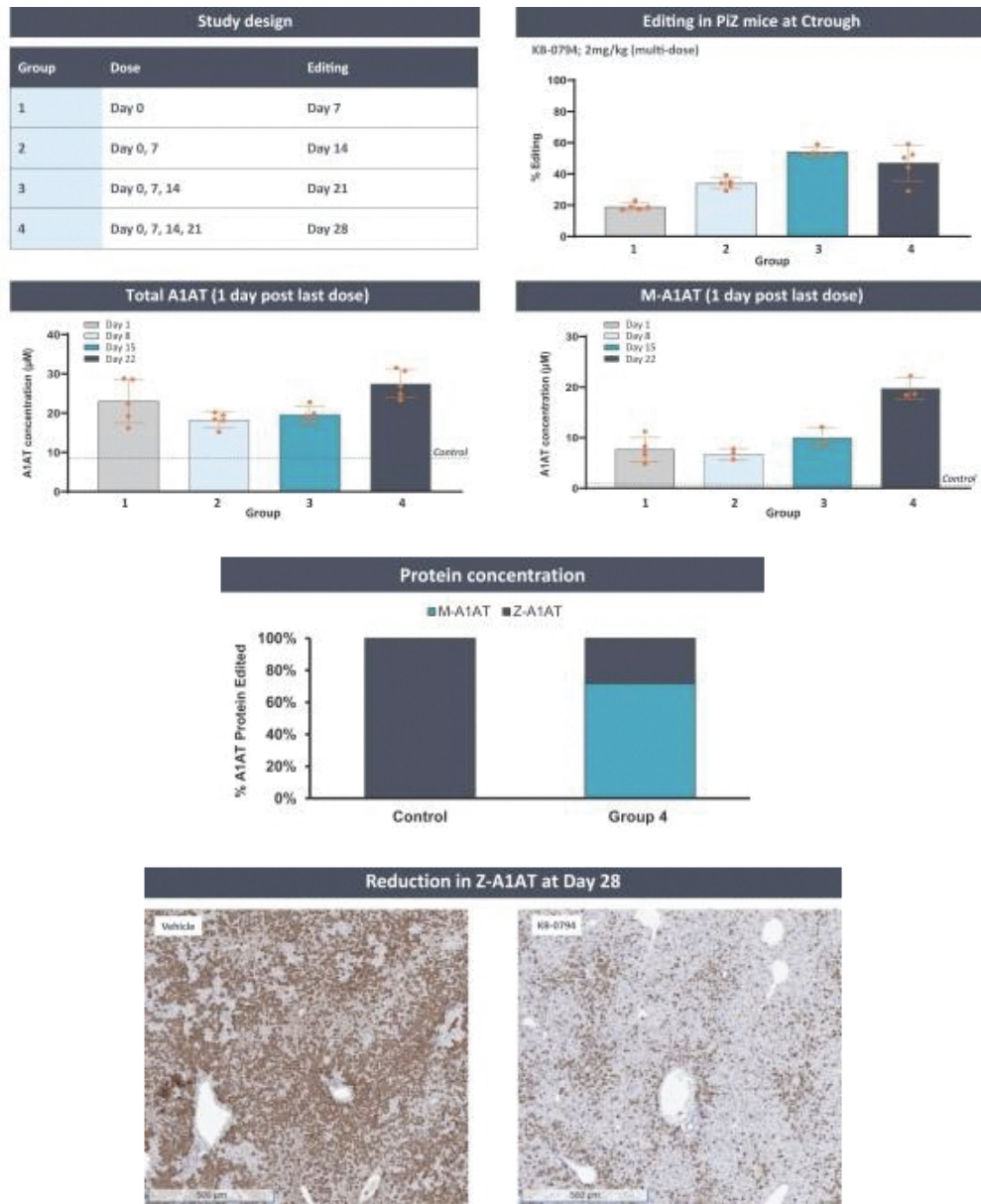


Figure 15. Potential to provide liver benefit by clearing aggregation and preventing further lung damage due to level of M-A1AT in secretion

The half-life of A1AT in mice and NHPs has been observed to be around 1-2 days and 2-4 days, respectively. Human A1AT has a longer half-life of 4-6 days, and when coupled with the optimization of our oligonucleotide drug product and the accumulation of drug product observed in the multi-dose preclinical studies, we believe that we will be able to achieve greater durability and a longer dosing interval in the clinic than the current once weekly interval in our preclinical studies.



**Translation in NHPs:** In addition to our preclinical *in vivo* studies conducted using the PiZ mouse model, we have also generated a translational model to validate the potential for delivery and ability to edit the SERPINA1 gene in NHPs with an earlier generation oligonucleotide. Because the human SERPINA1 gene in NHPs does not harbor the E342K mutation, we are demonstrating our oligonucleotide’s ability to edit within the coding region of the SERPINA1 gene and the ability to translate that preclinical *in vivo* editing from the PiZ mouse model to NHPs.

As shown in Figure 16 below, NHPs received a 2mg/kg intravenous dose of our earlier generation oligonucleotide formulated in an MC3 LNP, followed by two additional intravenous doses once per week. The liver editing was measured four days after the initial dose, and four days after the final dose. Editing of the SERPINA1 coding region in both NHPs and PiZ mice showed species translation at both time periods, with increasing editing efficiency upon receiving additional doses in NHPs. Additionally, mutated protein generated by this engineered RNA edit on the human SERPINA1 gene in NHPs was observed to be closely correlated with editing the mRNA at the same time points.

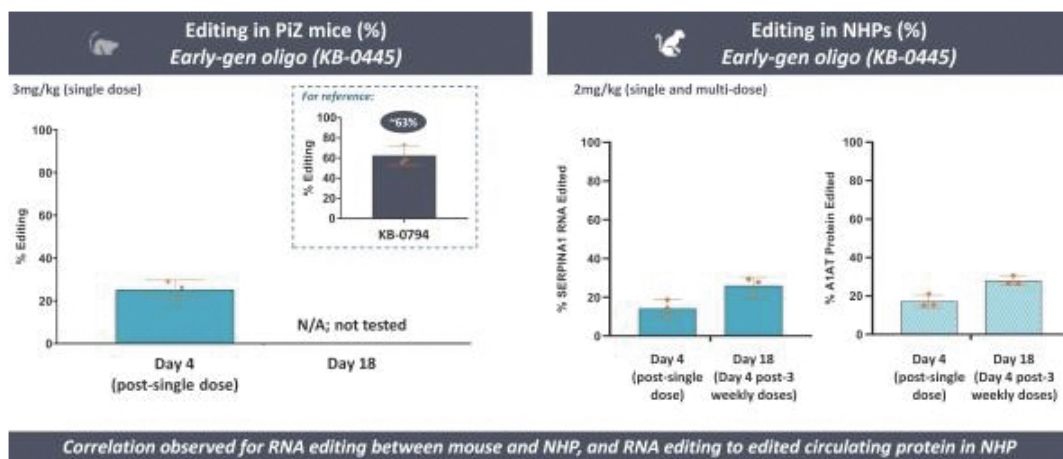


Figure 16. Editing of SERPINA1 coding region in NHPs and PiZ model showed correlation

*Optimization of our product candidate*

Our preclinical studies to identify product candidates have previously been conducted using an LNP delivery vehicle comprising lipids used in the approved product ONPATTRO®. Over the past decade, the field of LNP delivery has made advancements as measured by safety profile and tolerability. Our product candidates, when combined with current generation LNP delivery technology from Genevant, have demonstrated optimized editing efficiency, safety and tolerability.

In a preclinical study to compare the editing efficiency of a previous generation LNP (the comparator LNP) and current generation Genevant LNPs (GVT-1 and GVT-2), We evaluated PiZ mice after receiving a single 2mg/kg dose of KB-0794 via each of the three delivery vehicles. As detailed below in Figure 17, GVT-1 and GVT-2 achieved comparable or higher editing of 37% and 65%, respectively, as compared to 29% editing for the comparator LNP. For reference, the same KB-0794 achieved comparable editing of 63-65% at a dose of 3mg/kg with the comparator LNP compared to a lower dose of 2mg/kg with GVT-2. The percentage of normal A1AT protein in plasma at baseline is 0% due to all of the circulating protein being mutated A1AT. Post a single LNP dose, the percentage of normal-A1AT increased to 66% for GVT-1 and 85% for GVT-2, compared to 56% for the comparator LNP, showing potential for disease-modifying effects.

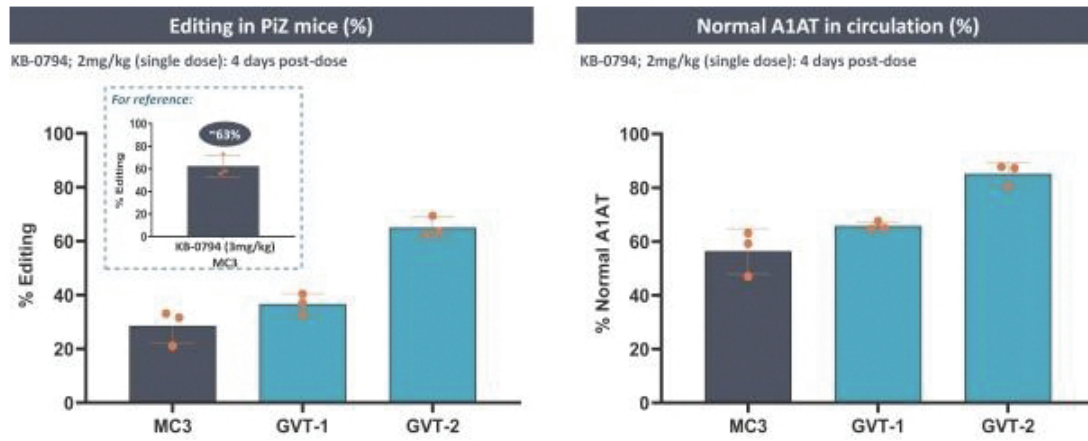


Figure 17. Comparison of editing efficiency and circulating normal protein in PiZ mice between MC3 LNP and current generation Genevant LNPs (GVT-1 and GVT-2)

We also evaluated the potential editing efficiency of GVT-1 and GVT-2 for the SERPINA1 coding region in NHPs. As detailed in Figure 18, the observed editing rate of GVT-2 was meaningfully higher at 34%, relative to 13% in the historical MC3 study. ALT levels, a measure of safety and tolerability, were meaningfully lower in GVT-1 and on par between GVT-2 and the LNP comparator. These results show that our product candidates, when combined with current generation Genevant LNPs, can demonstrate a desirable safety profile while increasing the editing efficiency. As shown in Figure 18 below, these results further illustrate the translation of GVT-1 and GVT-2 across mouse and NHP preclinical species.

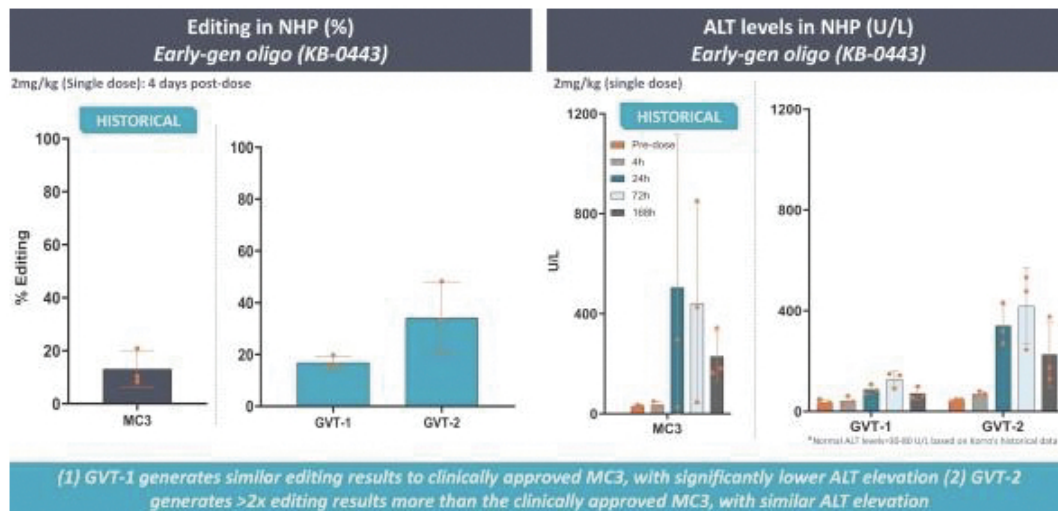


Figure 18. Comparison of editing translation in NHPs between MC3 LNP and current generation Genevant LNPs (GVT-1 and GVT-2)

**Next Steps**

Preclinical development of KRRO-110 is ongoing in preparation for a potential regulatory filing in the second half of 2024 to enable the initiation of human clinical studies.

## Our Parkinson's Disease Program: Repairing Pathogenic Variants

We are developing proprietary oligonucleotides that address the leucine-rich repeat kinase 2, or LRRK2. mutation for Parkinson's Disease, or PD, patients. This is the second program that leverages our ability to generate product candidates to repair pathogenic variants, similar to the AATD program.

### *Parkinson's Disease:*

PD is a complex, multifactorial progressive disease that is caused, in part, by the loss of dopaminergic neurons in a structure of the brain called the substantia nigra, which is essential for the proper control of the body's movement. Approximately 10% of PD cases are attributed to inherited genetic mutations, while the remaining cases are considered idiopathic or sporadic. Mutations in *LRRK2* are the most common genetic cause of PD and increasing evidence also provides support for a role of LRRK2 in idiopathic PD. PD is the second most common neurodegenerative disease with approximately 1.0 million people in the United States diagnosed. Despite the large commercial market opportunity, there remains significant unmet need as there is no cure, and current available therapies only relieve the symptoms of PD.

LRRK2 is linked to several cellular processes including mitochondrial function, endocytosis, vesicle trafficking, and the lysosomal autophagy pathway. Additionally, LRRK2 is implicated in regulating cytokine levels and neuroinflammation. There are various mutations in LRRK2 that can result in PD, the most common of which is the pathogenic G2019S mutation that accounts for 1-6% of sporadic and 3-19% of familial PD cases.

### *Our Differentiated Approach and Results*

Our approach is to make a single base edit to repair the protein caused by the G2019S mutation in LRRK2, which is expected to result in returning activity to the normal physiological state. We believe this change may result in disease modification.

As shown in Figure 19 below, our preliminary screening process in heterozygous LRRK2 G2019S patient-derived fibroblasts identified several product candidates that achieved >80% editing in *LRRK2* compared to only 47% in controls. The 47% represents half the transcripts having the mutation at baseline.

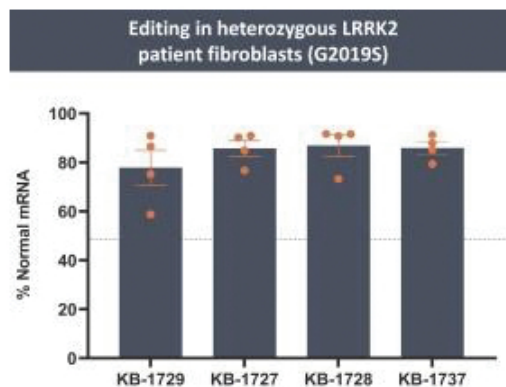


Figure 19. Editing of the G2019S mutation LRRK2 using our product candidates (100 nM)

### *Next Steps*

We are currently screening additional oligonucleotide designs and optimizing *in vitro* assays to correlate LRRK2 editing with downstream functional endpoints. Additionally, we plan to evaluate our product candidates in a LRRK2 G2019S humanized mouse model.

## Our Severe Alcohol-Associated Hepatitis Program: Disrupting Protein-Protein Interactions

Another of our programs is focused on the treatment of severe alcohol-associated hepatitis, or sAH, and demonstrates the versatility of our platform to modulate proteins. This program leverages our RNA editing technology to modulate the activity of a naturally occurring protein by disrupting protein-protein interactions. We are selectively modulating a protein transcription factor implicated in the disease pathophysiology for sAH. We believe that this approach enables the synthesis of a protein variant that disrupts interaction with our inhibitor and as a result, will be free to express downstream target genes. sAH patients with higher levels of expression of these downstream target genes have been shown to have better prognosis in a prior study examining liver biopsies at the time of diagnosis.

### *Severe Alcohol-Associated Hepatitis*

The burden of alcohol use and alcohol use disorders contributes significantly to the health care costs for alcohol-related diseases. These patients incur direct costs to the health care system for medical care, and indirect costs to society due to a loss of workforce productivity, absenteeism, injury, early retirement and mortality. Alcohol overconsumption can lead to the development of liver damage that can manifest as fatty liver disease, alcohol-associated hepatitis and cirrhosis. The amount of alcohol intake that puts an individual at risk for alcohol-associated hepatitis is not known, but most patients have a history of heavy alcohol use for two or more decades. It is estimated that two million people die of liver disease each year, and up to half of these cases are due in part to alcohol overconsumption. There are around 300,000 hospitalizations per year for sAH in the United States. sAH is an acute condition with a mortality rate of 25%—45% within 90 days of hospitalization.

There are no FDA-approved treatments for sAH. Prednisolone is used off-label in this setting and is the only treatment available. However, many patients fail to respond to prednisolone or are contraindicated, and studies have failed to show survival benefit at 90 days. Physicians may also prescribe pentoxifylline, an anti-inflammatory, or N-acetyl cysteine, an antioxidant, but the benefit of these drugs for sAH is not well established. Additionally, some sAH patients may be candidates for a liver transplant. It has been documented that survival for sAH patients is mainly driven by liver injury and not significantly impacted by alcohol-relapse. Current strategies to address harmful alcohol use and the development of pharmacotherapies remain largely ineffective, leading to substantial unmet need for advancement of policy efforts and development of novel therapies with effective mechanisms of action.

### *Our Differentiated Approach and Results*

We are developing a product candidate that increases expression of a transcription factor (TFX) implicated in sAH. By selectively modifying a single amino acid, we are able to disrupt interactions between the target protein and our inhibitor, as depicted in Figure 20 below.

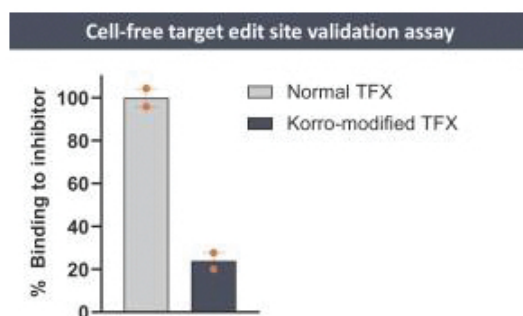


Figure 20. Changing a single amino acid disrupts binding of a transcription factor to its inhibitor

## Table of Contents

We have generated preclinical data for our sAH product candidates, demonstrating target editing and activation of target transcription factor activity in both preclinical *in vitro* and *in vivo* studies. *In vitro*, our oligonucleotides dose-dependently edited the target gene mRNA in human liver cells with > 70% editing efficiency as shown in Figure 21 below.

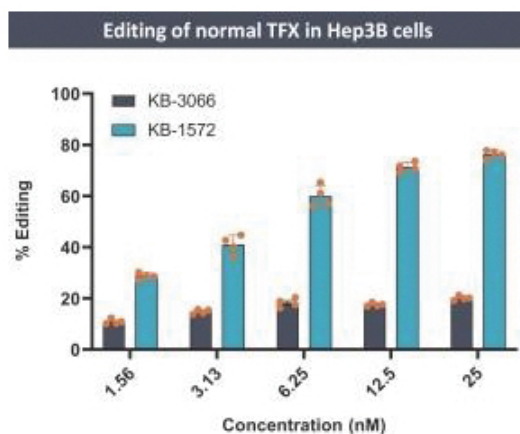


Figure 21. Our product candidate edits transcription factor RNA at the validated target site in a dose-responsive manner

*In vivo*, our product candidates edited the target mRNA and induced expression of downstream target genes by up to 7x in mouse liver tissue as shown in Figure 22 below.

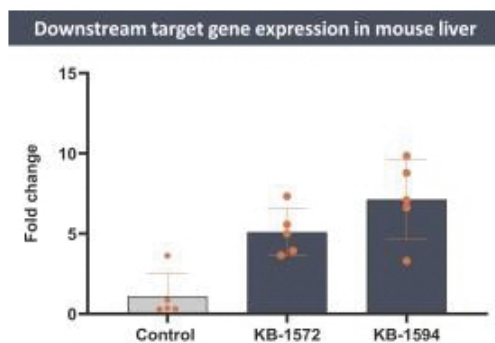


Figure 22. Hyperactive variant of transcription factor increased expression of downstream gene up to 7x *in vivo*

The product candidate has also demonstrated activity in an *in vitro* model of sAH, showing protection against cytotoxicity induced by alcohol and TNF-alpha in human liver cells overexpressing CYP2E1, the enzyme that metabolizes alcohol as shown in Figure 23 below.

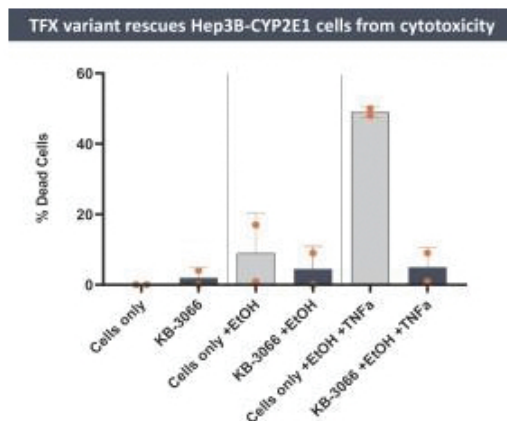


Figure 23. RNA editing demonstrates increased viability of liver cells in an in vitro model of sAH

*Next Steps*

We are currently evaluating additional oligonucleotide designs and conducting preclinical studies to confirm that our product candidates will ameliorate disease phenotype in models of alcohol-induced hepatitis. We also plan to evaluate our approach in NHP studies.

**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 amyotrophic lateral sclerosis, or 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 EMA, ALS is considered one of the more common neurodegenerative diseases worldwide. Prevalence estimates vary, but it is widely accepted that there are at least an estimated 25,000 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 TDP-43's role 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 our normal function.

## [Table of Contents](#)

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. We have engineered mutations amenable to an RNA edit using our OPERA platform that limit the formation of TDP-43 inclusion bodies *in vitro*. Additionally, we have demonstrated meaningful editing of TDP-43 targets sites with our product candidates in a human neuroblastoma-derived cell line (SK-N-AS) as demonstrated in Figure 24 below.

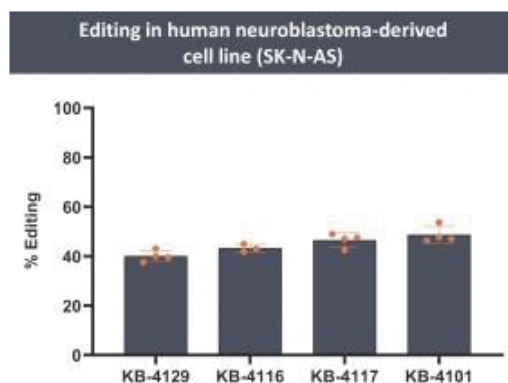


Figure 24. Editing of TDP-43 mRNA using our product candidates (100 nM)

We intend to initially pursue ALS with this approach and has the opportunity to expand our pipeline to other neurodegenerative diseases, such as FTD.

### *Next Steps*

We are continuing to design and screen additional oligonucleotides in SK-N-AS cells to identify proprietary oligonucleotides for further evaluation in aggregation assays. 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.

### **Our Pain Program: Selective Modulation of Ion Channels**

We are developing proprietary oligonucleotides that selectively modulate ion channels associated with pain.

### *Overview of Pain Indications*

Pain is a condition that millions of patients experience and is often a component of rare and highly prevalent diseases. Pain can be generally classified as either acute or chronic and can be further segmented into subcategories including nociceptive or neuropathic pain. There are several classes of therapeutics to target the numerous pathways that cause pain, including opioids, nerve growth factors and ion channel blockers. Many of these treatment methods involve non-specific targeting of pathways that lead to off-target effects. Despite a large commercial market opportunity, there remains significant unmet needs for safe and effective pain management, including non-opioid therapeutics.

Several classes of drugs, including local anesthetics, such as lidocaine, are ion channel blockers, although they do not show a high degree of specificity and thus inhibit many types of sodium channels rather than

## [Table of Contents](#)

selectively blocking NaV1.7. No highly selective small molecule product candidates have been FDA-approved as therapeutics. One of the challenges in developing a small molecule inhibitor of NaV1.7 is the high degree of homology with other voltage gated sodium channels, inhibition of which has been linked to safety concerns.

### *Our Differentiated Approach and Results*

The introduction of genetic changes into the mRNA encoding NaV1.7 demonstrates the potential of RNA editing to create highly differentiated and selective therapeutics for ion channels. NaV1.7 is a voltage-gated sodium channel that plays a critical role in the generation and conduction of action potentials and is thus important for electrical signaling in the nervous system. NaV1.7 is highly expressed in the pain sensing dorsal root ganglion neuron. Genetic inactivation of *SCN9A*, the gene encoding NaV1.7, in mice results in the inability to sense pain from inflammatory stimuli. In humans, mutations that lead to inactivation of NaV1.7 function result in a genetic condition known as Channelopathy-associated insensitivity to pain, or CIP. Individuals with CIP have severely diminished ability to sense pain. By contrast, mutations that activate NaV1.7 result in intense pain.

Through our RNA editing technology, we have generated a series of site-specific changes in NaV1.7 that modulate our ion channel function such that it mimics a small molecule sodium channel blocker. We believe that using RNA editing to introduce these changes in patients has the potential to deliver potent analgesic activity without the dose-limiting toxicities that have been observed by other sodium channel blockers.

We have demonstrated that rationally designed single amino acid changes to unique target sites are sufficient to decrease the activity of NaV1.7. Electrophysiology studies performed in CHO cells transfected with plasmids expressing channel variants demonstrated biophysical properties that are associated with a decrease in NaV1.7 channel activity compared to fully functional NaV1.7. Additionally, we have demonstrated meaningful editing for these target sites in SK-N-AS cells as shown in Figure 25 below.

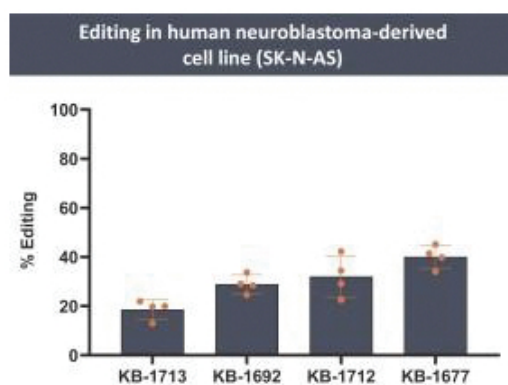


Figure 25. Editing of NaV1.7 using our product candidates (100nM)

### *Next Steps*

We are optimizing and screening our proprietary oligonucleotides in electrophysiology assays. Furthermore, we will perform a high throughput screen of Nav1.7 variants to identify potential novel ion channel variants with enhanced crippling of electrophysiology activity.

### **Our Cardiometabolic Disease Program: Activating Kinases**

We are developing proprietary oligonucleotides that activate a kinase involved in cardiometabolic disease. Cardiometabolic disease encompasses a broad range of complex, multifactorial diseases including cardiovascular



## [Table of Contents](#)

disease, diabetes, chronic renal failure and obesity, among others. A number of validated cardiometabolic disease targets such as kinases have been identified but have historically been difficult to drug.

We have generated a site-specific change in a validated kinase that is a central regulator of energy homeostasis. In an *in vitro* mutagenesis study, a site-specific change led to activation of the kinase and an increase in the phosphorylation of its downstream target. We believe that using RNA editing to introduce these changes with an oligonucleotide in patients has the potential to deliver efficacy that has been unattainable when using other modalities.

### **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. 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 a product candidate, if ever.

### **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 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 GMP manufacturing 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 AATD product candidate, KRRO-110. Preclinical studies of this LNP delivery technology have shown improved dose-dependent efficacy with reduced clinical chemistry and adverse events. For additional information relating to the financial terms of such agreement, see Note 10 to Legacy Korro's unaudited interim financial statements included in this Registration Statement.

### **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 Beam Therapeutics, Verve Therapeutics, Prime Medicine, ProQR, and Wave Life Sciences. 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.

## [Table of Contents](#)

Any product 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 product 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 product 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 endeavors 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 improvements thereof, pharmaceutical compositions, methods of treatment, methods of manufacture or identified from our ongoing development of our product candidates. Our success will depend on our ability to obtain and maintain patent and other proprietary protection for commercially important technology, 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 product candidates, or whether the claims of any issued patents will provide sufficient

## [Table of Contents](#)

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 product 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 interference proceedings or derivation proceedings declared by the USPTO to determine priority of invention. For more information regarding the risks related to our intellectual property, see “*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 product candidates, including seeking and maintaining patent protection intended to cover various target-specific editing strategies, the composition of matter of our product 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 September 18, 2023, Legacy Korro’s patent portfolio, which is now the primary patent portfolio for our business, in total consisted of 32 patent families, with two U.S. patents and one patent in foreign jurisdictions (e.g., Canada), including five pending Patent Cooperation Treaty, or PCT, applications, various pending non-provisional applications world-wide (e.g., United States, Australia, Canada, China, Europe, South Korea, and Japan), and nine families with pending provisional patent applications.

We have a patent portfolio that relates to our RNA editing platform OPERA, as well as numerous disease programs listed below, and includes 13 patent families. These families 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. The first patent family is pending in Australia, Canada, China, Europe, Japan, South Korea, Taiwan and the United States, and includes a U.S. patent. The first three patent families are pending in Australia, Canada, China, Europe, Hong Kong, Japan, South Korea, Taiwan and the United States, and include two U.S. patents. U.S. Patent No. 11,479,575 is directed to specific oligonucleotide structures and expires in 2040; U.S. Patent No. 11,453,878 is directed to methods of deamination of an adenosine in an mRNA using oligonucleotide with specific structures and also expires in 2040. Any other patents issuing from applications in these families will expire in 2040, absent any available additional term for patent term extension or patent term adjustment. The fourth patent family is pending in the United States and patents issuing from applications in this family will expire in 2042, absent any available additional term for patent term extension or patent term adjustment. The fifth, sixth, seventh and eighth patent families have been filed as PCT applications, and if issued, patents in these families would expire between 2042 and 2043, absent any available additional term for patent term extension or patent term adjustment. The ninth, tenth, eleventh, twelfth and thirteenth patent families have been filed as provisional patent applications, and if re-filed as PCT or non-provisional applications, and issued, patents in this family would expire in 2044, absent any available additional term for patent term extension or patent term adjustment.

In addition to the patent families related to our OPERA platform technology described above, our patent portfolio that relates to our A1AT program includes two patent families. These patent families are directed to specific oligonucleotides that target SERPINA1 for editing to treat A1AT. The first patent family includes pending applications in Australia, Canada, China, Europe, Japan, South Korea and the United States. Patents

## [Table of Contents](#)

issuing from applications in this family will expire in 2041, absent any available additional term for patent term extension or patent term adjustment. The second patent family has been filed as a provisional patent application, and if re-filed as PCT or non-provisional applications, and issued, patents in this family would expire in 2044, absent any available additional term for patent term extension or patent term adjustment.

In addition to the patent families related to our OPERA platform technology described above, our patent portfolio that relates to our PD program includes one patent family. This patent family is directed to specific oligonucleotides that target LRRK2 for editing to treat PD, and includes pending applications in Europe, and the United States. Patents issuing from applications in this family will expire in 2041, absent any available additional term for patent term extension or patent term adjustment.

In addition to the patent families related to our OPERA platform technology described above, our patent portfolio that relates to our sAH program includes two patent families. This patent family is directed to specific oligonucleotides that are capable of editing a specific target associated with sAH, and consists of a pending PCT application. Patents issuing from this family of patent applications will expire in 2042, absent any available additional term for patent term extension or patent term adjustment. The second patent family has been filed as a provisional patent application, and is directed to specific oligonucleotides that are capable of editing a specific target associated with sAH. If this application is re-filed as a PCT or non-provisional application, and issued, patents in this family will expire in 2043, absent any available additional term for patent term extension or patent term adjustment.

In addition to the patent families related to our OPERA platform technology described above, our patent portfolio that relates to our ALS includes one patent family, directed to oligonucleotides that edit TDP-43. This 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 2044, absent any available additional term for patent term extension or patent term adjustment.

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 2044, absent any available additional term for patent term extension or patent term adjustment, and includes Canadian Patent No. 3,162,416, which will expire in 2042. We also have legacy patents related to our pre-Merger operations.

### ***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 includes comply 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

## [Table of Contents](#)

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 product candidates receive FDA approval, we expect to apply, if appropriate, for patent term extension on patents directed to those product 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 *"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 *"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, 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 product candidates. The process of obtaining regulatory approvals of drugs and ensuring subsequent compliance with appropriate federal, state, local and foreign statutes and regulations requires the expenditure of substantial time and financial resources.

### ***Overview of U.S. Drugs Development Process***

In the United States, the FDA regulates drug products under the 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 product candidates must be approved for therapeutic indications by the FDA before they may be marketed in the United States. For drug product candidates regulated under the FD&C Act, FDA must approve a NDA. The process generally involves the following:

- completion of extensive preclinical studies in accordance with applicable regulations, including studies conducted in accordance with good laboratory practice, or GLP, requirements and applicable requirements for the humane use of laboratory animals or other applicable regulations;
- completion of the manufacture, under cGMP conditions, of the drug substance and drug product that the sponsor intends to use in human clinical trials along with required analytical and stability testing;
- submission to the FDA of an Investigational New Drug application, or IND, which must become effective before clinical trials may begin;
- payment of user fees for FDA review of the NDA;
- approval by an 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, 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 product 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.

## Table of Contents

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

## Table of Contents

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

### ***U.S. 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



## [Table of Contents](#)

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 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

## [Table of Contents](#)

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

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

## [Table of Contents](#)

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 product 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;

## [Table of Contents](#)

- 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 product 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 FDCA also can delay the submission or the approval of certain drug product applications. The FDCA 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 FDCA 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 are subject to multiple jurisdictions' privacy and data security laws and

regulations, including those within the United States, the EEA, and the UK. 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.

The GDPR in the EU and the UK, which have been incorporated into their respective laws, impose stringent requirements on the processing of health and other sensitive data. These requirements encompass: (i) providing information to individuals regarding data processing activities; (ii) obtaining consent from individuals to whom the data processing relates; (iii) responding to data subject requests; (iv) imposing requirements to notify the competent national data protection authorities and data subjects of personal data breaches; (v) implementing safeguards in connection with the security and confidentiality of the personal data; (vi) accountability requirements; and (vii) taking certain measures when engaging third-party processors. The GDPR is also the regulation that informs our obligations with respect to any clinical trials conducted in the EEA or UK. 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. 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) 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 to seek damages. In addition, 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.

Further, the UK has recently introduced a new Data Protection & Digital Information (No. 2) Bill. This development could reshape the UK's data protection landscape, distancing it from the EU's data protection regime. 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.

To enable the transfer of personal data outside of the EU or the UK, adequate safeguards must be implemented in compliance with the GDPR. On June 4, 2021, the European Commission issued new forms of standard contractual clauses, or SCCs, for data transfers from controllers or processors in the EU (or otherwise subject to the GDPR) to controllers or processors established outside the EU (and not subject to the GDPR). As of December 27, 2022 the new SCCs replace the SCCs that were adopted previously under the EU Data Protection Directive. The UK is not subject to the European Commission's new SCCs, and instead it has published the UK International Data Transfer Agreement, or IDTA, and the International Data Transfer Addendum to the new SCCs, or the Addendum, which enable transfers from the UK. For new transfers, the IDTA (or SCCs and Addendum) must be in place, and such measures must be in place for all existing transfers from the UK from March 21, 2024. Companies relying on SCCs or the IDTA to govern transfers of personal data to third countries will also need to assess whether the data importer can ensure sufficient guarantees for safeguarding the personal data under GDPR, including an analysis of the laws in the recipient's country. When conducting restricted data transfers under the EU and UK GDPR, we will need to implement these new safeguards, and doing so will require significant effort and cost.

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.

In the United States, privacy and security of personal information are regulated by various federal and state laws, such as health information privacy laws, security breach notification laws, and consumer protection laws.

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.

There is a further risk that we may not be able to adequately protect our information systems from cyberattacks. Such breaches 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, the GDPR, and the CCPA.

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 product 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 product candidates are subject to regulation by numerous regulatory authorities in the United States in addition to the FDA, which may include the 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 defends 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. In the EU, for example, 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.

In addition, 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.

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) (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 EU 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 product 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 product candidates with PRIME designation, including but not limited to, early and proactive regulatory dialogue with the EMA, frequent discussions on clinical trial designs and other development program elements, and potentially accelerated MAA assessment once a dossier has been submitted. 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 of market exclusivity will be set from the date of first approval of the product in Great Britain or the EU, wherever is earliest.

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 EU provides options for its Member States to restrict the range of medicinal products for which their national health insurance systems provide reimbursement and to control the prices of medicinal products for human use. To obtain reimbursement or pricing approval, some of these countries may require the completion of clinical trials that compare the cost effectiveness of a particular product candidate to currently available therapies. A Member State may approve a specific price for the medicinal product or it may instead adopt a system of direct or indirect controls on the profitability of the company placing the medicinal product on the market.

***Patients Rely on Insurance Coverage by Third-Party Payors (third-party payors include Medicare and Medicaid (government payors) and commercial insurance companies such as Blue Cross Blue Shield, Humana, Cigna, etc.) to Pay for Products***

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

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. Third-party payors may limit coverage to specific products on an approved list, also known as a formulary, which might not include all of the approved products for a particular indication. 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.

***No Uniform Policy Exists for Coverage and Reimbursement in the United States***

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 the CMS, an agency within the U.S. Department of Health and Human Services. CMS decides whether and to what extent a new medicine will be covered and reimbursed under Medicare and private payors tend to follow CMS to a substantial degree.

Further, during the COVID-19 pandemic, millions of individuals lost employer-based insurance coverage. It is unclear what effect, if any, the American Rescue Plan will have on the number of covered individuals, which may adversely affect our ability to commercialize our products.

***Other Healthcare Laws***

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

*Affordable Care Act and Legislative 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 must agree to offer 70% point-of-sale discounts off negotiated prices of applicable brand drugs to eligible beneficiaries during their coverage gap period, as a condition for the manufacturer's outpatient drugs to be covered under Medicare Part D; 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 eliminates the statutory Medicaid drug rebate cap, currently set at 100% of a drug's average manufacturer price, for single source and innovator multiple source drugs, beginning January 1, 2024. 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 2031. Medicare payments to providers will be further reduced starting in 2025 absent further legislation. The U.S. American Taxpayer Relief Act of 2012 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.

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

The Inflation Reduction Act of 2022, or 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 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 orphan designation and for which the only approved indication is for that disease or condition. If a product receives multiple orphan designations or has multiple approved indications, it may not qualify for the orphan drug exemption. 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.

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 product candidates for which we may obtain regulatory approval or the frequency with which any such product 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 completion of the Merger, we had 95 full-time employees, including 32 who hold Ph.D. degrees, and one part-time employee; 72 employees are engaged in research and development and 24 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, including to assist with Merger integration efforts.

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.

### **Facilities**

Our principal office is now located at One Kendall Square, Building 600-700, Suite 6-401, Cambridge, MA 02139, where we lease approximately 22,500 square feet of office space. The lease term began in August 2020 and will end in September 2024. We also lease 18,148 square feet of laboratory and office space at 42 & 45 Cummings Park in Woburn, Massachusetts. We have plans to relocate our headquarters and occupy 50,453 square feet of laboratory and office space at 60 First Street in Cambridge, Massachusetts upon completion of the buildout of the space in 2024. We believe that these facilities will be adequate for our near-term needs. If required, we believe that suitable additional or substitute space will be available in the future on commercially reasonable terms to accommodate any such expansion of our operations.

### **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.

## MANAGEMENT

### Executive Officers and Directors

Our directors and executive officers and their ages as of December 1, 2023 are listed below:

Name	Age	Position
<b>Executive Officers:</b>		
Ram Aiyar	45	President, Chief Executive Officer and Director
Vineet Agarwal	42	Chief Financial Officer
Steve Colletti	58	Chief Scientific Officer
Todd Chappell	50	Chief Operating Officer
Shelby Walker	49	General Counsel
<b>Non-Employee Directors:</b>		
David L. Lucchino	54	Director
Ali Behbahani <sup>(2)(3)</sup>	47	Director
Nessan Bermingham <sup>(1)(2)</sup>	51	Director
Jean-Francois Formela <sup>(1)(3)</sup>	67	Director
Rachel Meyers <sup>(3)</sup>	60	Director
Timothy Pearson <sup>(1)(2)</sup>	56	Director

(1) Audit Committee member

(2) Compensation Committee member

(3) Nominating and Corporate Governance Committee member

### Executive Officers

**Ram Aiyar, Ph.D., M.B.A.** Dr. Aiyar has served as our Chief Executive Officer and a director since completion of the Merger. Dr. Aiyar previously served as Chief Executive Officer and as a director of Legacy Korro since November 2020, and has served as its President since November 2021. Prior to joining Legacy Korro, Dr. Aiyar co-founded Corvidia Therapeutics, Inc. and most recently served its as Chief Financial Officer from January 2020 to November 2020 and Executive Vice President, Corporate and Business Development from February 2016 to November 2020. Prior to that, Dr. Aiyar held leadership roles in corporate development, product development, management, research, finance and strategy at BeneVir BioPharma, Inc., BioHealth Innovation, Inc., FlowMetric, Inc., Sofinnova Partners, J.P. Morgan Chase and Johnson & Johnson Pharmaceuticals (NYSE:JNJ). Dr. Aiyar is a co-founder and director of Protean Bio, Inc., a director of Triveni Bio, Inc. and a past director of Avidea Technologies, Inc. Dr. Aiyar holds an M.B.A. in finance and business strategy from INSEAD (France/Singapore), an M.S. in computer engineering and a Ph.D. in electrical and computer engineering from Drexel University, and a B.E. in electronics engineering from Mumbai University. We believe Dr. Aiyar is qualified to serve on the Board because of his significant operational and senior management experience in the biopharmaceutical industry.

**Vineet Agarwal, M.B.A.** Mr. Agarwal served as Chief Financial Officer since the Merger and previously served as Chief Financial Officer of Legacy Korro since May 2021. Prior to joining Korro Bio, Mr. Agarwal joined J.P. Morgan Chase & Co. In 2007 and advised healthcare companies on merger & acquisitions, capital raising and strategic initiatives. Mr. Agarwal served as Executive Director, Biotech Investment Banking at J.P. Morgan Chase & Co. from January 2019 until May 2021 and as Vice President, Biotech Investment Banking from January 2016 until January 2019. Mr. Agarwal previously served in numerous leadership roles at J.P. Morgan Chase & Co. across different countries. Mr. Agarwal holds an M.B.A. from the Institute of Management Technology, India, and a Bachelor's degree in finance from Shri Ram College of Commerce, India.

**Steve Colletti, Ph.D.** Dr. Colletti served as Chief Scientific Officer since the Merger and previously served as Chief Scientific Officer of Legacy Korro since February 2023. Dr. Colletti most recently served as Senior Vice President of Drug Discovery Research and Development at Zymogen, Inc. from May 2021 to January 2023.

## Table of Contents

Prior to this role, he served as Chief Scientific Officer of Lodo Therapeutics from March 2020 to May 2021 and as Senior Vice President, Head of Research and Development from September 2018 to March 2020. He previously held multiple leadership roles at Merck (NYSE:MRK), including in small molecule, natural products, oligonucleotide, peptide and fusion protein bioconjugate drug discovery, targeting programs in cardiovascular and respiratory disease, diabetes and obesity, immunological disorders, infectious diseases, neuroscience and oncology. Also at Merck, Dr. Colletti built and led the RNA Therapeutics Medicinal Chemistry department and was a core member of multiple development teams responsible for discovering more than a dozen preclinical candidates and advancing them to clinical development. Dr. Colletti is an inventor and author of over 130 patents and publications. Dr. Colletti holds a Ph.D. in chemistry from Boston University and a B.S. in chemistry from Loyola University, and was a National Institutes of Health postdoctoral fellow in chemistry at the Scripps Research Institute.

**Todd Chappell, M.B.A.** Mr. Chappell has served as Chief Operating Officer since the Merger and previously served as Chief Operating Officer of Legacy Korro since August 2023 and previously served as Senior Vice President, Strategy and Portfolio Planning of Korro Bio from March 2021. Before joining Korro Bio, Mr. Chappell served as Chief Executive Officer of Rasio Therapeutics, Inc. from June 2019 until March 2021. Prior to this role, he served as Chief Executive Officer of Perceptive Navigation, LLC from June 2015 until May 2019. Mr. Chappell previously managed a portfolio of start-up pharmaceutical and medical device companies as an entrepreneur-in-residence at BioHealth Innovation, Inc. Prior to that, Mr. Chappell was a Vice President of Operations at Shape Pharmaceuticals, Inc., a portfolio company of HealthCare Ventures, LLC, where he oversaw all day-to-day operations for the development of a novel HDAC inhibitor for cutaneous t-cell lymphoma. Prior to this role, Mr. Chappell was an Executive Director of New Products at CombinatoRx, Inc., where he led the advancement of three programs from assay stage into human clinical studies. Mr. Chappell holds an M.B.A. from Boston University and a B.S. in biology from the University of California, Los Angeles.

**Shelby J. Walker, M.S., J.D.** Ms. Walker has served as Senior Vice President, General Counsel and Corporate Secretary since the Merger and previously served as Senior Vice President, General Counsel and Corporate Secretary of Legacy Korro since May 2023. Ms. Walker most recently served as Senior Vice President and Head of Intellectual Property at CRISPR Therapeutics (Nasdaq:CRSP) from March 2018 to April 2023. She previously served as General Counsel at Ginkgo Bioworks, a synthetic biology company, from May 2016 to March 2018. Prior to this role, she served as Vice President, Associate General Counsel and Chief Intellectual Property Counsel at Dyax Corporation, and previously held intellectual property leadership roles at Novo Nordisk (NYSE:NVO) and ZymoGenetics. Ms. Walker holds a J.D. and L.L.M. in intellectual property law from the University of New Hampshire School of Law, master's degrees in biotechnology and regulatory science from Johns Hopkins University, and a B.S. in biotechnology from Worcester Polytechnic Institute.

### **Non-Employee Directors**

**David L. Lucchino** previously served as our President and Chief Executive Officer through completion of the Merger and has also served on the Board, each since November 2014 and was a co-founder of Frequency with Dr. Robert S. Langer and Dr. Christopher R. Loose. From December 2014 until June 2016, Mr. Lucchino served as the President of Entrega Bio, a biotechnology company focused on oral drug delivery technology. Prior to that, Mr. Lucchino cofounded Semprus BioSciences, or Semprus, a biotechnology company, and served as its President and Chief Executive Officer from June 2007 to June 2012. Mr. Lucchino oversaw the development of Semprus' lead medical product, which received FDA clearance in 2012. Semprus was acquired by Teleflex, Inc., or Teleflex, in June 2012. Prior to Semprus, Mr. Lucchino worked at the investment firm Polaris Partners. He started his biotech career by Co-Founding LaunchCyte, an investment firm where he was also a Managing Director. Mr. Lucchino is the past chairman of the board of directors of MassBio, a nonprofit organization that represents over 1,500 life science firms and provides services and support for the biotechnology industry in Massachusetts. He is a member of the College of Fellows of the American Institute for Medical and Biological Engineering and was appointed by Massachusetts' Governor Charlie Baker as a member of the Commonwealth's STEM Advisory Council. Mr. Lucchino also served as a trustee of Mt. Auburn Hospital, a Harvard Medical

School facility for fifteen years, a trustee of the Multiple Myeloma Research Foundation, and a member of the Board of NOLS (The National Outdoor Leadership School). Mr. Lucchino holds an MBA from the Massachusetts Institute of Technology's Sloan School of Management, an M.S. from the Newhouse School of Journalism at Syracuse University, and a B.A. in Philosophy and Religious Studies from Denison University. We believe Mr. Lucchino is qualified to continue to serve on the Board because of his extensive management experience in the biotechnology and pharmaceutical industry.

**Ali Behbahani, M.D., M.B.A.** Dr. Behbahani has served on the Board since completion of the Merger, and previously served as a member of Legacy Korro's board of directors since August 2019. Dr. Behbahani joined New Enterprise Associates, Inc., or NEA, in 2007 and is a General Partner on the healthcare team. He previously held positions at The Medicines Company, Morgan Stanley Venture Partners and Lehman Brothers. Dr. Behbahani has served as a member of the board of directors of Monte Rosa Therapeutics, Inc. (Nasdaq:GLUE) since April 2020, Black Diamond Therapeutics (Nasdaq:BDTX) since December 2018, Nkarta, Inc. (Nasdaq:NKTX) since August 2015, CRISPR Therapeutics AG (Nasdaq:CRSP) since April 2015, Arcellx, Inc. (Nasdaq:ACLX) since February 2015, Adaptimmune Therapeutics Plc (Nasdaq:ADAP) since September 2014, CVRx, Inc. (Nasdaq:CVRX) since July 2013, Minerva Surgical, Inc. (Nasdaq:UTRS) since May 2011, and was on the board of Nevro Corp. (NYSE:NVRO) from August 2014 to March 2019, Genocera Biosciences (Nasdaq:GNCA) from February 2018 to May 2022, and Oyster Point Pharma (Nasdaq:OYST) from July 2017 to January 2023. He also serves on a number of private company boards. Dr. Behbahani holds a B.S. in biomedical engineering, electrical engineering and chemistry from Duke University, an M.B.A. from the Wharton School of the University of Pennsylvania and an M.D. from the University of Pennsylvania School of Medicine. We believe Dr. Behbahani is qualified to serve on the Board because of his extensive experience as a public company director and investor in the biotech industry.

**Nessan Bermingham, Ph.D.** Dr. Bermingham, one of Legacy Korro's co-founders, has served as Chairperson of the Board since completion of the Merger, and previously served as Legacy Korro's Chairman and on its board of directors since November 2021, and previously served as its President and Executive Chairman from November 2018 to November 2021. Dr. Bermingham has been an Operating Partner at Khosla Ventures since December 2021 and has served as Interim Chief Executive Officer of Everyone Medicines since October 2022. Previously, he co-founded and served as President and Chief Executive Officer of Triplet Therapeutics from November 2018 until July 2021. Dr. Bermingham was also a Venture Partner at Atlas Venture from February 2018 until July 2021. Dr. Bermingham also served as Interim Chief Executive Officer of Liberate Bio from October 2022 until February 2023. Prior to that role, Dr. Bermingham co-founded and served as President and Chief Executive Officer of Intellia Therapeutics (Nasdaq:NTLA) from 2014 to 2017. Dr. Bermingham currently serves on the boards of directors of a number of private companies and previously served on the board of Xilio Therapeutics (Nasdaq:XLO). He also previously served as the chair of the board of F-Star Therapeutics prior to its reverse merger and subsequent to its acquisition as a public company, and served on the boards of several private companies. Dr. Bermingham holds a bachelor's degree in genetics from Queen's University Belfast and a Ph.D. in molecular biology from Imperial College London, and was a Howard Hughes Associate Fellow at Baylor College of Medicine. We believe Dr. Bermingham is qualified to serve on the Board because of his significant leadership and investment experience in the biotech industry.

**Jean-Francois Formela, M.D., M.B.A.** Dr. Formela, one of Legacy Korro's co-founders, has served as a member of the Board since completion of the Merger, and previously served on Legacy Korro's board of directors since November 2018. Dr. Formela is currently a partner at Atlas Venture, a life sciences-focused venture capital firm, which he joined in 1993. Dr. Formela is a co-founder and director of IFM Therapeutics, and serves as a director of Ikena Oncology, Inc. (Nasdaq:IKNA), as well as a director of the following private companies: Scorpion Therapeutics, Inc., Sail Bio, Inc., Triveni Bio, Inc. and Travin Bio, Inc. Dr. Formela also previously served as a director of Intellia Therapeutics, Inc. (Nasdaq:NTLA), Spero Therapeutics (Nasdaq:SPRO) and several private companies. Dr. Formela is a member of the Mass General Brigham Innovation Advisory Board and a former trustee of the Boston Institute of Contemporary Art. Dr. Formela began his career as a physician practicing emergency medicine at Necker University Hospital in Paris. He holds an



## [Table of Contents](#)

M.D. from the Paris University School of Medicine and an M.B.A. from Columbia University. We believe Dr. Formela's experience as an investor and board member in the life sciences industry, as well as his scientific and medical knowledge, provides him with the qualifications and skills to serve on the Board.

**Rachel Meyers, Ph.D.** Dr. Meyers has served as a member of the Board since November 2023. Dr. Meyers previously served as the Founder and Chief Scientific Officer at Faze Medicines, Inc. from June 2020 to January 2023. Prior to Faze Medicines, Dr. Meyers served as Entrepreneur-in-Residence at Third Rock Ventures. She also spent over 13 years at Alynlam Pharmaceuticals, Inc. from April 2003 to November 2016 and remains an active member of the scientific advisory board. Dr. Meyers also serves on several scientific advisory boards, including the National Advisory Board on Innovation and Entrepreneurship through the Department of Commerce. Rachel is listed as an inventor on many patents and patent applications, and has numerous peer-reviewed publications. Dr. Meyers completed her postdoctoral training at Harvard Medical School in the field of signal transduction and received her Ph.D. at the Massachusetts Institute of Technology in the field of in vitro transcription. We believe Dr. Meyers' extensive experience in the biotech industry and her expertise in drug discovery and development, including in RNA-based medicines, provide her with the qualifications and skills to serve on the Board.

**Timothy R. Pearson.** Mr. Pearson has served on the Board since completion of the Merger, and has served as the Chief Executive Officer of Carrick Therapeutics, a privately held oncology company, since July 2019. Mr. Pearson served as an Executive Vice President and the Chief Financial Officer of TESARO, Inc., an oncology-focused biopharmaceutical company, from 2014 until its acquisition by GlaxoSmithKline in February 2019. He served as an Executive Vice President, Chief Financial Officer and Treasurer of Catalyst Health Solutions, a publicly held pharmacy benefit management company, from 2011 until its acquisition by SXC Health Solutions in 2012. Prior to joining Catalyst Health Solutions, Mr. Pearson served as the Chief Financial Officer and Executive Vice President of MedImmune, Inc. Mr. Pearson has served on the board of directors of GlycoMimetics, Inc. (Nasdaq:GLYC) since 2014 and as its chairperson since 2019. He previously served on the board of directors of Ra Pharmaceuticals, Inc., a publicly held biopharmaceutical company until its acquisition by UCB in April 2020. Mr. Pearson is a Certified Public Accountant and holds dual B.S. degrees in business administration from the University of Delaware and in accounting from the University of Maryland, University College, as well as an M.S. degree in finance from Loyola College. We believe Mr. Pearson is qualified to serve on the Board because of his experience in the biopharmaceutical industry and his expertise in accounting and finance, strategic planning and leadership of complex organizations, and human capital management.

### **Election of Officers**

Our executive officers are appointed by, and serve at the discretion of, our board of directors. There are no family relationships among any of our directors or executive officers.

### **Our Board of Directors**

Our board of directors currently consists of seven directors divided into three staggered classes, with one class to be elected at each annual meeting to serve for a three-year term.

There are no family relationships among any of our directors and officers.

### **Committees of Our Board of Directors**

The standing committees of our board of directors are the following: audit committee, compensation committee and a nominating and corporate governance committee, and each operate pursuant to a charter. Our board of directors may establish other committees from time to time to assist us and our board of directors.

## Table of Contents

### *Audit Committee*

Our audit committee oversees our corporate accounting and financial reporting process. Among other matters, the audit committee's responsibilities will include:

- appointing, approving the compensation of, and assessing the independence of, our independent registered public accounting firm;
- pre-approving auditing and permissible non-audit services, and the terms of such services, to be provided by our independent registered public accounting firm;
- reviewing the overall audit plan with our independent registered public accounting firm and members of management responsible for preparing our financial statements;
- reviewing and discussing with management and our independent registered public accounting firm our annual and quarterly financial statements and related disclosures as well as critical accounting policies and practices used by us;
- coordinating the oversight and reviewing the adequacy of our internal control over financial reporting;
- establishing policies and procedures for the receipt and retention of accounting-related complaints and concerns;
- recommending, based upon the audit committee's review and discussions with management and our independent registered public accounting firm, whether our audited financial statements shall be included in our Annual Report on Form 10-K;
- monitoring the integrity of our financial statements and our compliance with legal and regulatory requirements as they relate to our financial statements and accounting matters;
- preparing the audit committee report required by SEC rules to be included in our annual proxy statement;
- reviewing all related person transactions for potential conflict of interest situations and approving all such transactions; and
- reviewing quarterly earnings releases.

The audit committee consists of Timothy Pearson, Nesson Bermingham and Jean-Francois Formela. Timothy Pearson is the chair of the audit committee and is a financial expert under the rules of the SEC. To qualify as independent to serve on our audit committee, listing standards of Nasdaq and the applicable SEC rules require that a director not accept any consulting, advisory or other compensatory fee from us, other than for service as a director, or be an affiliated person of us. We believe that the composition of the audit committee complies with the applicable requirements of the rules and regulations of Nasdaq and the SEC.

### *Compensation Committee*

Our compensation committee will oversee policies relating to compensation and benefits of our officers and employees. Among other matters, the compensation committee's responsibilities include:

- annually reviewing and recommending to the board of directors the corporate goals and objectives relevant to the compensation of our Chief Executive Officer;
- evaluating the performance of our Chief Executive Officer in light of such corporate goals and objectives and, based on such evaluation, recommending to the board of directors the cash compensation of our Chief Executive Officer;
- determining the cash compensation of our other executive officers;
- overseeing and administering our compensation and similar plans;

## Table of Contents

- reviewing and approving the retention or termination of any consulting firm or outside advisor to assist in the evaluation of compensation matters and evaluating and assessing potential and current compensation advisors in accordance with the independence standards identified in the applicable Nasdaq rules;
- retaining and approving the compensation of any compensation advisors;
- reviewing and approving the grant of equity-based awards;
- reviewing and recommending to the board of directors the compensation of our directors; and
- preparing the compensation committee report required by SEC rules, if and when required, to be included in our annual proxy statement.

The compensation committee consists of Nesson Bermingham, Ali Behbahani and Timothy Pearson. Nesson Bermingham is the chair of the compensation committee. Each member of our compensation committee is a “non-employee” director within the meaning of Rule 16b-3 of the rules promulgated under the Exchange Act and independent within the meaning of the independent director guidelines of Nasdaq. We believe that the composition of the compensation committee complies with the applicable requirements of the rules and regulations of Nasdaq.

### *Nominating and Corporate Governance Committee*

The nominating and corporate governance responsibilities include:

- developing and recommending to the board of directors criteria for board and committee membership;
- establishing procedures for identifying and evaluating board of director candidates, including nominees recommended by stockholders;
- reviewing the composition of the board of directors to ensure that it is composed of members containing the appropriate skills and expertise to advise us;
- identifying individuals qualified to become members of the board of directors;
- recommending to the board of directors the persons to be nominated for election as directors and to each of the board’s committees;
- reviewing and recommending to the board of directors appropriate corporate governance guidelines; and
- overseeing the evaluation of the board of directors.

The nominating and corporate governance committee consists of Ali Behbahani, Jean-Francois Formela and Rachel Meyers. Ali Behbahani is the chair of the nominating and corporate governance committee. We believe that the composition of the nominating and corporate governance committee meets the requirements for independence under, and the functioning of such nominating and corporate governance committee complies with, any applicable requirements of the rules and regulations of Nasdaq.

### *Compensation Committee Interlocks and Insider Participation*

Each member of the compensation committee is a “non-employee” director within the meaning of Rule 16b-3 of the rules promulgated under the Exchange Act and independent within the meaning of the independent director guidelines of Nasdaq. None of the our executive officers serve as a member of the board of directors or compensation committee of any entity that has one or more executive officers who is serving on our board of directors or compensation committee.

## Non-Employee Director Compensation

Prior to the Merger, Legacy Korro did not have a formal policy to provide any cash or equity compensation to its non-employee directors for their service on its board of directors or committees of its board of directors, nor did any non-employee director receive any compensation for serving on Legacy Korro's board of directors, except for Dr. Bermingham who received an annual payment of \$250,000.

Our board adopted a non-employee director compensation policy that is designed to provide a total compensation package that enables us to attract and retain, on a long-term basis, high-caliber directors who are not our employees or officers or of our subsidiaries. The non-employee director compensation policy became effective after the Merger.

Under the non-employee director compensation policy, our non-employee directors are eligible to receive cash retainers (which will be prorated for partial years of service) and equity awards as set forth below:

<b>Annual Retainer for Board Membership</b>	
Annual service on the board of directors	\$ 40,000
Additional retainer for annual service as non-executive chairperson	\$ 30,000
Additional retainer for lead director if there is no non-executive chairperson	\$ 30,000
<b>Additional Annual Retainer for Committee Membership</b>	
Annual service as audit committee chairperson	\$ 15,000
Annual service as member of the audit committee (other than chairperson)	\$ 7,500
Annual service as compensation committee chairperson	\$ 10,000
Annual service as member of the compensation committee (other than chairperson)	\$ 5,000
Annual service as nominating and governance committee chairperson	\$ 8,000
Annual service as member of the nominating and governance committee (other than chairperson)	\$ 4,000

In addition, the policy provides that, upon initial election or appointment to our board following the effective date of the policy, each new non-employee director will be granted a non-statutory stock option with a value of \$300,000 (as determined in accordance with the policy), or the Director Initial Grant. The Director Initial Grant will vest in substantially equal annual installments over three years, subject to continued service as a non-employee director through the applicable vesting date. On the date of each annual meeting of our stockholders, each non-employee director who has been serving as a non-employee director for at least six months as of such date and will continue as a non-employee director following such meeting will be granted an annual award of a non-statutory stock option with a value of \$150,000, or the Director Annual Grant. The Director Annual Grant will vest in full on the earlier of the one-year anniversary of the grant date or on the date of our next annual meeting of stockholders, subject to continued service as a non-employee director through the applicable vesting date. The Director Initial Grant and Director Annual Grants are subject to full accelerated vesting upon our sale our company. All of the foregoing stock options would be granted with a per share exercise price equal to the fair market value of a share of our common stock on the date of grant and would have a 10 year term.

The aggregate amount of compensation, including both equity compensation and cash compensation, paid to any of our non-employee directors for services as a director in a calendar year period will not exceed \$1,000,000 in the first calendar year such individual becomes a non-employee director and \$750,000 in any other calendar year.

We will reimburse all reasonable out-of-pocket expenses incurred by directors for their attendance at meetings of the board or any committee thereof.

Our employee directors will not receive any additional compensation for their service as a director.

## LEGACY KORRO DIRECTOR COMPENSATION

We adopted a non-employee director compensation policy, which was amended and restated in connection with the closing of the Merger. Each non-employee director will receive compensation for his or her service on the Board in accordance with our non-employee director compensation policy, which provides for the following cash and equity retainers:

- an annual cash retainer of \$40,000 for members of the Board of Directors (or \$70,000 for the chair of the Board of Directors);
- an additional annual cash retainer of \$7,500 for service on the Audit Committee (or \$15,000 for service as chair of the Audit Committee);
- an additional annual cash retainer of \$5,000 for service on the Compensation Committee (or \$10,000 for service as chair of the Compensation Committee); and
- an additional annual cash retainer of \$4,000 for service on the Nominating and Corporate Governance Committee (or \$8,000 for service as chair of the Nominating and Corporate Governance Committee).

In addition, upon initial election or appointment, each new non-employee director will be granted a non-statutory stock option with a value of up to \$300,000 (as determined in accordance with the policy and provided, that the maximum number of shares of our common stock subject to each such option shall be 16,000 shares). The initial grant will vest in substantially equal annual installments over three years, subject to continued service through the applicable vesting date. On the date of each annual meeting of stockholders, each non-employee director who has been serving as a non-employee director for at least six months as of such date and will continue as a non-employee director following such meeting will be granted an annual award of a non-statutory stock option with a value of \$150,000 (provided, that the maximum number of shares of our common stock subject to each such option shall be 8,000 shares). The annual grants will vest in full on the earlier of the one-year anniversary of the grant date or on the date of our next annual meeting of stockholders, subject to continued service through the applicable vesting date. These director grants are subject to full accelerated vesting upon the sale of our company. All of the foregoing stock options will be granted with a per share exercise price equal to the fair market value of a share of our common stock on the grant date have a 10 year term.

The aggregate amount of compensation, including both equity compensation and cash compensation, paid to any non-employee director for services as a director in a calendar year period will not exceed \$1,000,000 in the first calendar year such individual becomes a non-employee director and \$750,000 in any other calendar year.

### 2022 Director Compensation Table

The following table presents the total compensation paid by Legacy Korro for each person who served as a non-employee director of the Legacy Korro board of directors during 2022. Dr. Aiyar, our Chief Executive Officer and President (who served in such capacity at Legacy Korro prior to the Merger), did not receive any additional compensation from Legacy Korro for his services on the Legacy Korro board of directors. The compensation received by Dr. Aiyar as a named executive officer, or NEO, of Legacy Korro is set forth below in “*Legacy Korro Executive Compensation*.” Legacy Korro share amounts reflect actual shares of Legacy Korro capital stock and have not been adjusted to reflect the exchange for shares our common stock in the Merger.

Name	Fees Paid or Earned in Cash (\$)	Total (\$)
Nessan Bermingham(1)	250,000	250,000
Ali Behbahani(2)	—	—
Hannah Chang(2)	—	—
Jean-Francois Formela(2)	—	—
Omar Khwaja(3)	25,000	25,000

---

[Table of Contents](#)

- (1) Dr. Bermingham's cash fees were paid for his services as Chairman of the Legacy Korro board of directors. As of December 31, 2022, Dr. Bermingham held options to purchase 1,349,645 shares of Legacy Korro's common stock and 202,150 shares of Legacy Korro's restricted stock.
- (2) As of December 31, 2022, none of Dr. Behbahani, Dr. Chang or Dr. Formela held any outstanding equity awards.
- (3) Dr. Khwaja's cash fees were paid for his services on the Legacy Korro board of directors. As of December 31, 2022, Dr. Khwaja held options to purchase 75,000 shares of Legacy Korro's common stock.

## LEGACY KORRO EXECUTIVE COMPENSATION

### Executive Compensation Prior to the Merger

Unless the context otherwise requires, any reference in this section of this prospectus to “Legacy Korro” refers to Legacy Korro and its consolidated subsidiaries prior to the consummation of the Merger. As an emerging growth company, Legacy Korro opted to comply with the executive compensation disclosure rules applicable to “smaller reporting companies” as such term is defined in the rules promulgated under the Securities Act, which require compensation disclosure for its principal executive officer and two other most highly compensated executive officers who became our executive officers in the Merger.

This section discusses the material components of the executive compensation program offered to the executive officers of Legacy Korro who would have been “named executive officers” for 2022 and who are now serving as our executive officers. Such executive officers consist of the following persons, referred to herein as Legacy Korro’s NEOs:

- Ram Aiyar, our Chief Executive Officer and President; and
- Vineet Agarwal, our Chief Financial Officer.

Each of Legacy Korro’s NEOs serves our company in the same capacities as prior to the consummation of the Merger. This discussion may contain forward-looking statements that are based on our current plans, considerations, expectations and determinations regarding future compensation programs. Actual compensation programs that we adopt could vary significantly from our historical practices and currently planned programs summarized in this discussion.

### 2022 Summary Compensation Table – Legacy Korro

The following table presents information regarding the total compensation awarded to, earned by and paid to Legacy Korro’s NEOs for services during 2022.

Name and Principal Position	Year	Salary (\$)	Option Awards \$(1)	Nonequity Incentive Plan Compensation (\$)	All Other Compensation \$(2)	Total (\$)
Ram Aiyar <i>Chief Executive Officer</i>	2022	472,500	546,835	170,100	7,110	1,196,545
Vineet Agarwal <i>Chief Financial Officer</i>	2022	404,250	88,676	127,339	8,743	629,008

- (1) The amounts reported represent the aggregate grant date fair value of the stock option awards granted to Legacy Korro’s NEOs during 2022, calculated in accordance with FASB ASC Topic 718. Such grant date fair values do not take into account any estimated forfeitures. The assumptions used in calculating the grant date fair value of the stock option awards reported in this column are set forth in note 11 of Legacy Korro’s financial statements included elsewhere in this prospectus. The amounts reported in this column reflect the accounting cost for these stock option awards and do not correspond to the actual economic value that may be received by Legacy Korro’s NEOs upon the exercise of the stock option awards or any sale of the underlying shares of Legacy Korro common stock.
- (2) Represents Legacy Korro’s matching contributions to the NEO’s 401(k) account.

### Narrative Disclosure to the Legacy Korro 2022 Summary Compensation Table

#### 2022 Base Salaries

Each of the Legacy Korro’s NEOs’ base salary is a fixed component of annual compensation for performing specific duties and functions. Base salaries are adjusted from time to time to realign salaries with market levels

## [Table of Contents](#)

after taking into account individual responsibilities, performance and experience. For the fiscal year ended December 31, 2022, the base salaries for Dr. Aiyar and Mr. Agarwal were \$472,500 and \$404,250, respectively.

### **2022 Annual Bonuses**

During the year ended December 31, 2022, Dr. Aiyar and Mr. Agarwal were each eligible to earn an annual bonus based on Legacy Korro's performance. For the year ended December 31, 2022, the target annual bonuses for Dr. Aiyar and Mr. Agarwal were equal to 40% and 35%, respectively, of their applicable annual base salary.

### **Equity Incentive Compensation**

In January 2019 Legacy Korro's board of directors adopted the Legacy Korro 2019 Plan. Although Legacy Korro did not have a formal policy with respect to the grant of equity incentive awards to Legacy Korro's executive officers, Legacy Korro believes that equity awards provide Legacy Korro's executive officers with a strong link to Legacy Korro's long-term performance, create an ownership culture and help to align the interests of Legacy Korro's executives and Legacy Korro's stockholders. In addition, Legacy Korro believes that equity awards with a time-based vesting feature promote executive retention because this feature incentivizes Legacy Korro's executive officers to remain in Legacy Korro's employment during the applicable vesting period. Accordingly, Legacy Korro's board of directors periodically reviews the equity incentive compensation of Legacy Korro's NEOs and from time to time may grant equity incentive awards to them. In 2022, Legacy Korro granted options to its NEOs with the aggregate grant date fair values set forth in the Legacy Korro 2022 Summary Compensation Table above.

### **Perquisites**

Legacy Korro generally does not provide perquisites to its employees, other than certain de minimis perquisites available to all employees, including the Legacy Korro NEOs.

### **401(k) Plan**

Legacy Korro maintains its 401K Retirement Plan, a tax-qualified retirement plan that provides eligible employees, including the Legacy Korro NEOs, with an opportunity to save for retirement on a tax-advantaged basis. Plan participants are able to defer eligible compensation subject to applicable annual limits under the Code. Participants' pre-tax or Roth contributions are allocated to each participant's individual account and are then invested in selected investment alternatives according to the participants' directions. Participants are immediately and fully vested in their contributions. Legacy Korro matches each participant's contribution up to a maximum of 3% of their eligible compensation with participants vesting immediately and fully in such matching contributions. Legacy Korro's 401(k) plan is intended to be qualified under Section 401(a) of the Code with its 401(k) plan's related trust intended to be tax exempt under Section 501(a) of the Code.

### **Employment Agreements with Legacy Korro's NEOs**

We entered into new agreements with Legacy Korro's NEOs following the Merger, which are further described below.

### **Employment Agreements for Our Named Executive Officers**

#### ***Employment Agreements Prior to the Merger***

##### ***Ram Aiyar***

On October 13, 2020, Legacy Korro entered into an offer letter with Ram Aiyar, or the Aiyar Offer Letter, in connection with his appointment as Chief Executive Officer of Legacy Korro. The Aiyar Offer Letter set forth his initial annual base salary of \$450,000, initial target bonus opportunity equal to 40% of base salary, his initial equity grant, and his eligibility to participate in Legacy Korro's employee benefit plans generally.



## Table of Contents

The Aiyar Offer Letter provided that in the event that Dr. Aiyar's employment was terminated by Legacy Korro without "cause" or by him for "good reason" (as such terms are defined in the Aiyar Offer Letter), in either case within three months before or 12 months following a change in control, subject to Dr. Aiyar's signing and complying with a separation agreement and release, Dr. Aiyar would have been entitled to the following severance benefits: (i) a lump sum cash payment equal to sum of (x) 12 months of his then-current base salary (or the base salary in effect immediately prior to the change in control, if higher), plus (y) 100% of Dr. Aiyar's target annual bonus for the year of termination, without regard to whether the metrics had been established or achieved for such year; (ii) if Dr. Aiyar elected COBRA health continuation, a monthly payment to the group health plan provider or the COBRA provider for up to 12 months, and (iii) 100% of all equity awards held by Dr. Aiyar would have immediately accelerated in vesting and become fully exercisable or non-forfeitable.

In addition, in the event that Dr. Aiyar's employment was terminated by Legacy Korro without "cause" or by him for "good reason", in either case outside his change in control period, subject to Dr. Aiyar's signing and complying with a separation agreement and release, Dr. Aiyar would have been entitled to the severance benefits as described in the preceding paragraph, payable in substantially equal installments over a 12-month period, provided that Dr. Aiyar would not have been entitled to any acceleration of vesting of his equity awards and the target annual bonus described above would have been prorated based on the date of termination.

### *Vineet Agarwal*

On March 12, 2021, Legacy Korro entered into an employment agreement with Vineet Agarwal, or the Agarwal Employment Agreement, in connection with his appointment as Legacy Korro's Chief Financial Officer. The Agarwal Employment Agreement set forth his initial annual base salary of \$385,000, initial target bonus opportunity equal to 35% of base salary, initial equity grant, and his eligibility to participate in Legacy Korro's employee benefit plans generally.

The Agarwal Employment Agreement provided that in the event that Mr. Agarwal's employment was terminated by Legacy Korro without "cause" or by him for "good reason" (as such terms were defined in the Agarwal Employment Agreement), in either case within 12 months following a change in control, subject to Mr. Agarwal's signing and complying with a separation agreement and release, Mr. Agarwal would have been entitled to the following severance benefits: (i) a lump sum cash payment equal to sum of (x) nine months of his then-current base salary (or the base salary in effect immediately prior to the change in control, if higher), plus (y) 100% of Mr. Agarwal's target annual bonus for the year of termination, without regard to whether the metrics had been established or achieved for such year; (ii) if Mr. Agarwal elected COBRA health continuation, a monthly payment to the group health plan provider or the COBRA provider for up to nine months, and (iii) 100% of all equity awards subject to time-based vesting held by Mr. Agarwal would have immediately accelerated in vesting and become fully exercisable or non-forfeitable.

In addition, in the event that Mr. Agarwal's employment was terminated by Legacy Korro without "cause" or by him for "good reason", in each case outside his change in control period, subject to Mr. Agarwal's signing and complying with a separation agreement and release, Mr. Agarwal would have been entitled to the severance benefits as described in the preceding paragraph, payable in substantially equal installments over a nine-month period, provided that Mr. Agarwal would not have been entitled to any acceleration of vesting of his equity awards and the target annual bonus described above would have been prorated based on the date of termination.

### ***Employment Agreements Following the Merger***

Post-closing, we entered into new employment agreements with our executive officers, the terms of which are described below.

On November 10, 2023, we entered into a new employment agreement with Ram Aiyar, Ph.D., our President and Chief Executive Officer and principal executive officer, and on November 8, 2023, we entered into a new employment agreement with Vineet Agarwal, our Treasurer and Chief Financial Officer and principal financial officer and principal accounting officer.

## [Table of Contents](#)

These new employment agreements provide for substantially the same compensation as each officer's respective prior offer letters. As previously disclosed in our proxy statement/prospectus dated September 29, 2023 and filed with the Securities and Exchange Commission, or SEC, pursuant to Rule 424(b), we entered into the new employment agreements with each of Mr. Agarwal and Dr. Aiyar, along with our other executive officers, to provide enhanced severance pay and benefits in the event the executive's employment is terminated by us without cause or the executive resigns for good reason, in each case, within the change in control period, as defined in such new employment agreements.

Under Dr. Aiyar's new employment agreement, he has an initial annual base salary of \$498,487, an initial target bonus opportunity equal to 45% of his base salary and continues to remain eligible for equity grants under our equity incentive plans, and continues to be eligible to participate in our employee benefit plans generally. Under Mr. Agarwal's new employment agreement, he has an initial annual base salary of \$426,483, an initial target bonus opportunity equal to 35% of his base salary and continues to remain eligible for equity grants under our equity incentive plans, and continues to be eligible to participate in our employee benefit plans generally.

The new employment agreements provide that in the event the executive is terminated without "cause" or he resigns for "good reason" (as such terms are defined therein), in each case, outside of the change in control period (which runs from the three months prior to 12 months following a change in control, as "change in control" is defined in the therein), in each case subject to signing and complying with a separation agreement and release, then the executive will be entitled to the following severance benefits: for Dr. Aiyar, (i) 12 months of his then-current base, plus (ii) a pro rata target bonus for the year of termination, without regard to whether the metrics have been established or achieved for such year, and (iii) up to 12 months of COBRA health coverage; and for Mr. Agarwal, (i) nine months of his then-current base, plus (ii) a pro rata target bonus for the year of termination, without regard to whether the metrics have been established or achieved for such year, and (iii) up to nine months of COBRA health coverage.

The new employment agreements provide enhanced severance pay and benefits in the event the executive's employment is terminated by us without cause or the executive resigns for good reason, in each case, within the change in control period. Such enhanced severance pay and benefits consist of (i) a lump sum cash payment equal to the sum of (A) 12 months (18 months for Dr. Aiyar) of the executive's then-current base salary (or the base salary in effect immediately prior to the change in control, if higher) plus (B) 1.0 times (1.5 times for Dr. Aiyar) the executive's target annual bonus for the then current year, without regard to whether the metrics have been established or achieved for such year, (ii) up to 12 months (18 months for Dr. Aiyar) of COBRA health coverage, and (iii) accelerated vesting of the then-outstanding and unvested portion of the executive's stock options and other stock-based awards that are subject solely to time-based vesting (and, for Dr. Aiyar, any stock options and other stock-based awards that were granted to him prior to the effective date of his new employment agreement and that are subject to performance-based vesting). The severance pay and benefits described in this paragraph are subject to the executive's delivery of and compliance with a fully effective release of claims.

The payments and benefits to be provided under the new employment agreements in connection with a change in control may not be eligible for federal income tax deduction for us pursuant to Section 280G of the Code. These payments and benefits may also be subject to an excise tax under Section 4999 of the Code. If the payments or benefits payable to the executive in connection with a change in control would be subject to the excise tax imposed under Section 4999 of the Code, then those payments or benefits will be reduced if such reduction would result in a higher net after-tax benefit to him.

Each of Dr. Aiyar and Mr. Agarwal will continue to be subject to standard confidentiality and nondisclosure, assignment of intellectual property work product and post-termination nonsolicitation of employees, consultants and independent contractors covenants.

## Outstanding Equity Awards at 2022 Fiscal Year-End

The following table sets forth information concerning outstanding equity awards held by each of the Legacy Korro NEOs as of December 31, 2022. Share amounts (and price per share) have not been adjusted to reflect the exchange for shares of our common stock in the Merger.

Name	Vesting Commencement Date	Option Awards (1)		Option Exercise Price (\$)	Option Expiration Date
		Number of Securities Underlying Unexercised Options (#) Exercisable	Number of Securities Underlying Unexercised Options (#) Unexercisable		
Ram Aiyar	11/2/2020(2)	1,428,018	1,313,777	0.58	12/1/2030
	1/27/2022(2)	—	740,000	1.13	1/26/2032
Vineet Agarwal	5/11/2021(2)	325,588	496,951	0.58	5/29/2031
	1/27/2022(2)	—	120,000	1.13	1/26/2032

- (1) Each equity award is subject to the terms of the Korro Bio 2019 Plan.
- (2) 1/4 of the shares subject to the stock option vest on the first anniversary of the vesting commencement date, and 1/48 of the shares subject to the stock option vest each month thereafter, in each case, subject to a continuous service relationship through each applicable vesting date. The stock option is also subject to certain acceleration of vesting provisions as provided in the applicable NEO's offer letter or employment agreement, as applicable.

## Employee Benefit and Equity Compensation Plans and Arrangements

### 2023 Stock Option and Incentive Plan

The 2023 Plan allows us to make equity and equity-based incentive awards to officers, employees, directors and consultants. We anticipate that providing such persons with a direct stake in our company will assure a closer alignment of the interests of such individuals with ours and our stockholders, thereby stimulating their efforts on our behalf and strengthening their desire to remain with us.

The maximum aggregate number of shares that may be issued under the 2023 Plan is 885,028 shares (which takes into account the 1-for-50 reverse stock split of Frequency's common stock effected immediately prior to the Merger), or the Initial Limit. The 2023 Plan provides that the number of shares reserved and available for issuance under the 2023 Plan will automatically increase each January 1, beginning on January 1, 2024, by 5% of the outstanding number of shares on the immediately preceding December 31, or such lesser amount as determined by the plan administrator, or the Annual Increase. This limit is subject to adjustment in the event of a reorganization, recapitalization, reclassification, stock split, stock dividend, reverse stock split or other similar change in our capitalization. The maximum aggregate number of shares that may be issued upon exercise of incentive stock options under the 2023 Plan shall not exceed the Initial Limit cumulatively increased on January 1, 2024 and on each January 1 thereafter by the lesser of the Annual Increase or 885,028 shares (which takes into account the 1-for-50 reverse stock split of Frequency's common stock effected immediately prior to the Merger). Shares underlying any awards under the 2023 Plan and the shares underlying awards under the Korro Bio 2019 Plan that are forfeited, canceled, held back upon exercise of an option or settlement of an award to cover the exercise price or tax withholding, reacquired by us prior to vesting, satisfied without the issuance of stock or otherwise terminated (other than by exercise) shall be added back to the shares available for issuance under the 2023 Plan and, to the extent permitted under Section 422 of the Code and the regulations promulgated thereunder, the shares that may be issued as incentive stock options. Awards that may be settled solely in cash will not be counted against the shares available for issuance under the 2023 Plan and will not reduce the shares authorized for grant to a grantee in any calendar year.

The 2023 Plan contains a limitation whereby the value of all awards under the 2023 Plan and all other cash compensation paid to any non-employee director for services as a non-employee director may not exceed

## [Table of Contents](#)

\$750,000 in any calendar year; provided, however, that such amount will be \$1,000,000 for the first calendar year a non-employee director is initially appointed to our board of directors.

The 2023 Plan will be administered by our board of directors, the compensation committee of our board of directors or such other similar committee pursuant to the terms of the 2023 Plan. The plan administrator, which initially will be the compensation committee of our board of directors, will have full power to select, from among the individuals eligible for awards, the individuals to whom awards will be granted, to make any combination of awards to participants, and to determine the specific terms and conditions of each award, subject to the provisions of the 2023 Plan. The plan administrator may delegate to a committee consisting of one or more officers the authority to grant stock options and other awards to employees who are not subject to the reporting and other provisions of Section 16 of the Exchange Act and not members of the delegated committee, subject to certain limitations and guidelines. Persons eligible to participate in the 2023 Plan will be our officers, employees, non-employee directors and consultants as selected from time to time by the plan administrator in its discretion.

The 2023 Plan permits the granting of both options to purchase shares intended to qualify as incentive stock options under Section 422 of the Code and options that do not so qualify. Options granted under the 2023 Plan will be non-qualified options if they fail to qualify as incentive stock options or exceed the annual limit on incentive stock options. Incentive stock options may only be granted to our employees and our subsidiaries. Non-qualified options may be granted to any persons eligible to receive awards under the 2023 Plan. The option exercise price of each option will be determined by the plan administrator but generally may not be less than 100% of the fair market value of our share on the date of grant or, in the case of an incentive stock option granted to a 10% stockholder, 110% of such share's fair market value. The term of each option will be fixed by the plan administrator and may not exceed ten years from the date of grant or, in the case of an incentive stock option granted to a 10% stockholder, five years from the date of grant. The plan administrator will determine at what time or times each option will vest and may be exercised, including the ability to accelerate the vesting of such options.

Upon exercise of options, the option exercise price must be paid in full either in cash, by certified or bank check or other instrument acceptable to the plan administrator or by delivery (or attestation to the ownership) of shares that are beneficially owned by the optionee free of restrictions or were purchased in the open market. Subject to applicable law, the exercise price may also be delivered by a broker pursuant to irrevocable instructions to the broker from the optionee. In addition, the plan administrator may permit non-qualified options to be exercised using a "net exercise" arrangement that reduces the number of shares issued to the optionee by the largest whole number of shares with fair market value that does not exceed the aggregate exercise price.

The plan administrator may award stock appreciation rights subject to such conditions and restrictions as it may determine. Stock appreciation rights entitle the recipient to shares or cash, equal to the value of the appreciation in our stock price over the exercise price. The exercise price generally may not be less than 100% of the fair market value of our share on the date of grant. The term of each stock appreciation right will be fixed by the plan administrator and may not exceed ten years from the date of grant. The plan administrator will determine at what time or times each stock appreciation right will vest and may be exercised, including the ability to accelerate the vesting of such stock appreciation right.

The plan administrator may award restricted shares and restricted stock units to participants subject to such conditions and restrictions as it may determine. These conditions and restrictions may include the achievement of certain performance goals and/or continued employment with us through a specified vesting period. The plan administrator may also grant shares that are free from any restrictions under the 2023 Plan. Unrestricted stock may be granted to participants in recognition of past services or for other valid consideration and may be issued in lieu of cash compensation due to such participant. The plan administrator may grant dividend equivalent rights to participants that entitle the recipient to receive credits for dividends that would be paid if the recipient had held a specified number of shares.

The plan administrator may grant cash-based awards under the 2023 Plan to participants.

## [Table of Contents](#)

The 2023 Plan requires the plan administrator to make appropriate adjustments to the number of shares of common stock that are subject to the 2023 Plan, to certain limits in the 2023 Plan, and to any outstanding awards to reflect stock dividends, stock splits, extraordinary cash dividends and similar events.

The 2023 Plan provides that upon the effectiveness of a “sale event,” as defined in the 2023 Plan, an acquirer or successor entity may assume, continue or substitute for the outstanding awards under the 2023 Plan. To the extent that awards granted under the 2023 Plan are not assumed or continued or substituted by the successor entity, all awards granted under the 2023 Plan shall terminate and in such case, except as may be otherwise provided in the relevant award agreement, all stock options and stock appreciation rights with time-based vesting conditions or restrictions that are not vested and/or exercisable immediately prior to the effective time of the sale event and held by grantees who have had a continuous service relationship with us for at least one year prior to the effective time of the sale event shall become fully vested and exercisable as of the effective time of the sale event, all other awards with time-based vesting conditions or restrictions shall, if held by grantees who have had a continuous service relationship with us for at least one year prior to the effective time of the sale event, become fully vested and nonforfeitable as of the effective time of the sale event, and all awards with conditions and restrictions relating to the attainment of performance goals may become vested and nonforfeitable in connection with a sale event in the plan administrator’s discretion or to the extent specified in the relevant award agreement. In the event of such termination, individuals holding options and stock appreciation rights will, for each such award, either (a) receive a payment in cash or in kind for each share subject to such award that is exercisable in an amount equal to the per share cash consideration payable to stockholders in the sale event less the applicable per share exercise price (provided that, in the case of an option or stock appreciation right with an exercise price equal to or greater than the per share cash consideration payable to stockholders in the sale event, such option or stock appreciation right shall be cancelled for no consideration) or (b) be permitted to exercise such options and stock appreciation rights (to the extent exercisable) within a specified period of time prior to the sale event. The plan administrator shall also have the option (in its sole discretion) to make or provide for a payment, in cash or in kind, to the grantees holding other awards in an amount equal to the per share cash consideration payable to stockholders in the sale event multiplied by the number of vested shares under such awards.

Participants in the 2023 Plan are responsible for the payment of any federal, state or local taxes that we are required by law to withhold upon the exercise of options or stock appreciation rights or vesting of other awards. The plan administrator may cause any of our tax withholding obligation to be satisfied, in whole or in part, by us withholding from shares to be issued pursuant to an award a number of shares with an aggregate fair market value that would satisfy the withholding amount due. The plan administrator may also require any of our tax withholding obligation to be satisfied, in whole or in part, by an arrangement whereby a certain number of shares issued pursuant to any award are immediately sold and proceeds from such sale are remitted to us in an amount that would satisfy the withholding amount due.

The 2023 Plan generally does not allow for the transfer or assignment of awards, other than by will or by the laws of descent and distribution or pursuant to a domestic relations order; however, the plan administrator may permit the transfer of non-qualified stock options by gift to an immediate family member, to trusts for the benefit of family members, or to partnerships in which such family members are the only partners. All awards will be subject to any clawback policy as set forth in such clawback policy or the applicable award agreement.

The plan administrator may amend or discontinue the 2023 Plan and the plan administrator may amend or cancel outstanding awards for purposes of satisfying changes in law or any other lawful purpose, but no such action may materially and adversely affect rights under an award without the holder’s consent. The plan administrator may not reduce the exercise price of outstanding options or stock appreciation rights, effect the repricing of such awards through cancellation and re-grants or cancel such awards in exchange for cash or other awards without prior stockholder approval. Certain amendments to the 2023 Plan require the approval of our stockholders.

No awards may be granted under the 2023 Plan after the date that is ten years from the Effective Time.

### ***Legacy Korro Plan***

Upon closing of the Merger, we assumed the Legacy Korro 2019 Stock Incentive Plan, or the Legacy Korro Plan, and each outstanding and unexercised option to purchase Legacy Korro shares at such time, each of which converted into an option to purchase shares of our common stock, with necessary adjustments to the number of shares and exercise price to reflect the exchange ratio. In addition, upon the closing of the Merger, we assumed each outstanding and unexercised warrant to purchase Legacy Korro shares at such time, each of which converted into a warrant to purchase shares of our common stock, with necessary adjustments to the number of shares and exercise price to reflect the Exchange. We do not plan to grant any additional awards under the Korro Bio 2019 Plan.

Under the Legacy Korro Plan, Legacy Korro reserved for issuance an aggregate of 15,048,960 shares (which does not take into account any adjustments for the exchange ratio or the 1-for-50 reverse stock split of Frequency's common stock effected immediately prior to the Merger) of Legacy Korro common stock. The number of shares of Legacy Korro common stock reserved for issuance was subject to adjustment in the event of a stock dividend, stock split or combination of shares, recapitalization or other similar change affecting the outstanding Legacy Korro common stock and no more than 15,048,960 shares (which does not take into account any adjustments for the exchange ratio or the 1-for-50 reverse stock split of Frequency's common stock effected immediately prior to the Merger) may be issued pursuant to incentive stock options.

The Legacy Korro Plan is administered by our board of directors or a committee appointed by us, referred to herein as the plan administrator. The plan administrator has full power to, among other things, select, from among the individuals eligible for awards, the individuals to whom awards will be granted, to accelerate the time at which our stock award may be exercised or vest, to amend the Legacy Korro Plan and to determine the specific terms and conditions of each award, subject to the provisions of the Legacy Korro Plan.

The plan administrator may, with consent of affected option holders, effect repricing through cancellation of outstanding stock options and by granting such holders new awards in replacement of the cancelled options in accordance with the terms of the Legacy Korro Plan.

Stock options may be granted under the Legacy Korro Plan. The exercise price per share of all stock options must equal at least 100% of the fair market value per share of our common stock on the date of grant. The term of a stock option may not exceed ten years. An incentive stock option granted to a participant who owns more than 10% of the total combined voting power of all classes of Legacy Korro capital stock on the date of grant, or any parent or subsidiary corporations, may not have a term in excess of five years and must have an exercise price of at least 110% of the fair market value per share of Legacy Korro common stock on the date of grant. The plan administrator will determine the methods of payment of the exercise price of an option, which may include cash, shares or certain other property or other consideration acceptable to the plan administrator. After a participant's termination of service, the participant generally may exercise their stock options, to the extent vested as of such date of termination, during a period of three months after termination of service. If a termination of service is due to death or disability, the option generally will remain exercisable, to the extent vested as of such date of termination, until the one-year anniversary of such termination of service. However, in no event may an option be exercised later than the expiration of its term. If a termination of service is for misconduct (as defined in an applicable award agreement), the stock option automatically expires upon the date of the termination of service.

Stock awards may be granted under the Legacy Korro Plan. A stock award may be vested upon grant or may vest in one or more installments. The plan administrator determines the terms and conditions of stock awards, including the number of our common stock shares granted, the vesting criteria (which may include specified performance criteria and/or continued service to us) and the form of consideration payable for the shares (including cash, services, or any other valid consideration under Delaware law).

Restricted stock units may be granted under the Legacy Korro 2019 Plan. A restricted stock unit is an award that covers a number of shares of our common stock that will be settled upon vesting by the issuance of the

## [Table of Contents](#)

underlying shares. The plan administrator determines the terms and conditions of restricted stock units, including the number of units granted, the vesting criteria (which may include specified performance criteria and/or continued service to us) and the form and timing of payment.

The Legacy Korro Plan generally does not allow for the transfer or assignment of awards, other than at the discretion of the plan administrator, by gift to an immediate family member or to trusts for the benefit of family members.

In the event of certain changes in our capitalization, the exercise prices of and the number of shares subject to outstanding awards, and the purchase price of and the numbers of shares subject to outstanding awards will be proportionately adjusted, subject to any required action by our board of directors or stockholders.

The Legacy Korro Plan provides that upon the effectiveness of a “change in control,” as defined in the Legacy Korro Plan, the plan administrator may provide (i) that an acquirer or successor entity may assume, continue or substitute for the outstanding awards under the Legacy Korro Plan, (ii) all awards may be continued in full force and effect pursuant to the terms of the transaction, or (iii) that awards be replaced with a cash retention program of the acquirer that preserves the spread existing on the unvested shares subject to an award at the time of the transaction. To the extent that awards granted under the Legacy Korro Plan are not assumed or continued or substituted by acquirer or the successor entity, all stock options and all other awards granted under the Legacy Korro Plan shall automatically vest in full. In connection with the accelerated vesting of awards under the Legacy Korro Plan upon a change in control, we may make or provide for a cash payment equal to (A) in the case of options, the difference between (1) the fair market value of a share of our common stock (as determined by the plan administrator) times the number of shares subject to the options being cancelled and (2) the aggregate exercise price of the options and (B) in the case of restricted stock and restricted stock unit awards, the fair market value of a share of our common stock multiplied by the number of shares of stock subject to such stock awards (payable at the time of the change in control or upon any escrow, holdback or earn-out provided for in the definitive agreement effecting the change in control, as determined by the plan administrator).

### ***2023 Employee Stock Purchase Plan***

An aggregate of 88,502 shares (which takes into account the 1-for-50 reverse stock split of Frequency’s common stock effected immediately prior to the Merger), or the Initial Reserve, is reserved and available for issuance under the 2023 ESPP. The 2023 ESPP provides that the number of shares reserved and available for issuance under the plan will automatically increase each January 1, beginning on January 1, 2024, by the lesser of a number of shares equal to the Initial Reserve, 1% of the outstanding number of shares on the immediately preceding December 31, or such lesser amount as determined by the plan administrator. If the combined company’s capital structure changes because of a stock dividend, stock split or similar event, the number of shares that can be issued under the 2023 ESPP will be appropriately adjusted.

The 2023 ESPP is administered by the person or persons appointed by our board of directors. Initially, the compensation committee of our board of directors will administer the plan and has full authority to make, administer and interpret such rules and regulations regarding the 2023 ESPP as it deems advisable.

Any employee or one of our subsidiaries that has been designated to participate in the 2023 ESPP is eligible to participate in the 2023 ESPP so long as the employee is customarily employed for more than 20 hours a week. No person who owns or holds, or as a result of participation in the 2023 ESPP would own or hold, shares or options to purchase shares, that together equal to 5% or more of total combined voting power or value of all classes of our stock or any parent or subsidiary is entitled to participate in the 2023 ESPP. No employee may exercise an option granted under the 2023 ESPP that permits the employee to purchase shares having a value of more than \$25,000 (determined using the fair market value of the stock at the time such option is granted) in any calendar year.

## Table of Contents

Participation in the 2023 ESPP is limited to eligible employees who authorize payroll deductions equal to a whole percentage of base pay to the 2023 ESPP. Employees may authorize payroll deductions, with a minimum of 1% of base pay and a maximum of 15% of base pay.

Once an employee becomes a participant in the 2023 ESPP, that employee will automatically participate in successive offering periods, as described below, until such time as that employee withdraws from the 2023 ESPP, becomes ineligible to participate in the 2023 ESPP, or his or her employment ceases.

We may make one or more offerings under the 2023 ESPP, consisting of one or more purchase periods, for employees to purchase shares under the 2023 ESPP, which is referred to as an “offering period.” The plan administrator may, in its discretion, determine when each offering shall occur, including the duration of any offering period; provided, that no offering period will exceed 27 months in duration. Shares are purchased on the last day of each purchase period or if such purchase period is the last purchase period of the offering period, the last day of such offering period, with that day being referred to as an “exercise date.” Unless otherwise determined by the plan administrator, participants will only be permitted to participate in one offering at a time.

On the first day of an offering period, employees participating in that offering period will be granted an option to purchase shares. On the exercise date of each purchase period, the employee is deemed to have exercised the option, at the exercise price, for the lowest of (i) a number of shares determined by dividing such employee’s accumulated payroll deductions or contributions on such exercise date by the exercise price; (ii) a number of shares determined by dividing \$25,000 by the fair market value per share on the first day of the offering period; or (iii) such lesser number as established by the plan administrator in advance of the offering. The exercise price is equal to the lesser of (i) 85% the fair market value per share on the first day of the offering period or (ii) 85% of the fair market value per share on the exercise date. The maximum number of shares that may be issued to any employee under the 2023 ESPP in a calendar year is a number of shares determined by dividing \$25,000, valued at the start of the offering period, or such other lesser number of shares as determined by the plan administrator from time to time.

In general, if an employee is no longer a participant on an exercise date, the employee’s option will be automatically terminated, and the amount of the employee’s accumulated payroll deductions will be refunded.

Except as may be permitted by the plan administrator in advance of an offering, a participant may not increase or decrease the amount of his or her payroll deductions during any offering period but may increase or decrease his or her payroll deduction with respect to the next offering period by filing a new enrollment form at least 15 business days before the first day of such offering period, or such other deadline established by the plan administrator. A participant may withdraw from an offering period at any time without affecting his or her eligibility to participate in future offering periods. If a participant withdraws from an offering period, that participant may not again participate in the same offering period, but may enroll in subsequent offering periods. An employee’s withdrawal will be effective as of the next business day following the date that the plan administrator receives the employee’s written notice of withdrawal under the 2023 ESPP.

In the case of and subject to the consummation of a “sale event,” the plan administrator, in its discretion, and on such terms and conditions as it deems appropriate, is hereby authorized to take any one or more of the following actions under the 2023 ESPP or with respect to any right under the 2023 ESPP or to facilitate such transactions or events: (a) to provide for either (i) termination of any outstanding option in exchange for an amount of cash, if any, equal to the amount that would have been obtained upon the exercise of such option had such option been currently exercisable or (ii) the replacement of such outstanding option with other options or property selected by the plan administrator in its sole discretion; (b) to provide that the outstanding options under the 2023 ESPP shall be assumed by the successor or survivor corporation, or a parent or subsidiary thereof, or shall be substituted for similar options covering the stock of the successor or survivor corporation, or a parent or subsidiary thereof, with appropriate adjustments as to the number and kind of shares and prices; (c) to make adjustments in the number and type of shares (or other securities or property) subject to outstanding options



## [Table of Contents](#)

under the 2023 ESPP and/or in the terms and conditions of outstanding options and options that may be granted in the future; (d) to provide that the offering with respect to which an option relates will be shortened by setting a new exercise date on which such offering will end; and (e) to provide that all outstanding options shall terminate without being exercised and all amounts in the accounts of participants shall be promptly refunded.

The 2023 ESPP will automatically terminate on the 10-year anniversary of the Effective Time. Our board of directors may, in its discretion, at any time, terminate or amend the 2023 ESPP.

### ***Senior Executive Cash Incentive Bonus Plan***

Our board adopted a Senior Executive Cash Incentive Bonus Plan, or the Bonus Plan. The Bonus Plan became effective following completion of the Merger and provides for cash bonus payments based upon the attainment of performance targets established by our compensation committee. The performance targets may be related to financial and operational measures or objectives with respect to us and/or any of our subsidiaries, or corporate performance goals, as well as individual performance objectives.

Our compensation committee may select corporate performance goals from among the following: developmental, publication, clinical or regulatory milestones; cash flow (including, but not limited to, operating cash flow and free cash flow); revenue; corporate revenue; earnings before interest, taxes, depreciation and amortization; net income (loss) (either before or after interest, taxes, depreciation and/or amortization); changes in the market price of our common stock; economic value-added; acquisitions, licenses, or strategic transactions; financing or other capital raising transactions; operating income (loss); return on capital, assets, equity, or investment; stockholder returns; return on sales; total shareholder return; gross or net profit levels; productivity; expense efficiency; margins; operating efficiency; customer satisfaction; working capital; earnings (loss) per share of our common stock; bookings, new bookings or renewals; sales or market shares; number of prescriptions or prescribing physicians; coverage decisions; leadership development, employee retention, and recruiting and other human resources matters; operating income and/or net annual recurring revenue; or any other performance goal selected by the compensation committee, any of which may be (A) measured in absolute terms or compared to any incremental increase, (B) measured in terms of growth, (C) compared to another company or companies or to results of a peer group, (D) measured against the market as a whole and/or as compared to applicable market indices and/or (E) measured on a pre-tax or post-tax basis (as applicable).

Each executive officer who is selected to participate in the Bonus Plan will have a target bonus opportunity set for each performance period. The bonus formulas will be adopted in each performance period by the compensation committee and communicated to each executive officer at the beginning of each performance period. The corporate performance goals will be measured at the end of each performance period. If the corporate performance goals and individual performance objectives are met, payments will be made as soon as practicable following the end of each performance period, but no later than two and one-half months after the end of the fiscal year in which such performance period ends, unless otherwise determined by the compensation committee. Subject to the rights contained in any agreement between the executive officer and us or unless otherwise determined by the compensation committee, an executive officer must be employed by us on the bonus payment date to be eligible to receive a bonus payment. The Bonus Plan will also permit the compensation committee to approve additional bonuses to executive officers in its sole discretion.

## FREQUENCY EXECUTIVE AND DIRECTOR COMPENSATION

This section discusses the material components of the executive compensation program for Frequency’s executive officers who are named in the Frequency 2022 Summary Compensation Table below. In 2022, Frequency’s “named executive officers” and their positions were:

- David L. Lucchino, President and Chief Executive Officer;
- Carl P. LeBel, Former Chief Development Officer; and
- Christopher R. Loose, Former Chief Scientific Officer.

Dr. LeBel ceased to be an employee in March 2023 and Dr. Loose ceased to be an employee in July 2023, and Mr. Lucchino ceased to be an employee effective upon the Merger in November 2023.

### 2022 Summary Compensation Table - Frequency

Name and principal position	Year	Salary (\$)	Stock awards \$(1)	Option awards \$(2)	Non-equity incentive plan compensation \$(3)	All other compensation \$(4)	Total (\$)
David L. Lucchino	2022	630,000	1,209,000	927,028	378,000	15,250	3,159,278
President and Chief Executive Officer	2021	600,000	—	4,883,032	324,000	14,500	5,821,532
Carl P. LeBel	2022	480,344	604,500	254,472	192,138	15,250	1,546,704
Former Chief Development Officer	2021	461,869	286,200	1,831,138	157,035	14,500	2,750,743
Christopher R. Loose	2022	480,344	604,500	226,580	192,138	15,250	1,518,812
Former Chief Scientific Officer							

- (1) Amounts represent the full grant date value of Frequency Restricted Stock Units issued during the given year, computed in accordance with ASC Topic 718, rather than the amounts paid to or realized by the named individual. With respect to the Frequency Performance Stock Units, the grant date fair value is reported based on the probable outcome of the performance conditions as of the grant date, which is \$0. The maximum potential value as of the grant date of the Frequency Performance Stock Units is \$420,000 for Mr. Lucchino and \$280,000 for Drs. LeBel and Loose. These amounts do not reflect the extent to which the named executive officer realized or will realize an actual financial benefit from the awards.
- (2) Amounts represent the incremental fair value expensed in connection with the repricing of Frequency Options held by the named individual that was approved in August 2022, computed in accordance with ASC Topic 718, rather than the amounts paid to or realized by the named individual.
- (3) Amounts represent incentive compensation awarded in recognition of individual and company performance under Frequency’s annual incentive compensation program. Refer to “2022 Bonuses” below for additional information regarding 2022 awards.
- (4) Amounts represent employer contributions to Frequency’s 401(k) plan for each of Frequency’s named executive officers.

### Narrative to Frequency 2022 Summary Compensation Table

Frequency’s executive compensation program is designed to align compensation with business objectives and the creation of stockholder value, while also enabling Frequency to attract, motivate and retain individuals who contribute to its long-term success. For 2022, the compensation of Frequency’s named executive officers primarily consisted of a base salary, an annual cash incentive bonus opportunity, equity compensation in the form

## [Table of Contents](#)

of Frequency Restricted Stock Units, and health and welfare benefits. Pursuant to their employment agreements, during 2022, Frequency's named executive officers were also eligible to receive certain payments and benefits upon a termination of employment under certain circumstances.

### **2022 Salaries**

Each of the named executive officers receives a base salary to provide a fixed component of compensation intended to reflect the executive's skill set, experience, role and responsibilities. Annual base salaries are reviewed periodically by the compensation committee and the Frequency board of directors. Effective January 1, 2022, the compensation committee approved an increase in the base salary for Mr. Lucchino from \$600,000 to \$630,000, for Dr. LeBel from \$461,869 to \$480,344, and for Dr. Loose from \$461,869 to \$480,344.

### **2022 Bonuses**

Frequency offers its named executive officers the opportunity to earn annual performance bonuses to compensate them for attaining short-term company and individual goals established by the Frequency board of directors. Each named executive officer has an established target annual performance bonus amount, expressed as a percentage of the named executive officer's annual base salary. The target bonus amounts for Mr. Lucchino, Dr. LeBel, and Dr. Loose in 2022 were 60%, 40%, and 40%, respectively.

In January 2023, the compensation committee evaluated the current named executive officers' performance against the relevant bonus goals and approved the amounts earned by Frequency's named executive officers under Frequency's annual bonus program for 2022 and included above in the 2022 Summary Compensation Table. Mr. Lucchino, Dr. LeBel, and Dr. Loose met their target bonus, earning amounts based on the performance of Frequency in 2022, as determined by the compensation committee. Specifically, the compensation committee considered, among other things, Frequency's completion of enrollment in a Phase 2b study of FX-322, initiation of a Phase 1b study of FX-345, and progress in the preclinical program for remyelination in multiple sclerosis.

### **Equity Compensation**

Although Frequency's does not have a formal policy with respect to the grant of equity incentive awards to its executive officers, including Frequency's named executive officers, or any formal equity ownership guidelines applicable to them, Frequency believes that equity grants provide its executive officers with a strong link to Frequency's long-term performance, create an ownership culture and help to align the interests of its executive officers and its stockholders. In addition, Frequency believes that equity grants with a time-based vesting feature promote executive retention because this feature incentivizes its executive officers to remain in Frequency's employment during the vesting period. Accordingly, the Frequency board of directors periodically reviews the equity incentive compensation of its executives, including its named executive officers, and from time to time may grant equity incentive awards to them. To date, Frequency's equity awards have been made in the form of Frequency Options, Frequency Restricted Stock Units, and Frequency Performance Stock Units.

During the fiscal year ended December 31, 2022, Frequency granted Frequency Restricted Stock Units and Frequency Performance Stock Units to each of its named executive officers, as shown in more detail in the "*Outstanding Equity Awards at 2022 Fiscal Year-End*" table below. The time-based restricted stock units were granted in February 2022 and consist of 6,000 restricted stock units (on a post-split basis) granted to Mr. Lucchino, and 3,000 restricted stock units (on a post-split basis) granted to each of Dr. LeBel and Dr. Loose. The Frequency Restricted Stock Units vest in one installment on July 4, 2023, subject to the applicable executive's continued employment with Frequency. The Frequency Performance Stock Units were granted in April 2022 and consist of 6,000 restricted stock units (on a post-split basis) granted to Mr. Lucchino, and 4,000 restricted stock units (on a post-split basis) granted to each of Drs. LeBel and Loose. The Frequency Performance Stock Units generally vest upon a determination by the Frequency board of directors of the completion of a bona

## [Table of Contents](#)

vide, third-party security financing transaction in which Frequency receives gross proceeds of at least \$25 million that occurs on or before December 31, 2023, subject to the applicable executive's continued employment through such vesting date. The Restricted Stock Units vested upon completion of the Merger and the Performance Stock Units issued to Mr. Luchino vested upon execution of his separation agreement from Frequency.

In addition, on August 17, 2022, the Frequency board of directors approved the repricing of all Frequency Options granted under the 2019 Plan that were held by then current employees, executives, directors, and consultants for which the exercise price per share was greater than the closing price per share of the Frequency common stock on August 17, 2022 by reducing the exercise price of each such Frequency Option to \$107.00, the closing price per share of the Frequency common stock on August 17, 2022 (as adjusted for the 1-for-50 reverse stock split effected November 3, 2023).

### ***Other Elements of Compensation***

#### *Retirement Plan*

Frequency maintains a 401(k) retirement savings plan, or the 401(k) Plan, for its employees including its named executive officers, who satisfy certain eligibility requirements. Frequency's named executive officers are eligible to participate in the 401(k) Plan on the same terms as other full-time employees. Under this plan, during 2022 Frequency matched 100% of the first 5% of participants' contributions. Frequency believes that providing a vehicle for tax-deferred retirement savings through its 401(k) Plan adds to the overall desirability of its executive compensation package and further incentivizes its employees, including its named executive officers, in accordance with its compensation policies.

#### *Health and Welfare Plans*

During their employment, Frequency's named executive officers are eligible to participate in Frequency's employee benefit plans and programs, including medical, dental and vision benefits, to the same extent as its other full-time employees, subject to the terms and eligibility requirements of those plans.

[Table of Contents](#)

**Outstanding Equity Awards at 2022 Fiscal Year-End**

Share and exercise prices in the table and footnotes below have been adjusted to reflect the 1-for-50 reverse stock split effected November 3, 2023 (rounded down without adjustment for fractional shares).

Name	Grant Date	Frequency Option Awards				Stock Awards	
		Number of securities underlying unexercised Frequency Options (#) exercisable	Number of securities underlying unexercised Frequency Options (#) unexercisable	Frequency Option exercise price (\$) (1)	Frequency Option Expiration Date	Number of Shares or Units of Stock that have not Vested(2)	
David L. Lucchino(11)	4/11/2022(5)					6,000	1,155,000
	2/17/2022(6)					6,000	1,155,000
	1/15/2021(7)	1,916	2,083	107.00	1/14/2031		
	2/12/2020(8)	3,536	1,313	107.00	2/11/2030		
	10/2/2019(9)	11,311	2,976	107.00	10/1/2029		
	4/17/2019(10)	8,702	185	168.50	4/16/2029		
	4/17/2019	3,854		168.50	4/16/2029		
Carl P. LeBel (3)	4/11/2022(5)					4,000	770,000
	2/17/2022(6)					3,000	577,500
	1/15/2021(7)	718	781	107.00	1/14/2031		
	2/12/2020(8)	838	311	107.00	2/11/2030		
	10/2/2019(9)	2,833	745	107.00	10/1/2029		
	4/17/2019(10)	1,996	42	168.50	4/16/2029		
	4/17/2019	942		168.50	4/16/2029		
Christopher R. Loose(4)	3/12/2018	2,672		30.50	3/11/2028		
	4/11/2022(5)					4,000	770,000
	2/17/2022(6)					3,000	577,500
	1/15/2021(7)	670	729	107.00	1/14/2031		
	2/12/2020(8)	838	311	107.00	2/11/2030		
	10/2/2019(9)	2,324	611	107.00	10/1/2029		
	4/17/2019(10)	7,061	150	168.50	4/16/2029		
	4/17/2019	2,569		168.50	4/16/2029		
5/22/2018	4,151		30.50	5/21/2028			
6/29/2017	927		30.50	6/28/2027			

- (1) All Frequency Options issued under the 2019 Plan with an exercise price greater than \$107.00 (as adjusted for the reverse stock split) were repriced on August 17, 2022 as approved by the Frequency board of directors.
- (2) Market value based on the closing price of the Frequency common stock as of December 30, 2022 of \$192.50 per share, the last trading day in 2022 (as adjusted for the reverse stock split).
- (3) Dr. LeBel, Frequency's former Chief Development Officer, terminated employment with Frequency on March 31, 2023.
- (4) Dr. Loose, Frequency's former Chief Scientific Officer, terminated employment with Frequency on July 28, 2023. In connection with Dr. Loose's separation agreement, among other things, Dr. Loose's unvested Frequency Options and Frequency Restricted Stock Units remain outstanding and vested as the Merger closed and became effective on or before December 31, 2023.
- (5) The Frequency Performance Stock Units vest in one installment upon a determination by the Frequency board of directors of the completion of a bona fide, third-party security financing transaction in which

## Table of Contents

Frequency receives gross proceeds of at least \$25 million that occurs on or before December 31, 2023. Dr. Loose forfeited his Frequency Performance Stock Units in connection with his termination on July 28, 2023.

- (6) The Frequency Restricted Stock Units vest in one installment on July 4, 2023, subject to continued employment through the applicable vesting date.
- (7) The Frequency Option vests in 48 equal monthly installments beginning on February 1 of the year of grant, subject to continued employment through each applicable vesting date.
- (8) The Frequency Option vests in 48 equal monthly installments beginning on February 1 of the year of grant, subject to continued employment through each applicable vesting date.
- (9) The Frequency Option vests in 48 equal monthly installments beginning November 2 of the year of grant, subject to continued employment through each applicable vesting date.
- (10) The Frequency Option vests in 48 equal monthly installments beginning on February 1 of the year of grant, subject to continued employment through each applicable vesting date. The Frequency Option vests in full in the event of a change in control.
- (11) Mr. Lucchino's employment ceased upon closing of the Merger on November 3, 2023.

## **Executive Compensation Arrangements**

### ***Employment Agreements***

#### ***Mr. Lucchino***

Frequency entered into a second amended and restated executive employment agreement with Mr. Lucchino on September 20, 2019, pursuant to which Frequency employs Mr. Lucchino as its President and Chief Executive Officer. The employment agreement also provides for Mr. Lucchino to serve as a member of the Frequency board of directors for as long as he is employed as its Chief Executive Officer. The employment agreement has an indefinite term.

The employment agreement provides for an annual base salary of \$525,000, which was increased to \$630,000 effective January 1, 2022, and for a target annual performance bonus equal to 55%, which was increased to 60% effective January 1, 2021, of Mr. Lucchino's annual base salary to be based on the attainment of predetermined performance objectives agreed upon between Mr. Lucchino and the Frequency board of directors. In the event of certain corporate transactions, including a spin-off of assets or a restructuring, Mr. Lucchino is entitled to the same relative ownership percentage in the resulting entity or entities as he had in Frequency immediately before the corporate transaction. If a "change in control" (as such term is defined in his employment agreement) occurs, all of Mr. Lucchino's time-based equity awards will accelerate and vest.

If Frequency terminates Mr. Lucchino's employment without "cause", he resigns for "good reason" or his employment terminates as a result of "disability" (as such terms are defined in the employment agreement) or death, subject to his execution and non-revocation of a release in favor of Frequency, he is entitled to receive the following termination payments: (i) twelve months' base salary, (ii) 100% of his target annual bonus and (iii) a pro-rated portion of his annual target bonus based on the portion of the year he was employed. The payments under clauses (i)-(iii) are payable in a single lump sum on the first payroll date following the 60th day after his termination of employment. Mr. Lucchino may also receive up to twelve months' continued coverage, at Frequency's expense, under COBRA, if he elects such continued coverage. In addition to the termination payments, all time-based equity awards granted to Mr. Lucchino will accelerate and vest as to the number of shares that would have vested had he remained employed for an additional six months following his date of termination. If such a qualifying termination occurs following a "change in control", subject to his execution and non-revocation of a release, Mr. Lucchino will be entitled to receive the same termination payments except (i) the severance payment will be equal to 18 months' base salary and (ii) all equity awards held by Mr. Lucchino will accelerate and vest (including performance vesting awards, which will vest at target level of achievement).

## [Table of Contents](#)

Mr. Lucchino is also party to restrictive covenant agreements, pursuant to which he has agreed to refrain from competing with Frequency or soliciting its customers or employees during his employment and for one year following termination of his employment and from disclosing Frequency's proprietary information during or at any time following his employment.

On November 3, 2023, Frequency entered into a separation agreement with Mr. Lucchino pursuant to which, in exchange for a general release of claims in favor of Frequency and its affiliates, he is entitled to receive the severance payments and benefits provided under his employment agreement.

### ***Dr. LeBel***

Frequency entered into an employment agreement with Dr. LeBel on September 19, 2019, pursuant to which Frequency employed Dr. LeBel as its Chief Development Officer. The employment agreement for Dr. LeBel provided for an annual salary of \$425,000, which was increased to \$480,344 effective January 1, 2022, with a target annual performance bonus equal to 40% of his base salary based on the attainment of predetermined individual and company performance objectives determined by the Frequency board of directors.

Under Dr. LeBel's employment agreement, if Frequency terminated Dr. LeBel's employment without "cause" or he resigned for "good reason" (as such terms were defined in the employment agreement), subject to his execution and non-revocation of a release in favor of Frequency, he was entitled to receive the following termination payments: (i) twelve months' continued base salary in equal installments following his termination, (ii) 100% of his target annual bonus paid in a lump sum within 14 days following his execution of the release and (iii) if he makes an election, up to twelve months continued coverage under COBRA, with Frequency paying the same portion of the COBRA premiums as it pays for active employees. If such a qualifying termination occurred within 12 months following a "change in control" (as defined in his employment agreement), Dr. LeBel's equity awards would accelerate and vest.

Dr. LeBel is party to restrictive covenant agreements, pursuant to which he agreed to refrain from competing with Frequency or soliciting its customers or employees during his employment and for one year following termination of his employment and from disclosing Frequency's proprietary information during or at any time following his employment.

On March 23, 2023, Frequency entered into a separation agreement with Dr. LeBel pursuant to which, in exchange for a general release of claims in favor of Frequency and its affiliates, he is entitled to receive the severance payments and benefits provided under his employment agreement.

### ***Dr. Loose***

Frequency entered into an amended and restated employment agreement with Dr. Loose on September 20, 2019, pursuant to which Frequency employed Dr. Loose as its Chief Scientific Officer. The employment agreement had an indefinite term.

The employment agreement for Dr. Loose provided for an annual base salary of \$425,000, which was increased to \$480,344 effective January 1, 2022, and a target annual performance bonus equal to 40% of his base salary, and is based on the attainment of predetermined individual and company performance objectives agreed upon between Dr. Loose and Frequency.

In the event Frequency terminates Dr. Loose's employment without "cause" or he resigns for "good reason" (as such terms are defined in the employment agreement), subject to his execution and non-revocation of a release in favor of Frequency, he is entitled to receive the following termination payments: (i) 12 months' continued base salary in equal installments following his termination, (ii) 100% of his target annual bonus paid in a lump sum within 14 days following his execution of the release and (iii) if he makes an election, up to twelve months continued coverage under COBRA, with Frequency paying the same portion of the COBRA premiums as it pays for active employees. If such a qualifying termination occurs within twelve months following a "change in control" (as defined in his employment agreement), Dr. Loose's equity awards will accelerate and vest.

## [Table of Contents](#)

Dr. Loose is party to restrictive covenant agreements, pursuant to which he has agreed to refrain from competing with Frequency or soliciting its customers or employees during his employment and for one year following termination of his employment and from disclosing Frequency's proprietary information during or at any time following his employment.

On July 28, 2023, Frequency entered into a separation agreement with Dr. Loose pursuant to which, in exchange for a general release of claims in favor of Frequency and its affiliates, he is entitled to receive (i) continued payment of his base salary for a period of 12 months from July 28, 2023, (ii) continued group health plan coverage under COBRA for up to 12 months, with Frequency paying the portion of the premium that it would pay for active and similarly situated employees, (iii) \$201,744.35, which is equal to 100% of his 2023 target bonus opportunity, and (iv) accelerated vesting of all of his unvested Frequency Options and Frequency Restricted Stock Units if the Merger closes and becomes effective on or before December 31, 2023.

### **Frequency Director Compensation**

Effective on the initial public offering of Frequency common stock in October 2019, Frequency adopted and its stockholders approved a compensation program for Frequency's non-employee directors under which each non-employee director receives the following amounts for their services on the Frequency board of directors (share amounts have been adjusted for the 1-for-50 reverse stock split effected November 3, 2023):

- an option to purchase 593 shares of Frequency common stock upon the director's initial election or appointment to the Frequency board of directors,
- if the director has served on the Frequency board of directors for at least six months as of the date of an annual meeting of stockholders, an option to purchase 296 shares of Frequency common stock on the date of the annual meeting,
- an annual director fee of \$35,000, and
- if the director serves on a committee of the Frequency board of directors or in the other capacities stated below, an additional annual fee as follows:
  - chairman of the board, vice chairman of the board, or lead independent director, \$30,000
  - chairman of the audit committee, \$15,000,
  - audit committee member other than the chairman, \$7,500,
  - chairman of the compensation committee, \$10,000,
  - compensation committee member other than the chairman, \$5,000,
  - chairman of the nominating and corporate governance committee, \$8,000, and
  - nominating and corporate governance committee member other than the chairman, \$4,000.

Frequency Options granted to Frequency's non-employee directors under the program have an exercise price equal to the fair market value of Frequency common stock on the date of grant and expire not later than ten years after the date of grant. The Frequency Options granted upon a director's initial election or appointment vest in 36 substantially equal monthly installments following the date of grant. The Frequency Options granted annually to directors vest in a single installment on the earlier of the day before the next annual meeting or the first anniversary of the date of grant. In addition, all unvested Frequency Options vest in full upon the occurrence of a change in control.

Director fees under the program are payable in arrears in four equal quarterly installments not later than the fifteenth day following the final day of each calendar quarter, provided that the amount of each payment is prorated for any portion of a quarter that a director is not serving as non-employee member of the Frequency board of directors.



## [Table of Contents](#)

Mr. Lucchino, Frequency's former President and Chief Executive Officer, serves on the board of directors but does not receive additional compensation for his service as a director. Refer to the discussion of named executive officer compensation elsewhere in this section for information regarding Mr. Lucchino's 2022 compensation.

### 2022 Director Compensation Table - Frequency

Share and exercise prices in the table and footnotes below have been adjusted to reflect the 1-for-50 reverse stock split effected November 3, 2023.

Name	Fees earned or paid in cash (\$)	Frequency Option (\$)(1)	All other compensation (\$)(2)	Total (\$)
Marc A. Cohen (3)	39,500	—	—	39,500
Robert S. Langer	44,000	29,322	60,000	133,322
Timothy J. Barberich	75,000	29,322	—	104,322
Michael Huang	58,921	29,322	—	88,243
Cynthia L. Feldmann	50,000	42,816	—	92,816

- (1) Amounts represent the full grant date fair value of Frequency Options issued during 2022, computed in accordance with ASC Topic 718, and the incremental fair value expensed in connection with the repricing of Frequency Options held by the Frequency directors that was approved in August 2022, computed in accordance with ASC Topic 718, rather than the amounts paid to or realized by the named individual. The assumptions used to calculate the grant date fair value of all Frequency Options made to the Frequency directors are set forth in the financial statements included in this proxy statement/prospectus.
- (2) Amounts represent consulting fees paid pursuant to a verbal consulting agreement with Frequency. The agreement entitles Dr. Langer to \$5,000 in consulting fees per month until it is terminated either by Frequency upon six months' notice or by Dr. Langer upon 30 days' notice.
- (3) Mr. Cohen's term on Frequency's Board of Directors ended in June 2022.

The table below shows the aggregate numbers of Frequency Options held as of December 31, 2022 by each non-employee director who served on the Frequency board of directors in 2022. None of Frequency's non-employee directors held unvested restricted shares as of December 31, 2022.

Name	Frequency Options outstanding at fiscal year end (exercisable)	Frequency Options outstanding at fiscal year end (unexercisable)
Marc A. Cohen	2,494	—
Robert S. Langer	7,444	296
Timothy J. Barberich	2,042	296
Michael Huang	593	296
Joel S. Marcus	593	296
Cynthia L. Feldmann	742	445

**2022 Equity Compensation Plan Information**

The following table provides information on Frequency equity compensation plans as of December 31, 2022. Share and exercise prices in the table and footnotes below have been adjusted to reflect the 1-for-50 reverse stock split effected November 3, 2023 (without giving effect to fractional shares and rounding down).

Plan Category	Number of Securities to be Issued Upon Exercise of Outstanding Frequency Options, Warrants and Rights	Weighted-Average Exercise Price of Outstanding Frequency Options, Warrants, and Rights	Number of Securities Available for Future Issuance Under the Plans (excludes securities Reflected in first column) (1)
Equity compensation plans approved by security holders(2)	176,874(3)	\$ 117.50(4)	44,274(5)
Equity compensation plans not approved by security holders	—	—	—
<b>Total</b>	<b>176,874</b>	<b>\$ 117.50</b>	<b>44,274</b>

- (1) Pursuant to the terms of the 2019 Plan, the number of shares of common stock available for issuance under the 2019 Plan automatically increases on each January 1 until and including January 1, 2029, by an amount equal to the lesser of: (a) 4% of the shares of common stock outstanding on the final day of the immediately preceding calendar year and (b) such smaller number of shares as is determined by the Frequency board of directors. Pursuant to the terms of the Frequency ESPP, the number of shares of common stock available for issuance under the Frequency ESPP automatically increases on each January 1 until and including January 1, 2029, by an amount equal to the lesser of: (a) 1% of the shares of common stock outstanding on the final day of the immediately preceding calendar year and (b) such smaller number of shares as is determined by the Frequency board of directors.
- (2) Consists of the 2014 Plan, the 2019 Plan, and the Frequency ESPP.
- (3) Includes 49,552 outstanding Frequency Options to purchase shares of common stock under the 2014 Plan, 65,289 outstanding Frequency Options to purchase common stock under the 2019 Plan and 62,033 Frequency Restricted Stock Units under the 2019 Plan, which includes 23,000 shares representing the maximum number of shares that may be issued subject to Frequency Performance stock Units under the 2019 Plan.
- (4) As of December 31, 2022, the weighted-average exercise price of outstanding Frequency Options under the 2014 Plan was \$125.50 and the weighted-average exercise price per share of outstanding Frequency Options under the 2019 Plan was \$111.00. Frequency Restricted Stock Units do not have an exercise price and were not included in calculating weighted average exercise prices.
- (5) As of December 31, 2022, a total of 44,274 shares of common stock were available for issuance, consisting of (a) 24,510 shares of common stock available for future issuance under the Frequency ESPP, none of which shares were subject to outstanding purchase rights under the Frequency ESPP, and (b) 19,764 shares of common stock available for future issuance under the 2019 Plan.

**LEGACY KORRO CERTAIN RELATIONSHIPS AND RELATED PARTY TRANSACTIONS****Private Placements of Securities****Series A Convertible Preferred Stock Financing**

In July 2021, Legacy Korro sold an aggregate of 20,424,108 shares of Series A Preferred Stock at a purchase price of \$2.24 per share for aggregate gross proceeds of \$45.8 million. The following table summarizes purchases of Legacy Korro's Series A Preferred Stock by related persons (share amounts have not been updated to reflect the exchange for our common stock in the Merger):

<b>Participant</b>	<b>Shares of Series A Preferred Stock</b>	<b>Total Cash Purchase Price (\$)</b>
Atlas Venture Fund XI, L.P. (1)	2,678,571	5,999,999
New Enterprise Associates 17, L.P. (2)	4,464,286	10,000,001
Platanus Investment LLC (3)	4,464,286	10,000,001
Qiming U.S. Healthcare Fund II, L.P. (4)	2,790,179	6,250,001
Citadel Multi-Strategy Equities Master Fund Ltd. (5)	2,232,143	5,000,000
Entities affiliated with Cormorant Asset Management LP (6)	2,232,143	5,000,000

- (1) Atlas Venture Fund XI, L.P., or Atlas, beneficially owns more than 5% of our outstanding capital stock. Jean-François Formela is a Partner at Atlas and a member of our board of directors.
- (2) New Enterprise Associates 17, L.P., or NEA, beneficially owns more than 5% of our outstanding capital stock. Ali Behbahani is a Partner at NEA and a member of our board of directors.
- (3) Platanus Investment LLC, or Platanus, beneficially owns more than 5% of our outstanding capital stock. Hannah Chang is a Partner at Platanus and was member of Legacy Korro's board of directors.
- (4) Qiming U.S. Healthcare Fund II, L.P., or Qiming, beneficially owns more than 5% of our outstanding capital stock and had a designee on Legacy Korro's board of directors.
- (5) Citadel Multi-Strategy Equities Master Fund Ltd. owns more than 5% of our outstanding capital stock.
- (6) Entities affiliated with Cormorant Asset Management LP own more than 5% of our outstanding capital stock.

## [Table of Contents](#)

### **Series B Convertible Preferred Stock Financing**

In November 2021, December 2021 and March 2023, Legacy Korro sold an aggregate of 43,085,531 shares of its Series B preferred stock at a purchase price of \$2.61 and \$2.78 per share for aggregate gross proceeds of \$116.0 million. The following table summarizes purchases of Legacy Korro's Series B preferred stock by related persons (share amounts have not been updated to reflect the exchange for our common stock in the Merger):

<b>Participant</b>	<b>Shares of Series B Preferred Stock</b>	<b>Total Purchase Price (\$)</b>
Atlas Venture Fund XI, L.P. (1)	3,064,273	8,250,001
New Enterprise Associates 17, L.P. (2)	2,971,416	8,000,000
Platanus Investment LLC (3)	1,764,279	4,750,002
Qiming U.S. Healthcare Fund II, L.P. (4)	1,114,281	3,000,000
Mutual Fund Series Trust, on behalf of Eventide Healthcare & Life Sciences Fund (5)	7,428,540	20,000,000
Invus Public Equities, L.P. (6)	5,571,405	15,000,000
Point72 Biotech Private Investments, LLC (7)	5,571,405	15,000,000
The Ram Aiyar Irrevocable Trust (8)	92,857	250,001
FMR LLC (9)	9,285,675	25,000,000
Citadel Multi-Strategy Equities Master Fund Ltd. (10)	835,710	2,249,998
Entities affiliated with Cormorant Asset Management LP (11)	835,710	2,249,998

- (1) Atlas beneficially owns more than 5% of our outstanding capital stock. Jean-François Formela is a Partner at Atlas and a member of our board of directors.
- (2) NEA beneficially owns more than 5% of our outstanding capital stock. Ali Behbahani is a Partner at NEA and a member of our board of directors.
- (3) Platanus beneficially owns more than 5% of our outstanding capital stock. Hannah Chang is a Partner at Platanus and was a member of Legacy Korro's board of directors.
- (4) Qiming beneficially owns more than 5% of our outstanding capital stock and had a designee on Legacy Korro's board of directors.
- (5) Mutual Fund Series Trust, on behalf of Eventide Healthcare & Life Sciences Fund, or Eventide, owns more than 5% of our outstanding capital stock.
- (6) Invus Public Equities, L.P. owns more than 5% of our outstanding capital stock.
- (7) Point72 Biotech Private Investments, LLC owns more than 5% of our outstanding capital stock and had a designee on Legacy Korro's board of directors.
- (8) Ram Aiyar is the grantor of The Ram Aiyar Irrevocable Trust and an officer and member of our board of directors.
- (9) FMR LLC owns more than 5% of our outstanding capital stock.
- (10) Citadel Multi-Strategy Equities Master Fund Ltd. owns more than 5% of our outstanding capital stock.
- (11) Entities affiliated with Cormorant Asset Management LP own more than 5% of our outstanding capital stock.

### **Pre-Closing Financing**

Legacy Korro entered into a Subscription Agreement in July 2023 with certain investors to consummate the Pre-Closing Financing. Pursuant to the Subscription Agreement, the investors agreed to purchase shares of Legacy Korro common stock, at a price of \$2.78 per share, for aggregate gross proceeds of \$117.3 million. Seven of the investors or their affiliates are beneficial holders of more than 5% of our capital stock, and the table below

## Table of Contents

sets forth the number of shares of our common stock purchased by such holders at the closing of the Pre-Closing Financing (share amounts have not been updated to reflect the exchange for our common stock in the Merger):

<b>Participant</b>	<b>Shares of Our Common Stock</b>	<b>Total Purchase Price (\$)</b>
Atlas Venture Fund XI, L.P. (1)	177,217	9,999,999
New Enterprise Associates 17, L.P. (2)	177,217	9,999,999
FMR LLC (3)	265,826	14,999,999
Citadel CEMF Investments Ltd.(4)	265,826	14,999,999
Platanus Investment LLC (5)	8,860	500,000
Qiming U.S. Healthcare Fund II, L.P. (6)	35,443	1,999,999
Mutual Fund Series Trust, on behalf of Eventide Healthcare & Life Sciences Fund (7)	177,217	9,999,999
Invus Public Equities, L.P (8)	141,774	8,000,000
Point72 Associates, LLC (9)	265,826	14,999,999
Entities affiliated with Cormorant Asset Management LP (10)	265,826	14,999,999

- (1) Atlas beneficially owns more than 5% of our outstanding capital stock. Jean-François Formela is a Partner at Atlas and a member of our board of directors.
- (2) NEA beneficially owns more than 5% of our outstanding capital stock. Ali Behbahani is a Partner at NEA and a member of our board of directors.
- (3) FMR LLC owns more than 5% of our outstanding capital stock.
- (4) Citadel owns more than 5% of our outstanding capital stock.
- (5) Platanus beneficially owns more than 5% of our outstanding capital stock. Hannah Chang is a Partner at Platanus and was a member of Legacy Korro's board of directors.
- (6) Qiming beneficially owns more than 5% of our outstanding capital stock and had a designee on Legacy Korro's board of directors.
- (7) Eventide owns more than 5% of our outstanding capital stock.
- (8) Invus Public Equities, L.P. owns more than 5% of our outstanding capital stock.
- (9) Point72 Biotech Private Investments, LLC, an affiliate of Point72 Associates, LLC, owns more than 5% of Korro Bio's outstanding capital stock and had a designee on Legacy Korro's board of directors.
- (10) Entities affiliated with Cormorant Asset Management LP own more than 5% of our outstanding capital stock.

### **Other Agreements with Our Stockholders**

In connection with Legacy Korro's Series B convertible preferred stock financing, we entered into investors' rights, voting and right of first refusal and co-sale agreements containing registration rights, information rights, voting rights and rights of first refusal, among other things, with certain holders of our preferred stock and certain holders of our common stock. These stockholder agreements terminated upon the closing of the Merger, except for the registration rights granted under Legacy Korro's investors' rights agreement.

### **Indemnification Agreements**

We have entered into agreements to indemnify our directors and executive officers. These agreements will, among other things, require us to indemnify these individuals for certain expenses (including attorneys' fees), judgments, fines and settlement amounts reasonably incurred by such person in any action or proceeding, including any action by or in our right, on account of any services undertaken by such person on our behalf or that person's status as a member of our board of directors to the maximum extent allowed under Delaware law.

**Policies for Approval of Related Party Transactions**

Our board of directors reviews and approves transactions with our directors, officers and holders of 5% or more of our voting securities and their affiliates, each a related party. Prior to this offering, the material facts as to the related party's relationship or interest in the transaction are disclosed to our board of directors prior to their consideration of such transaction, and the transaction is not considered approved by our board of directors unless a majority of the directors who are not interested in the transaction approve the transaction. Further, when stockholders are entitled to vote on a transaction with a related party, the material facts of the related party's relationship or interest in the transaction are disclosed to our stockholders, who must approve the transaction in good faith.

## CERTAIN RELATED PERSON TRANSACTIONS OF FREQUENCY

### **Policies and Procedures Regarding Transactions with Related Persons**

Frequency's board of directors recognizes that transactions with related persons present a heightened risk of conflicts of interests and/or improper valuation (or the perception thereof). Frequency's board of directors adopted a written policy on transactions with related persons that is in conformity with the requirements for issuers having publicly held common stock listed on the Nasdaq. Frequency's related person transaction policy required that the audit committee approve or ratify related person transactions required to be disclosed pursuant to Item 404(a) of Regulation S-K (which are transactions in which Frequency was or is to be a participant and the amount involved exceeds the lesser of (i) \$120,000 or (2) 1% of the average of Frequency's total assets at fiscal year-end for the last two completed fiscal years, and in which any "related person" as defined under Item 404(a) of Regulation S-K had or will have a direct or indirect material interest). It was Frequency's policy that directors interested in a related person transaction will recuse themselves from any vote on a related person transaction in which they have an interest. Each of the transactions described below entered into following the adoption of Frequency's related person transaction policy was approved in accordance with such policy.

### **Certain Related Person Transactions**

#### ***Leases***

In December 2016, Frequency entered into a lease for laboratory, office and storage facilities in Woburn, Massachusetts with ARE-MA Region No. 20, LLC, an entity affiliated with Alexandria. Joel S. Marcus, a former director of Frequency's board of directors, is executive chairman of Alexandria. Under the lease, which was amended in November 2019, January 2020 and December 2020, and terminated in May 2021, Frequency paid monthly base rent and operating expenses. The total rent paid under this lease was \$230 thousand and \$0 for the years ended December 31, 2021 and 2022, respectively. There was also an early termination payment of \$100 thousand in 2021.

#### ***Massachusetts Institute of Technology License Agreement***

In December 2016, Frequency entered into the MIT License, with MIT. The patents in-licensed by Frequency from MIT pursuant to the MIT License claim inventions created by, among others, Robert S. Langer, one of the Frequency's directors. Pursuant to MIT policy, inventors of intellectual property invented at MIT, including the inventors of patents licensed to Frequency under the MIT License, are entitled to a portion of the net royalty income derived by MIT from such inventions.

In July 2019, Frequency entered into the Astellas Agreement, under which Frequency granted Astellas an exclusive, royalty-bearing, sub-licensable, nontransferable license to certain patent rights to research, develop, manufacture, have manufactured, use, seek and secure regulatory approval for, commercialize, offer for sale, sell, have sold and import, and otherwise exploit licensed products containing both a GSK-3 inhibitor and an HDAC inhibitor, including the product candidate FX-322, outside of the United States. Pursuant to the Astellas Agreement, Frequency received an \$80 million upfront payment in July 2019, or the Astellas Royalty Payment.

Pursuant to the MIT License Agreement, Frequency is obligated to pay royalties and a portion of sublicensing income to MIT. Frequency was required to pay MIT a royalty of \$16 million on the \$80 million Astellas Royalty Payment. Dr. Langer is entitled to receive a portion of the amounts Frequency pays to MIT under the MIT License, including the Astellas Royalty Payment and future milestone payments or royalties, if any, that Frequency may receive pursuant to the Astellas Agreement. Accordingly, Dr. Langer received \$11 thousand and \$6 thousand from MIT under the MIT Policy during the year ended December 31, 2021 and 2022, respectively. The MIT License Agreement has since been terminated.

### ***Registration Rights***

Frequency entered into a second amended and restated investors' rights agreement, or the Investors' Rights Agreement, in July 2019 with each holder of Frequency preferred stock, which included certain holders of more than 5% of Frequency common stock at the time and certain of Frequency's directors and executive officers. The Investors' Rights Agreement grants the parties thereto certain registration rights in respect of the "registrable securities" held by them, which securities include (1) the shares of Frequency common stock issuable or issued upon the conversion of shares of Frequency convertible preferred stock, (2) any shares of Frequency common stock, or any common stock issued or issuable upon conversion and/or exercise of any of Frequency's securities acquired by the parties after the date of the Investors' Rights Agreement, and (3) any shares of Frequency common stock issued as a dividend or other distribution with respect to, or in exchange for, or in replacement of, the shares described in the foregoing clauses (1) and (2). The registration of shares of Frequency common stock pursuant to the exercise of these registration rights would enable the holders thereof to sell such shares under the Securities Act when the applicable registration statement is declared effective. Under the Investors' Rights Agreement, Frequency will pay all expenses relating to such registrations, including the reasonable fees of one special counsel for the participating stockholders, and the stockholders will pay all underwriting discounts and commissions relating to the sale of their shares. The Investors' Rights Agreement also includes customary indemnification and procedural terms.

#### *Form S-1 registration rights*

If at any time the holders of at least 40% of the registrable securities request in writing that Frequency effects a registration with respect to at least 25% of such registrable securities then outstanding (or a lesser percent if the anticipated aggregate offering price, net of selling expenses, would exceed \$10.0 million), Frequency is obligated to register their shares. Frequency is obligated to effect at most two registrations in response to these demand registration rights. If the holders requesting registration intend to distribute their shares by means of an underwriting, the managing underwriter of such offering will have the right to limit the numbers of shares to be underwritten for reasons related to the marketing of the shares.

#### *Piggyback registration rights*

If at any time Frequency proposes to register any shares of Frequency common stock under the Securities Act, subject to certain exceptions, the holders of registrable securities will be entitled to notice of the registration and to include their registrable securities in the registration. If Frequency's proposed registration involves an underwriting, the managing underwriter of such offering will have the right to limit the number of shares to be underwritten for reasons related to the marketing of the shares.

#### *Form S-3 registration rights*

If, at any time after Frequency becomes entitled under the Securities Act to register Frequency's shares on a registration statement on Form S-3, the holders of the registrable securities request in writing that Frequency effects a registration with respect to registrable securities at an aggregate price to the public in the offering of at least \$1,000,000, net of expenses borne by the holders, Frequency is obligated to effect such registration. Frequency is not obligated to effect more than one S-3 registration in any 12 month period.

#### *Expenses and indemnification*

Ordinarily, other than underwriting discounts and commissions, Frequency will be required to pay all expenses incurred by Frequency related to any registration effected pursuant to the exercise of these registration rights. These expenses may include all registration, filing and qualification fees, printing and accounting fees, fees and disbursements of Frequency's counsel, and reasonable fees and disbursements of a counsel for the selling securityholders. Additionally, Frequency has agreed to indemnify selling stockholders for damages, and



---

## [Table of Contents](#)

any legal or other expenses reasonably incurred, arising from or based upon any untrue statement or alleged untrue statement of a material fact contained in any registration statement, an omission or alleged omission to state a material fact required to be stated in any registration statement or necessary to make the statements therein not misleading, or any violation or alleged violation by the indemnifying party of securities laws, subject to certain exceptions.

### *Termination of registration rights*

The registration rights expire on the earlier of (1) the date that is five years after the closing of Frequency's IPO and (2) with respect to each stockholder, at such time as such stockholder can sell all of its shares pursuant to Rule 144 of the Securities Act or another similar exemption under the Securities Act during any three month period without registration.

### *Indemnification agreements*

Frequency enters into indemnification agreements with each of its directors and executive officers. These agreements, among other things, require Frequency to indemnify each director and executive officer (and in certain cases their related venture capital funds) to the fullest extent permitted by Delaware law, including indemnification of expenses such as attorneys' fees, judgments, fines, and settlement amounts incurred by the director or executive officer in any action or proceeding, including any action or proceeding by or in right of Frequency, arising out of the person's services as a director or executive officer.

## PRINCIPAL SECURITYHOLDERS

The following table sets forth certain information regarding beneficial ownership of our common stock as of November 24, 2023 and reflects the 1-for-50 reverse stock split of our common stock effected November 3, 2023.

Beneficial ownership is determined in accordance with the rules of the SEC and generally includes voting or investment power with respect to securities. Under those rules, beneficial ownership includes any shares as to which the individual or entity has sole or shared voting power or investment power with respect to the securities as well as any shares of common stock that the individual or entity has the right to acquire within 60 days of November 24, 2023 the exercise of stock options or other rights. These shares are deemed to be outstanding and beneficially owned by the person holding those options for the purpose of computing the percentage ownership of that person, but they are not treated as outstanding for the purpose of computing the percentage ownership of any other person. Except as noted by footnote, and subject to community property laws where applicable, we believe, based on the information provided to them, that the persons and entities named in the table below have sole voting and investment power with respect to all common stock shown as beneficially owned by them.

The table lists applicable percentage ownership based on 8,011,438 shares of common stock outstanding as of November 24, 2023. The number of shares beneficially owned includes shares of common stock that each person has the right to acquire within 60 days, including upon the exercise of stock options and the vesting of restricted stock units. These stock options and restricted stock units shall be deemed to be outstanding for the purpose of computing the percentage of outstanding shares of our common stock expected to be owned by such person but shall not be deemed to be outstanding for the purpose of computing the percentage of outstanding shares of the combined organization's common stock expected to be owned by any other person.

Name of Beneficial Owner	Beneficial Ownership After the Merger	
	Number	Percent
<b>5% or Greater Stockholders:</b>		
Entities affiliated with Atlas Venture(1)	1,119,292	14.0%
Entities affiliated with New Enterprise Associates(2)	1,074,273	13.4%
FMR LLC(3)	727,205	9.1%
Mutual Fund Series Trust, on behalf of Eventide Healthcare & Life Sciences Fund(4)	546,325	6.8%
Entities affiliated with Point72 Asset Management(5)	542,657	6.8%
Platanus Investment LLC(6)	540,165	6.7%
Entities affiliated with Citadel(7)	546,252	6.8%
Entities affiliated with Cormorant Asset Management LP(8)	679,170	8.5%
Invus Public Equities, L.P.(9)	418,605	5.2%
<b>Directors and Named Executive Officers:</b>		
Vineet Agarwal(10)	41,440	0.5%
Ram Aiyar(11)	144,145	1.8%
Ali Behbahani	—	*
Nessan Bermingham(12)	110,927	1.4%
Jean-François Formela	—	*
David L. Lucchino(13)	58,026	0.7%
Rachel Meyers	—	*
Timothy R. Pearson.	—	*
All executive officers and directors as a group (11 persons)(14)	373,107	4.5%

\* Represents beneficial ownership of less than 1%.

## Table of Contents

- (1) Consists of (i) 942,075 shares of our common stock held by Atlas Venture Fund XI, L.P., or AVF XI, and (ii) 177,217 shares of our common stock held by Atlas Venture Opportunity Fund II, L.P., or AVO II. Atlas Venture Associates XI, L.P. is the general partner of AVF XI and Atlas Venture Associates XI, LLC is the general partner of Atlas Venture Associates XI, L.P. The members of Atlas Venture Associates XI, LLC collectively make investment decisions on behalf of Atlas Venture Fund XI, LLC. Jean-Francois Formela is a member of Atlas Venture Associates XI, LLC and a member of Korro Bio's board of directors. Each of AVF XI, Atlas Venture Associates XI, L.P., and Atlas Venture Associates XI, LLC may be deemed to beneficially own the shares held by AVF XI. Mr. Formela expressly disclaim beneficial ownership of the shares owned by AVF XI, except to the extent of his pecuniary interest therein, if any. Atlas Venture Associates Opportunity II, L.P. is the general partner of AVO II, and Atlas Venture Associates Opportunity II, LLC is the general partner of Atlas Venture Associates Opportunity II, L.P. The members of Atlas Venture Associates Opportunity II, LLC collectively make investment decisions on behalf of Atlas Venture Associates Opportunity II, LLC. Mr. Formela is a member of Atlas Venture Associates Opportunity II, LLC. Each of AVO II, Atlas Venture Associates Opportunity II, L.P., and Atlas Venture Associates Opportunity II, LLC may be deemed to beneficially own the shares held by AVO II. Mr. Formela expressly disclaim beneficial ownership of the shares owned by AVO II, except to the extent of his pecuniary interest therein, if any. The mailing address of Atlas is 300 Technology Square, 8th Floor, Cambridge, MA 02139.
- (2) Consists of 1,072,936 shares of our common stock held by New Enterprise 17 Associates 17, L.P., or New Enterprise 17, and 1,337 shares of our common stock held by NEA Ventures 2019, L.P. The general partner of New Enterprise 17 is NEA 17 LP, and the general partner of NEA 17 LP is NEA 17 LLC. The managers of NEA 17 LLC are Forest Baskett, Ali Behbahani, M.D., Carmen Chang, Anthony A. Florence, Jr., Mohamad H. Makhzoumi, Edward T. Mathers, Scott D. Sandell, Paul Walker and Rick Yang. Dr. Behbahani is a member of NEA 17 LLC and a member of Korro Bio's board of directors. Each of NEA 17 LP and NEA 17 LLC may be deemed to beneficially own the shares held by New Enterprise 17. The address of the principal business office of New Enterprise 17, NEA 17 LP, NEA 17 LLC and Mr. Sandell is New Enterprise Associates, 1954 Greenspring Drive, Suite 600, Timonium, MD 21093. The address of the principal business office of Dr. Behbahani and Mr. Mathers is New Enterprise Associates, 5425 Wisconsin Avenue, Suite 800, Chevy Chase, MD 20815. The address of the principal business office of Mr. Baskett, Ms. Chang, Mr. Makhzoumi, Mr. Walker and Mr. Yang is New Enterprise Associates, 2855 Sand Hill Road, Menlo Park, California 94025. The address of the principal business office of Mr. Florence is New Enterprise Associates, 104 5th Avenue, 19th Floor, New York, NY 10001.
- (3) Consists of (i) 180,884 shares of our common stock held by Fidelity Select Portfolios: Biotechnology Portfolio, (ii) 40,253 shares of our common stock held by Fidelity Mt. Vernon Street Trust: Fidelity Series Growth Company Fund, (iii) 197,128 shares of our common stock held by Fidelity Mt. Vernon Street Trust: Fidelity Growth Company Fund, (iv) 250,912 shares of our common stock held by Fidelity Growth Company Commingled Pool and (v) 58,028 shares of our common stock held by Fidelity Mt. Vernon Street Trust: Fidelity Growth Company K6 Fund. All of the foregoing securities are beneficially owned, or may be deemed to be beneficially owned, by FMR LLC, certain of its subsidiaries and affiliates, and other companies. Abigail P. Johnson is a Director, the Chairman and the Chief Executive Officer of FMR LLC. Members of the Johnson family, including Abigail P. Johnson, are the predominant owners, directly or through trusts, of Series B voting common shares of FMR LLC, representing 49% of the voting power of FMR LLC. The Johnson family group and all other Series B shareholders have entered into a shareholders' voting agreement under which all Series B voting common shares will be voted in accordance with the majority vote of Series B voting common shares. Accordingly, through their ownership of voting common shares and the execution of the shareholders' voting agreement, members of the Johnson family may be deemed, under the Investment Company Act of 1940, to form a controlling group with respect to FMR LLC. The address of FMR LLC is 245 Summer Street, Boston, MA 02210.
- (4) Consists of 546,325 shares of our common stock held by Mutual Fund Series Trust, on behalf of Eventide. Eventide Asset Management, LLC is the investment advisor to Eventide. Robin C. John is the Chief Executive Officer of Eventide Asset Management, LLC and Finny Kuruvilla, M.D., Ph.D. is a Co-Chief Investment Officer and Managing Director of Eventide Asset Management, LLC. In their corporate

## Table of Contents

capacity for Eventide Asset Management, LLC, Mr. John and Dr. Kuruvilla hold voting and/or dispositive power over the shares held by Eventide. Mr. John and Dr. Kuruvilla disclaim beneficial ownership of such shares except to the extent of their pecuniary interest therein. The address for Eventide, Mr. John and Dr. Kuruvilla is U.S. Bank Trust Services, Physical Processing, MK-WI S302, 1555 N RiverCenter Drive, Suite 302, Milwaukee, WI 53212.

- (5) Consists of 276,831 shares of our common stock held by Point72 Biotech Private Investments, LLC, or Point72 Biotech, and 265,826 shares of our common stock held by Point72 Associates, LLC, or Point72 Associates. Differentiated Ventures Investments, LLC, or Differentiated Ventures, is the managing member of Point72 Biotech and may be deemed to share beneficial ownership of the shares held by Point72 Biotech. 72 Investment Holdings, LLC, or 72 Investment Holdings, is the sole member of Differentiated Ventures and may be deemed to share beneficial ownership of the shares of which Differentiated Ventures may be deemed to share beneficial ownership. Steven A. Cohen, or Mr. Cohen, is the sole member of 72 Investment Holdings and may be deemed to share beneficial ownership of the shares of which 72 Investment Holdings may be deemed to share beneficial ownership. Each of Differentiated Ventures, 72 Investment Holdings and Mr. Cohen disclaims beneficial ownership of the shares held by Point72 Biotech. Pursuant to an investment management agreement, Point72 Asset Management, L.P., or Point72 Asset Management, maintains investment and voting power with respect to the shares held by Point72 Associates and therefore may be deemed to share beneficial ownership of such shares. Point72 Capital Advisors, Inc., or Point72 Capital Advisors, is the general partner of Point72 Asset Management and may be deemed to share beneficial ownership of the shares of which Point72 Asset Management may be deemed to share beneficial ownership. Mr. Cohen is the sole member of Point72 Capital Advisors and may be deemed to share beneficial ownership of the shares of which Point72 Capital Advisors may be deemed to share beneficial ownership. Each of Point72 Asset Management, Point72 Capital Advisors and Mr. Cohen disclaims beneficial ownership of the shares held by Point72 Associates. The address for Point72 Biotech and Point72 Associates is c/o Point72, L.P., 72 Cummings Point Road, Stamford, CT 06902.
- (6) Consists of 540,165 shares of our common stock held by Platanus Investment LLC, or Platanus. Xinyi Cai is the director of Platanus and holds voting and dispositive power over the securities owned by Platanus. The address for Platanus is 3 E 3rd Ave, Suite 200, San Mateo, CA 94401.
- (7) Based solely on Schedule 13G jointly filed by Citadel Advisors LLC, or Citadel Advisors, Citadel Advisors Holdings LP, or CAH, Citadel GP LLC, or CGP, Citadel Securities LLC, or Citadel Securities, Citadel Securities Group LP, or CALC4, Citadel Securities GP LLC, or CSGP, and Mr. Kenneth Griffin, or collectively with Citadel Advisors, CAH, CGP, Citadel Securities, CALC4 and CSGP, the Citadel Reporting Persons, with respect to shares owned by Citadel Multi-Strategy Equities Master Fund Ltd., a Cayman Islands company, or CM, Citadel CEMF Investments Ltd., a Cayman Islands limited company, or CCIL, Citadel Securities and CRBU Holdings LLC, a Delaware limited liability company, or CRBH. Citadel Advisors is the portfolio manager for CM and CCIL. CAH is the sole member of Citadel Advisors. CGP is the general partner of CAH. CALC4 is the non-member manager of Citadel Securities and CRBH. CSGP is the general partner of CALC4. Mr. Griffin is the President and Chief Executive Officer of CGP, and owns a controlling interest in CGP and CSGP. The address of each of the Citadel Reporting Persons is Southeast Financial Center, 200 S. Biscayne Blvd., Suite 3300, Miami, FL 33131.
- (8) Consists of (i) 462,052 shares of our common stock held by Cormorant Global Healthcare Master Fund, LP, or Master Fund, and (ii) 217,118 shares of our common stock held by Cormorant Private Healthcare Fund II, LP, or Fund II. Cormorant Global Healthcare GP, LLC, or Global GP, and Cormorant Private Healthcare GP II, LLC, or Private GP II, serve as the general partner of Master Fund and Fund II, respectively. Cormorant Asset Management, LP serves as the investment manager to Master Fund and Fund II. Bihua Chen serves as the managing member of Global GP, Private GP II and Cormorant Asset Management, LP. Each of Global GP, Private GP II, Cormorant Asset Management, LP and Ms. Chen disclaims beneficial ownership of such shares except to the extent of any pecuniary interest therein. The principal address for the Cormorant Asset Management LP entities is 200 Clarendon Street 52nd Floor, Boston, Massachusetts 02116.
- (9) Consists of 418,605 shares of our common stock held by Invus Public Equities L.P., or Invus. Invus Public Equities Advisors, LLC, or Invus PE Advisors, controls Invus, as its general partner and accordingly, may be deemed to beneficially own the shares held by Invus. The Geneva branch of Artal International

## Table of Contents

S.C.A., or Artal International, controls Invus PE Advisors, as its managing member and accordingly, may be deemed to beneficially own the shares held by Invus. Artal International Management S.A., or Artal International Management, as the managing partner of Artal International, controls Artal International and accordingly, may be deemed to beneficially own the shares that Artal International may be deemed to beneficially own. Artal Group S.A., or Artal Group, as the sole stockholder of Artal International Management, controls Artal International Management and accordingly, may be deemed to beneficially own the shares that Artal International Management may be deemed to beneficially own. Westend S.A., or Westend, as the parent company of Artal Group, controls Artal Group and accordingly, may be deemed to beneficially own the shares that Artal Group may be deemed to beneficially own. Stichting Administratiekantoor Westend, or the Stichting, as majority shareholder of Westend, controls Westend and accordingly, may be deemed to beneficially own the shares that Westend may be deemed to beneficially own. Mr. Amaury Wittouck, as the sole member of the board of the Stichting, controls the Stichting and accordingly, may be deemed to beneficially own the shares that the Stichting may be deemed to beneficially own. The address for Invus and Invus PE Advisors is 750 Lexington Avenue, 30th Floor, New York, NY 10022. The address for Artal International, Artal International Management, Artal Group, Westend and Mr. Wittouck is Valley Park, 44, Rue de la Vallée, L-2661, Luxembourg. The address for the Stichting is Claude Debussylaan, 46, 1082 MD Amsterdam, The Netherlands. The address for Invus is 750 Lexington Avenue, New York, NY 10022.

- (10) Consists of 41,440 shares of our common stock underlying options that are exercisable or will become exercisable within 60 days of November 24, 2023.
- (11) Consists of (i) 4,613 shares of our common stock held by The Ram Aiyar Irrevocable Trust, or the Trust, and (ii) 139,532 shares of our common stock underlying options that are exercisable or will become exercisable within 60 days of November 24, 2023. The address of the Trust is c/o Steven M. Burke, P.O. Box 326, Manchester, NH 03105.
- (12) Consists of (i) 35,114 shares of our common stock and (ii) 75,813 shares of our common stock underlying options that are exercisable or will become exercisable within 60 days of November 24, 2023.
- (13) Consists of (i) 22,150 shares of our common stock and (ii) 35,876 shares of our common stock underlying options that are exercisable or will become exercisable within 60 days of November 24, 2023.
- (14) Consists of (i) 61,877 shares of our common stock and (ii) 311,230 shares of our common stock underlying options that are exercisable or will become exercisable within 60 days of November 24, 2023.

## SELLING SECURITYHOLDERS

The selling stockholders acquired shares of common stock from us in the Merger upon exchange of shares of Legacy Korro acquired from Legacy Korro immediately prior to the Merger pursuant to an exemption from registration under Section 4(a)(2) of the Securities Act. Under the registration rights agreement that we assumed in the Merger, we agreed to file a registration statement with the SEC for the purposes of registering for resale from time to time the shares of common stock.

Except for the ownership of shares of common stock received in the Merger, the selling stockholders have not had any material relationship with our company within the past three years.

The table below lists the selling stockholders and other information regarding their ownership of the shares of common stock offered hereby. The second column lists the number of shares of common stock beneficially owned by the selling stockholders as of November 3, 2023 immediately following consummation of the Merger. The selling stockholders may have sold or transferred some or all of the common stock indicated below and may in the future sell or transfer some or all of the common stock indicated below in transactions exempt from the registration requirements of the Securities Act rather than under this prospectus. The third column lists the shares of common stock being offered by this prospectus by the selling stockholders. The fourth column assumes the sale of all of the shares of common stock offered by the selling stockholders pursuant to this prospectus. The selling stockholders may sell all, some or none of their shares of common stock in this offering. See “*Plan of Distribution.*”

Except as indicated by the footnotes below, we believe, based on the information furnished to us, that the selling stockholders have sole voting and investment power with respect to all shares of common stock that they own, subject to applicable community property laws. Beneficial ownership for the purposes of the table below is determined in accordance with the rules and regulations of the SEC. These rules generally provide that a person is the beneficial owner of securities if such person has or shares the power to vote or direct the voting thereof, or to dispose or direct the disposition thereof or has the right to acquire such powers within 60 days. Percentage of beneficial ownership is based on 8,001,283 shares of common stock outstanding as of November 3, 2023 immediately following consummation of the Merger.

Name and Address of Selling Stockholders	Number of Shares Beneficially Owned Before the Offering	Number of Shares that May Be Offered Hereby(13)	Shares Beneficially Owned After the Offering	
			Number	Percentage
Fidelity Select Portfolios: Biotechnology Portfolio(1)	180,884	88,608	92,276	1.2%
Fidelity Mt. Vernon Street Trust: Fidelity Series Growth Company Fund(1)	40,253	16,996	23,257	*
Fidelity Mt. Vernon Street Trust: Fidelity Growth Company Fund(1)	197,128	58,740	138,388	1.7%
Fidelity Growth Company Commingled Pool(1)	250,912	79,990	170,922	2.1%
Fidelity Mt. Vernon Street Trust: Fidelity Growth Company K6 Fund(1)	58,028	21,489	36,539	*
Mutual Fund Series Trust, on behalf of Eventide Healthcare & Life Sciences Fund(2)	546,325	177,217	369,108	4.6%
Entities affiliated with Point72 Asset Management(3)	542,657	265,826	276,831	3.5%
Citadel CEMF Investments Ltd.(4)	265,826	265,826	—	—
Entities Affiliated with Cormorant(5)	529,170	265,826	263,344	3.3%
Invus Public Equities, L.P.(6)	418,605	141,774	276,831	3.5%
Qiming U.S. Healthcare Fund II, L.P.(7)	368,085	35,443	332,642	4.2%
Entities Affiliated with Monashee Investment Management(8)	90,805	35,441	55,364	*

## Table of Contents

Name and Address of Selling Stockholders	Number of Shares Beneficially Owned Before the Offering	Number of Shares that May Be Offered Hereby(13)	Shares Beneficially Owned After the Offering	
			Number	Percentage
Verition Multi-Strategy Master Fund Ltd.(9)	197,140	141,774	55,366	*
Entities Affiliated with Sixty Degree Capital(10)	31,561	17,721	13,840	*
MP Healthcare Venture Management, Inc.(11)	197,666	66,456	131,210	1.6%
ExodusPoint Partners Master Fund, L.P.(12)	35,443	35,443	—	—

\* Less than 1%

- (1) These accounts are managed by direct or indirect subsidiaries of FMR LLC. The shares listed above are beneficially owned, or may be deemed to be beneficially owned, by FMR LLC, certain of its subsidiaries and affiliates, and other companies. Abigail P. Johnson is a Director, the Chairman and the Chief Executive Officer of FMR LLC. Members of the Johnson family, including Abigail P. Johnson, are the predominant owners, directly or through trusts, of Series B voting common shares of FMR LLC, representing 49% of the voting power of FMR LLC. The Johnson family group and all other Series B shareholders have entered into a shareholders' voting agreement under which all Series B voting common shares will be voted in accordance with the majority vote of Series B voting common shares. Accordingly, through their ownership of voting common shares and the execution of the shareholders' voting agreement, members of the Johnson family may be deemed, under the Investment Company Act of 1940, to form a controlling group with respect to FMR LLC. The address of FMR LLC is 245 Summer Street, Boston, MA 02210.
- (2) Shares listed under "Number of Shares Beneficially Owned Before Offering" consists of 546,325 shares held by Mutual Fund Series Trust, on behalf of Eventide Healthcare & Life Sciences Fund, or Eventide. Eventide Asset Management, LLC is the investment advisor to Eventide. Robin C. John is the Chief Executive Officer of Eventide Asset Management, LLC and Finny Kuruvilla, M.D., Ph.D. is a Co-Chief Investment Officer and Managing Director of Eventide Asset Management, LLC. In their corporate capacity for Eventide Asset Management, LLC, Mr. John and Dr. Kuruvilla hold voting and/or dispositive power over the shares held by Eventide. Mr. John and Dr. Kuruvilla disclaim beneficial ownership of such shares except to the extent of their pecuniary interest therein. The address for Eventide, Mr. John and Dr. Kuruvilla is U.S. Bank Trust Services, Physical Processing, MK-WI S302, 1555 N RiverCenter Drive, Suite 302, Milwaukee, WI 53212.
- (3) Shares listed under "Number of Shares Beneficially Owned Before Offering" consists of (i) 276,831 shares held by Point72 Biotech Private Investments, LLC, or Point72 Biotech, and (ii) 265,826 shares held by Point72 Associates, LLC, or Point72 Associates. Differentiated Ventures Investments, LLC, or Differentiated Ventures, is the managing member of Point72 Biotech and may be deemed to share beneficial ownership of the shares held by Point72 Biotech. 72 Investment Holdings, LLC, or 72 Investment Holdings, is the sole member of Differentiated Ventures and may be deemed to share beneficial ownership of the shares of which Differentiated Ventures may be deemed to share beneficial ownership. Steven A. Cohen, or Mr. Cohen, is the sole member of 72 Investment Holdings and may be deemed to share beneficial ownership of the shares of which 72 Investment Holdings may be deemed to share beneficial ownership. Each of Differentiated Ventures, 72 Investment Holdings and Mr. Cohen disclaims beneficial ownership of the shares held by Point72 Biotech. Pursuant to an investment management agreement, Point72 Asset Management, L.P., or Point72 Asset Management, maintains investment and voting power with respect to the shares held by Point72 Associates and therefore may be deemed to share beneficial ownership of such shares. Point72 Capital Advisors, Inc., or Point72 Capital Advisors, is the general partner of Point72 Asset Management and may be deemed to share beneficial ownership of the shares of which Point72 Asset Management may be deemed to share beneficial ownership. Mr. Cohen is the sole member of Point72 Capital Advisors and may be deemed to share beneficial ownership of the shares of which Point72 Capital Advisors may be deemed to share beneficial ownership. Each of Point72 Asset Management, Point72 Capital Advisors and Mr. Cohen disclaims beneficial ownership of the shares

## Table of Contents

held by Point72 Associates. The address for Point72 Biotech and Point72 Associates is c/o Point72, L.P., 72 Cummings Point Road, Stamford, CT 06902.

- (4) Shares listed under “Number of Shares Beneficially Owned Before Offering” consists of 265,826 shares held by Citadel CEMF Investments Ltd. Citadel Advisors LLC is the portfolio manager of Citadel CEMF Investments Ltd. Citadel Advisors Holdings LP, or CAH, is the sole member of Citadel Advisors LLC. Citadel GP LLC, or CGP, is the general partner of CAH. Kenneth Griffin owns a controlling interest in CGP. Mr. Griffin, as the owner of a controlling interest in CGP, may be deemed to have shared power to vote or direct the vote of, and/or shared power to dispose or to direct the disposition over, the shares covered by this registration statement. This response is not and shall not be construed as an admission that Mr. Griffin or any of the Citadel related entities listed above is the beneficial owner of any securities of the Company other than the securities actually owned by such person (if any). The address of Citadel CEMF Investments Ltd. is c/o Citadel Enterprise Americas, Southeast Financial Center, 200 S. Biscayne Blvd., Suite 3300, Miami, FL 33131.
- (5) Shares listed under “Number of Shares Beneficially Owned Before Offering” consists of (i) 312,052 shares held by Cormorant Global Healthcare Master Fund, LP, or Master Fund, and (ii) 217,118 shares held by Cormorant Private Healthcare Fund II, LP, or Fund II. Cormorant Global Healthcare GP, LLC, or Global GP, and Cormorant Private Healthcare GP II, LLC, or Private GP II, serve as the general partner of Master Fund and Fund II, respectively. Cormorant Asset Management, LP serves as the investment manager to Master Fund and Fund II. Bihua Chen serves as the managing member of Global GP, Private GP II and Cormorant Asset Management, LP. Each of Global GP, Private GP II, Cormorant Asset Management, LP and Ms. Chen disclaims beneficial ownership of such shares except to the extent of any pecuniary interest therein. The principal address for the Cormorant Asset Management LP entities is 200 Clarendon Street 52nd Floor, Boston, Massachusetts 02116.
- (6) Shares listed under “Number of Shares Beneficially Owned Before Offering” consists of 418,605 shares held by Invus Public Equities L.P., or Invus. Invus Public Equities Advisors, LLC, or Invus PE Advisors, controls Invus, as its general partner and accordingly, may be deemed to beneficially own the shares held by Invus. The Geneva branch of Artal International S.C.A., or Artal International, controls Invus PE Advisors, as its managing member and accordingly, may be deemed to beneficially own the shares held by Invus. Artal International Management S.A., or Artal International Management, as the managing partner of Artal International, controls Artal International and accordingly, may be deemed to beneficially own the shares that Artal International may be deemed to beneficially own. Artal Group S.A., or Artal Group, as the sole stockholder of Artal International Management, controls Artal International Management and accordingly, may be deemed to beneficially own the shares that Artal International Management may be deemed to beneficially own. Westend S.A., or Westend, as the parent company of Artal Group, controls Artal Group and accordingly, may be deemed to beneficially own the shares that Artal Group may be deemed to beneficially own. Stichting Administratiekantoor Westend, or the Stichting, as majority shareholder of Westend, controls Westend and accordingly, may be deemed to beneficially own the shares that Westend may be deemed to beneficially own. Mr. Amaury Wittouck, as the sole member of the board of the Stichting, controls the Stichting and accordingly, may be deemed to beneficially own the shares that the Stichting may be deemed to beneficially own. The address for Invus and Invus PE Advisors is 750 Lexington Avenue, 30th Floor, New York, NY 10022. The address for Artal International, Artal International Management, Artal Group, Westend and Mr. Wittouck is Valley Park, 44, Rue de la Vallée, L-2661, Luxembourg. The address for the Stichting is Claude Debussylaan, 46, 1082 MD Amsterdam, The Netherlands.
- (7) Shares listed under “Number of Shares Beneficially Owned Before Offering” consists of 368,085 shares held by Qiming U.S. Healthcare Fund II, L.P., or Qiming. Qiming U.S. Healthcare GP II, LLC, or Qiming GP, serves as the sole general partner of Qiming. As such, Qiming GP possesses power to direct the voting and disposition of the shares owned by Qiming and may be deemed to have indirect beneficial ownership of the shares held by Qiming. Mark McDade and Gary Rieschel are the managing partners of Qiming GP. As such, each of Mark McDade and Gary Rieschel possesses power to direct the voting and disposition of the shares owned by Qiming and may be deemed to have indirect beneficial ownership of these shares.



## Table of Contents

- (8) Shares listed under “Number of Shares Beneficially Owned Before Offering” consists of (i) 33,520 shares held by DS Liquid Div RVA MON LLC, or MON LLC, (ii) 34,603 shares held by Monashee Solitario Fund LP., or Monashee LP, (iii) 6,379 shares held by BEMAP Master Fund Ltd., or BEMAP, (iv) 6,734 shares held by Monashee Pure Alpha SPV I LP, or Alpha SPV, (v) 7,443 shares held by Blackstone CSP-MST FMAP Fund, or Blackstone Fund, and (vi) 2,126 shares held by Mission Pure Alpha LP, or Pure Alpha LP. Jeff Muller, as the COO of Monashee Investment Management LLC, has voting and/or dispositive power over the shares held by MON LLC, Monashee LP, BEMAP, Alpha SPV, Blackstone Fund and Pure Alpha LP. Jeff Muller, as the COO of Monashee Investment Management LLC, has voting and/or dispositive power over the shares held by MON LLC, Monashee LP, BEMAP, Alpha SPV, Blackstone Fund and Pure Alpha LP. Jeff Muller, however, disclaims any beneficial ownership of the shares held by these entities.
- (9) Shares listed under “Number of Shares Beneficially Owned Before Offering” consists of 197,140 held by Verition Multi-Strategy Master Fund Ltd., or Verition. Verition Fund Management LLC, as the investment manager of Verition, may be deemed to have voting and investment control over these securities. Nicholas Maounis, through ownership of the managing member of Verition Fund Management LLC, may be deemed to have voting and investment control with respect to these securities. Verition Fund Management LLC, its managing member and Mr. Maounis disclaim beneficial ownership over these securities, except to the extent of their pecuniary interest therein.
- (10) Shares listed under “Number of Shares Beneficially Owned Before Offering” consists of (i) 26,941 shares held by Sixty Degree Capital Fund II-A, L.P., or Sixty Degree Fund II-A, and (ii) 4,620 shares held by Sixty Degree Capital Fund II, L.P., or Sixty Degree Fund II. The general partner of Sixty Degree Fund II-A and of Sixty Degree Fund II is Sixty Degree Capital Fund II GP Inc. The manager of Sixty Degree Fund II-A and of Sixty Degree Fund II is Sixty Degree Capital Inc. Each of Sixty Degree Capital Inc. and Sixty Degree Fund II may be deemed to beneficially own the shares held by Sixty Degree Fund II-A and each of Sixty Degree Capital Inc. and Sixty Degree Fund II may be deemed to beneficially own the shares held by Sixty Degree Fund II. The address of the principal business office of Sixty Degree Fund II-A, Sixty Degree Fund II, Sixty Degree Capital Fund II GP Inc. and Sixty Degree Capital Inc. is 251 Consumers Rd, #1100, Toronto, ON Canada M2J 4R3.
- (11) Shares listed under “Number of Shares Beneficially Owned Before Offering” consist of 197,666 shares held by MP Healthcare Venture Management, Inc., or MP Healthcare. Mitsubishi Tanabe Pharma America, Inc. is the sole shareholder of MP Healthcare. Mitsubishi Tanabe Pharma Corporation is the sole shareholder of Mitsubishi Tanabe Pharma America, Inc. Mitsubishi Chemical Group Corporation is the sole shareholder of Mitsubishi Tanabe Pharma Corporation. As a result, Mitsubishi Tanabe Pharma America, Inc., Mitsubishi Tanabe Pharma Corporation and Mitsubishi Chemical Group Corporation may be deemed to share beneficial ownership of the shares held by MP Healthcare. The principal business address of MP Healthcare is 33 Arch Street, 31st Floor, Boston, MA 02110 and the principal business address of Mitsubishi Tanabe Pharma America, Inc., Mitsubishi Tanabe Pharma Corporation and Mitsubishi Chemical Group Corporation is 3-2-10, Doshomachi, Chuo-ku, Osaka, 541-8505, Japan.
- (12) Shares listed under “Number of Shares Beneficially Owned Before Offering” consists of 35,443 shares held by ExodusPoint Partners Master Fund, L.P, or Exodus. ExodusPoint Capital Management, LP acts as the investment manager to Exodus. Michael Gelband and Hyung Lee, the co-founders and Co-Chief Executive Officers of ExodusPoint Capital Management, LP, have voting and investment control of the shares held by Exodus. The business address of Exodus, Michael Gelband and Hyung Lee is 190 Elgin Avenue, George Town, Grant Cayman, Cayman Islands KY1-9008.
- (13) No other shares of common stock, including, without limitation, shares of common stock acquired in the open market are being offered under this prospectus.

## DESCRIPTION OF CAPITAL STOCK

### General

The following description summarizes some of the terms the Charter and Bylaws and of the DGCL. This description is summarized from, and qualified in its entirety by reference to, the Charter and Bylaws, each of which has been filed as an Exhibit to the registration statement of which this prospectus forms a part, as well as the relevant provisions of the DGCL.

### Capital stock

Our authorized capital stock consists of 200,000,000 shares of common stock, par value \$0.001 per share, and 10,000,000 shares of preferred stock, par value \$0.001 per share.

### Common Stock

Holders of our common stock are entitled to one vote for each share held on all matters submitted to a vote of stockholders and do not have cumulative voting rights. An election of directors by our stockholders shall be determined by a plurality of the votes cast by the stockholders entitled to vote on the election. Subject to the supermajority votes for some matters, other matters shall be decided by the affirmative vote of our stockholders having a majority in voting power of the votes cast by the stockholders present or represented and voting on such matters. The Charter and Bylaws also provide that our directors may be removed only for cause and only by the affirmative vote of the holders of at least two-thirds in voting power of the outstanding shares of capital stock entitled to vote thereon. In addition, the affirmative vote of the holders of at least two-thirds in voting power of the outstanding shares of capital stock entitled to vote thereon is required to amend or repeal, or to adopt any provision inconsistent with, several of the provisions of the Charter. See below under "*Anti-takeover effects of Delaware law and Charter and Bylaws-Amendment of charter provisions.*" Holders of common stock are entitled to receive proportionately any dividends as may be declared by its board of directors, subject to any preferential dividend rights of any series of preferred stock that we may designate and issue in the future.

In the event of our liquidation or dissolution, the holders of our common stock are entitled to receive proportionately our net assets available for distribution to stockholders after the payment of all debts and other liabilities and subject to the prior rights of any outstanding preferred stock. Holders of our common stock have no preemptive, subscription, redemption or conversion rights. The rights, preferences and privileges of holders of our common stock are subject to, and may be adversely affected by, the rights of the stockholders of shares of any series of our preferred stock that we may designate and issue in the future.

### Preferred Stock

Under the terms of the Charter, our board of directors is authorized to direct us to issue shares of preferred stock in one or more series without stockholder approval. Our board of directors has the discretion to determine the rights, preferences, privileges and restrictions, including voting rights, dividend rights, conversion rights, redemption privileges and liquidation preferences, of each series of our preferred stock.

The purpose of authorizing our board of directors to issue preferred stock and determine our rights and preferences is to eliminate delays associated with a stockholder vote on specific issuances. The issuance of preferred stock, while providing flexibility in connection with possible acquisitions, future financings and other corporate purposes, could have the effect of making it more difficult for a third party to acquire, or could discourage a third party from seeking to acquire, a majority of our outstanding voting stock.

### Anti-takeover effects of Delaware law and Charter and Bylaws

Some provisions of Delaware law, Charter and Bylaws could make the following transactions more difficult: an acquisition of us by means of a tender offer; an acquisition of us by means of a proxy contest or

## [Table of Contents](#)

otherwise; or the removal of our incumbent officers and directors. It is possible that these provisions could make it more difficult to accomplish or could deter transactions that stockholders may otherwise consider to be in their best interest or in our best interests, including transactions which provide for payment of a premium over the market price for our shares.

These provisions, summarized below, are intended to discourage coercive takeover practices and inadequate takeover bids. These provisions are also designed to encourage persons seeking to acquire control of us to first negotiate with its board of directors.

### ***Undesignated preferred stock***

The ability of our board of directors, without action by the stockholders, to issue up to 10,000,000 shares of undesignated preferred stock with voting or other rights or preferences as designated by our board of directors could impede the success of any attempt to change control of us. These and other provisions may have the effect of deferring hostile takeovers or delaying changes in control or management of us.

### ***Stockholder meetings***

The Bylaws provide that a special meeting of stockholders may be called only by our chairman of the board of directors, chief executive officer or president (in the absence of a chief executive officer), or by a resolution adopted by a majority of our board of directors.

### ***Requirements for advance notification of stockholder nominations and proposals***

The Bylaws establish advance notice procedures with respect to stockholder proposals to be brought before a stockholder meeting and the nomination of candidates for election as directors, other than nominations made by or at the direction of the board of directors or a committee of the board of directors.

### ***Elimination of stockholder action by written consent***

The Charter eliminates the right of stockholders to act by written consent without a meeting.

### ***Staggered board***

Our board of directors is divided into three classes. The directors in each class will serve for a three-year term, one class being elected each year by its stockholders. This system of electing and removing directors may tend to discourage a third-party from making a tender offer or otherwise attempting to obtain control of us, because it generally makes it more difficult for stockholders to replace a majority of the directors.

### ***Removal of directors***

The Charter provides that no member of our board of directors may be removed from office by our stockholders except for cause and, in addition to any other vote required by law, upon the approval of the holders of at least two-thirds in voting power of the outstanding shares of our common stock entitled to vote in the election of directors.

### ***Stockholders not entitled to cumulative voting***

The Charter does not permit stockholders to cumulate their votes in the election of directors. Accordingly, the holders of a majority of the outstanding shares of our common stock entitled to vote in any election of directors can elect all of the directors standing for election, if they choose, other than any directors that holders of our preferred stock may be entitled to elect.

***Delaware anti-takeover statute***

We are subject to Section 203 of the DGCL, which prohibits persons deemed to be “interested stockholders” from engaging in a “business combination” with a publicly held Delaware corporation for three years following the date these persons become interested stockholders unless the business combination is, or the transaction in which the person became an interested stockholder was, approved in a prescribed manner or another prescribed exception applies. Generally, an “interested stockholder” is a person who, together with affiliates and associates, owns, or within three years prior to the determination of interested stockholder status did own, 15% or more of a corporation’s voting stock. Generally, a “business combination” includes a merger, asset or stock sale, or other transaction resulting in a financial benefit to the interested stockholder. The existence of this provision may have an anti-takeover effect with respect to transactions not approved in advance by the board of directors.

***Choice of forum***

The Charter provides that, unless we consent in writing to the selection of an alternative forum, the Court of Chancery of the State of Delaware will, to the fullest extent permitted by applicable law, be the sole and exclusive forum for: (1) any derivative action or proceeding brought on our behalf; (2) any action asserting a claim of breach of a fiduciary duty or other wrongdoing by any of our directors, officers, employees or agents to us or our stockholders; (3) any action asserting a claim against us arising pursuant to any provision of the DGCL or the Charter or Bylaws; (4) any action to interpret, apply, enforce or determine the validity of the Charter or Bylaws; or (5) any action asserting a claim governed by the internal affairs doctrine. Under the Charter, this exclusive forum provision does not apply to claims which are vested in the exclusive jurisdiction of a court or forum other than the Court of Chancery of the State of Delaware, or for which the Court of Chancery of the State of Delaware does not have subject matter jurisdiction. For instance, the provision would not apply to actions arising under federal securities laws, including suits brought to enforce any liability or duty created by the Exchange Act or the rules and regulations thereunder. The Charter also provides that any person or entity purchasing or otherwise acquiring any interest in shares of its capital stock will be deemed to have notice of and to have consented to this choice of forum provision. The Charter further provides that the federal district courts of the United States will be the exclusive forum for resolving any complaint asserting a cause of action arising under the Securities Act. It is possible that a court of law could rule that the choice of forum provision contained in the Charter is inapplicable or unenforceable if it is challenged in a proceeding or otherwise.

***Amendment of charter provisions***

The amendment of any of the above provisions, except for the provision making it possible for our board of directors to issue preferred stock and the provision prohibiting cumulative voting, would require approval by holders of at least two-thirds in voting power of the outstanding shares of stock entitled to vote thereon. The provisions of Delaware law, the Charter and Bylaws could have the effect of discouraging others from attempting hostile takeovers and, as a consequence, they may also inhibit temporary fluctuations in the market price of its common stock that often result from actual or rumored hostile takeover attempts. These provisions may also have the effect of preventing changes in the composition of our board of directors and management. It is possible that these provisions could make it more difficult to accomplish transactions that stockholders may otherwise deem to be in their best interests.

## MATERIAL UNITED STATES FEDERAL INCOME TAX CONSIDERATIONS

The following is a discussion of certain material U.S. federal income tax consequences of the acquisition, ownership and disposition of our shares of common stock, which we refer to as our securities. This discussion applies only to securities that are held as capital assets for U.S. federal income tax purposes and is applicable only to holders who are receiving our securities in this offering.

This discussion is a summary only and does not describe all of the tax consequences that may be relevant to you in light of your particular circumstances, including but not limited to the alternative minimum tax, the Medicare tax on certain investment income and the different consequences that may apply if you are subject to special rules that apply to certain types of investors (such as the effects of Section 451 of the Code), including but not limited to:

- financial institutions or financial services entities;
- broker-dealers;
- governments or agencies or instrumentalities thereof;
- regulated investment companies;
- real estate investment trusts;
- expatriates or former long-term residents of the United States;
- persons that actually or constructively own 5% or more of our voting shares;
- insurance companies;
- dealers or traders subject to a mark-to-market method of accounting with respect to the securities;
- persons holding the securities as part of a “straddle,” hedge, integrated transaction or similar transaction;
- U.S. holders (as defined below) whose functional currency is not the U.S. dollar;
- partnerships or other pass-through entities for U.S. federal income tax purposes and any beneficial owners of such entities; and
- tax-exempt entities.

This discussion is based on the Code, and administrative pronouncements, judicial decisions and final, temporary and proposed Treasury regulations as of the date hereof, which are subject to change, possibly on a retroactive basis, and changes to any of which subsequent to the date of this prospectus may affect the tax consequences described herein. This discussion does not address any aspect of state, local or non-U.S. taxation, or any U.S. federal taxes other than income taxes (such as gift and estate taxes).

We have not sought, and will not seek, a ruling from the IRS as to any U.S. federal income tax consequence described herein. The IRS may disagree with the discussion herein, and its determination may be upheld by a court. Moreover, there can be no assurance that future legislation, regulations, administrative rulings or court decisions will not adversely affect the accuracy of the statements in this discussion. You are urged to consult your tax advisor with respect to the application of U.S. federal tax laws to your particular situation, as well as any tax consequences arising under the laws of any state, local or foreign jurisdiction.

This discussion does not consider the tax treatment of partnerships or other pass-through entities or persons who hold our securities through such entities. If a partnership (or other entity or arrangement classified as a partnership or other pass-through entity for U.S. federal income tax purposes) is the beneficial owner of our securities, the U.S. federal income tax treatment of a partner or member in the partnership or other pass-through

entity generally will depend on the status of the partner or member and the activities of the partnership or other pass-through entity. If you are a partner or member of a partnership or other pass-through entity holding our securities, we urge you to consult your tax advisor.

**THIS DISCUSSION IS ONLY A SUMMARY OF CERTAIN UNITED STATES FEDERAL INCOME TAX CONSIDERATIONS ASSOCIATED WITH THE ACQUISITION, OWNERSHIP AND DISPOSITION OF OUR SECURITIES. EACH PROSPECTIVE INVESTOR IN OUR SECURITIES IS URGED TO CONSULT ITS TAX ADVISOR WITH RESPECT TO THE PARTICULAR TAX CONSEQUENCES TO SUCH INVESTOR OF THE ACQUISITION, OWNERSHIP AND DISPOSITION OF OUR SECURITIES, INCLUDING THE APPLICABILITY AND EFFECT OF ANY UNITED STATES FEDERAL NON-INCOME, STATE AND LOCAL, AND NON-U.S. TAX LAWS.**

### **U.S. Holders**

This section applies to you if you are a “U.S. holder.” A U.S. holder is a beneficial owner of our shares of common stock who or that is, for U.S. federal income tax purposes:

- an individual who is a citizen or resident of the United States;
- a corporation (or other entity taxable as a corporation) organized in or under the laws of the United States, any state thereof or the District of Columbia; or
- an estate the income of which is includible in gross income for U.S. federal income tax purposes regardless of its source; or
- a trust, if (i) a court within the United States is able to exercise primary supervision over the administration of the trust and one or more U.S. persons (as defined in the Code) have authority to control all substantial decisions of the trust or (ii) it has a valid election in effect under Treasury Regulations to be treated as a U.S. person.

*Taxation of Distributions.* If we pay distributions in cash or other property (other than certain distributions of our stock or rights to acquire our stock) to U.S. holders of shares of Common Stock, such distributions generally will constitute dividends for U.S. federal income tax purposes to the extent paid from our current or accumulated earnings and profits, as determined under U.S. federal income tax principles. Distributions in excess of current and accumulated earnings and profits will constitute a return of capital that will be applied against and reduce (but not below zero) the U.S. holder’s adjusted tax basis in Common Stock. Any remaining excess will be treated as gain realized on the sale or other disposition of the common stock and will be treated as described under “*U.S. Holders-Gain or Loss on Sale, Taxable Exchange or Other Taxable Disposition of common stock*” below.

Dividends we pay to a U.S. holder that is a taxable corporation generally will qualify for the dividends received deduction if the requisite holding period is satisfied. With certain exceptions (including, but not limited to, dividends treated as investment income for purposes of investment interest deduction limitations), and provided certain holding period requirements are met, dividends we pay to a non-corporate U.S. holder may constitute “qualified dividends” that will be subject to tax at the maximum tax rate accorded to long-term capital gains. If the holding period requirements are not satisfied, then a corporation may not be able to qualify for the dividends received deduction and would have taxable income equal to the entire dividend amount, and non-corporate holders may be subject to tax on such dividend at regular ordinary income tax rates instead of the preferential rate that applies to qualified dividend income.

*Gain or Loss on Sale, Taxable Exchange or Other Taxable Disposition of common stock.* Upon a sale or other taxable disposition of Common Stock, a U.S. holder generally will recognize capital gain or loss in an amount equal to the difference between the amount realized and the U.S. holder’s adjusted tax basis in the common stock. Any such capital gain or loss generally will be long-term capital gain or loss if the U.S. holder’s

## [Table of Contents](#)

holding period for the common stock so disposed of exceeds one year. If the holding period requirements are not satisfied, any gain on a sale or taxable disposition of the shares would be subject to short-term capital gain treatment and would be taxed at regular ordinary income tax rates. Long-term capital gains recognized by non-corporate U.S. holders will be eligible to be taxed at reduced rates. The deductibility of capital losses is subject to limitations.

Generally, the amount of gain or loss recognized by a U.S. holder is an amount equal to the difference between (i) the sum of the amount of cash and the fair market value of any property received in such disposition and (ii) the U.S. holder's adjusted tax basis in its common stock so disposed of. A U.S. holder's adjusted tax basis in its common stock generally will equal the U.S. holder's acquisition cost for the common stock or less, in the case of a share of common stock, any prior distributions treated as a return of capital. In the case of any shares of common stock originally acquired as part of an investment unit, the acquisition cost for the share of common stock that were part of such unit would equal an allocable portion of the acquisition cost of the unit based on the relative fair market values of the components of the unit at the time of acquisition.

*Information Reporting and Backup Withholding.* In general, information reporting requirements may apply to dividends paid to a U.S. holder and to the proceeds of the sale or other disposition of our shares of common stock, unless the U.S. holder is an exempt recipient. Backup withholding may apply to such payments if the U.S. holder fails to provide a taxpayer identification number, a certification of exempt status or has been notified by the IRS that it is subject to backup withholding (and such notification has not been withdrawn).

Any amounts withheld under the backup withholding rules generally should be allowed as a refund or a credit against a U.S. holder's U.S. federal income tax liability provided the required information is timely furnished to the IRS.

### **Non-U.S. Holders**

This section applies to you if you are a "Non-U.S. holder." As used herein, the term "Non-U.S. holder" means a beneficial owner of Common Stock who or that is for U.S. federal income tax purposes:

- a non-resident alien individual (other than certain former citizens and residents of the U.S. subject to U.S. tax as expatriates);
- a foreign corporation or
- an estate or trust that is not a U.S. holder;

but generally does not include an individual who is present in the United States for 183 days or more in the taxable year of disposition. If you are such an individual, you should consult your tax advisor regarding the U.S. federal income tax consequences of the acquisition, ownership or sale or other disposition of our securities.

*Taxation of Distributions.* In general, any distributions we make to a Non-U.S. holder of shares of Common Stock, to the extent paid out of our current or accumulated earnings and profits (as determined under U.S. federal income tax principles), will constitute dividends for U.S. federal income tax purposes and, provided such dividends are not effectively connected with the Non-U.S. holder's conduct of a trade or business within the United States, we will be required to withhold tax from the gross amount of the dividend at a rate of 30%, unless such Non-U.S. holder is eligible for a reduced rate of withholding tax under an applicable income tax treaty and provides proper certification of its eligibility for such reduced rate (usually on an IRS Form W-8BEN or W-8BEN-E). Any distribution not constituting a dividend will be treated first as reducing (but not below zero) the Non-U.S. holder's adjusted tax basis in its shares of Common Stock and, to the extent such distribution exceeds the Non-U.S. holder's adjusted tax basis, as gain realized from the sale or other disposition of the common stock, which will be treated as described under "*Non-U.S. Holders-Gain on Sale, Taxable Exchange or Other Taxable Disposition of common stock*" below.

## Table of Contents

The withholding tax does not apply to dividends paid to a Non-U.S. holder who provides a Form W-8ECI, certifying that the dividends are effectively connected with the Non-U.S. holder's conduct of a trade or business within the United States. Instead, the effectively connected dividends will be subject to regular U.S. income tax as if the Non-U.S. holder were a U.S. resident, subject to an applicable income tax treaty providing otherwise. A Non-U.S. corporation receiving effectively connected dividends may also be subject to an additional "branch profits tax" imposed at a rate of 30% (or a lower treaty rate).

*Gain on Sale, Taxable Exchange or Other Taxable Disposition of common stock.* A Non-U.S. holder generally will not be subject to U.S. federal income or withholding tax in respect of gain recognized on a sale, taxable exchange or other taxable disposition of Common Stock, unless:

- the gain is effectively connected with the conduct of a trade or business by the Non-U.S. holder within the United States (and, under certain income tax treaties, is attributable to a United States permanent establishment or fixed base maintained by the Non-U.S. holder); or
- we are or have been a "U.S. real property holding corporation" for U.S. federal income tax purposes at any time during the shorter of the five-year period ending on the date of disposition or the period that the Non-U.S. holder held Common Stock, and, in the case where shares of Common Stock are regularly traded on an established securities market, the Non-U.S. holder has owned, directly or constructively, more than 5% of Common Stock at any time within the shorter of the five-year period preceding the disposition or such Non-U.S. holder's holding period for the shares of Common Stock. There can be no assurance that Common Stock will be treated as regularly traded on an established securities market for this purpose.

Unless an applicable treaty provides otherwise, gain described in the first bullet point above will be subject to tax at generally applicable U.S. federal income tax rates as if the Non-U.S. holder were a U.S. resident. Any gains described in the first bullet point above of a Non-U.S. holder that is a foreign corporation may also be subject to an additional "branch profits tax" at a 30% rate (or lower treaty rate).

If the second bullet point above applies to a Non-U.S. holder, gain recognized by such holder on the sale, exchange or other disposition of Common Stock will be subject to tax at generally applicable U.S. federal income tax rates.

*Information Reporting and Backup Withholding.* Information returns will be filed with the IRS in connection with payments of dividends and the proceeds from a sale or other disposition of our shares of common stock. A Non-U.S. holder may have to comply with certification procedures to establish that it is not a United States person in order to avoid information reporting and backup withholding requirements. The certification procedures required to claim a reduced rate of withholding under a treaty will satisfy the certification requirements necessary to avoid the backup withholding as well. The amount of any backup withholding from a payment to a Non-U.S. holder will be allowed as a credit against such holder's U.S. federal income tax liability and may entitle such holder to a refund, provided that the required information is timely furnished to the IRS.

*FATCA Withholding Taxes.* Provisions commonly referred to as "FATCA" impose withholding of 30% on payments of dividends (including constructive dividends) on Common Stock to "foreign financial institutions" (which is broadly defined for this purpose and in general includes investment vehicles) and certain other Non-U.S. entities unless various U.S. information reporting and due diligence requirements (generally relating to ownership by U.S. persons of interests in or accounts with those entities) have been satisfied by, or an exemption applies to, the payee (typically certified as to by the delivery of a properly completed IRS Form W-8BEN-E). Pursuant to proposed Treasury Regulations, the U.S. Treasury Department has indicated its intent to eliminate the requirement under FATCA of withholding on gross proceeds from the sale or other disposition of property of a type which can produce U.S. source dividends or interest. The U.S. Treasury Department has indicated that taxpayers may rely on these proposed Treasury Regulations pending their finalization. Foreign financial



---

[Table of Contents](#)

institutions located in jurisdictions that have an intergovernmental agreement with the United States governing FATCA may be subject to different rules. Under certain circumstances, a Non-U.S. holder might be eligible for refunds or credits of such withholding taxes, and a Non-U.S. holder might be required to file a U.S. federal income tax return to claim such refunds or credits. Prospective investors should consult their tax advisers regarding the effects of FATCA on their investment in our securities.

## PLAN OF DISTRIBUTION

Each selling stockholder of the securities and any of their pledgees, assignees, donees, transferees or other successors-in-interest may, from time to time, sell, transfer or otherwise dispose of any or all of their securities covered hereby on the Nasdaq Global Select Market, the Nasdaq Global Market, the Nasdaq Capital Market, or the New York Stock Exchange or any other stock exchange, market or trading facility on which the securities are traded or in private transactions. These sales may be at fixed or negotiated prices. A selling stockholder may use any one or more of the following methods when selling securities:

- ordinary brokerage transactions and transactions in which the broker-dealer solicits purchasers;
- block trades in which the broker-dealer will attempt to sell the securities as agent but may position and resell a portion of the block as principal to facilitate the transaction;
- purchases by a broker-dealer as principal and resale by the broker-dealer for its account;
- an exchange distribution in accordance with the rules of the applicable exchange;
- privately negotiated transactions;
- settlement of short sales entered into after the effective date of the registration statement of which this prospectus is a part;
- in transactions through broker-dealers that agree with the selling stockholders to sell a specified number of such securities at a stipulated price per security;
- through the writing or settlement of options or other hedging transactions, whether through an options exchange or otherwise;
- a combination of any such methods of sale; or
- any other method permitted pursuant to applicable law.

The selling stockholders may also sell securities under Rule 144 or any other exemption from registration under the Securities Act, if available, rather than under this prospectus.

Broker-dealers engaged by the selling stockholders may arrange for other brokers-dealers to participate in sales. Broker-dealers may receive commissions or discounts from the selling stockholders (or, if any broker-dealer acts as agent for the purchaser of securities, from the purchaser) in amounts to be negotiated, but, except as set forth in a supplement to this prospectus, in the case of an agency transaction not in excess of a customary brokerage commission in compliance with FINRA Rule 2121; and in the case of a principal transaction a markup or markdown in compliance with FINRA Rule 2121.

In connection with the sale of the securities or interests therein, the selling stockholders may enter into hedging transactions with broker-dealers or other financial institutions, which may in turn engage in short sales of the securities in the course of hedging the positions they assume. The selling stockholders may also sell securities short and deliver these securities to close out their short positions, or loan or pledge the securities to broker-dealers that in turn may sell these securities. The selling stockholders may also enter into option or other transactions with broker-dealers or other financial institutions or create one or more derivative securities that require the delivery to such broker-dealer or other financial institution of securities offered by this prospectus, which securities such broker-dealer or other financial institution may resell pursuant to this prospectus (as supplemented or amended to reflect such transaction). The selling stockholders also may transfer the securities in other circumstances, in which case the transferees, pledgees, donees or other successors in interest will be the selling beneficial owners for purposes of this prospectus.

The selling stockholders and any broker-dealers or agents that are involved in selling the securities may be deemed to be “underwriters” within the meaning of the Securities Act in connection with such sales (it being

## Table of Contents

understood that the selling stockholders shall not be deemed to be underwriters solely as a result of their participation in this offering). In such event, any commissions received by such broker-dealers or agents and any profit on the resale of the securities purchased by them may be deemed to be underwriting commissions or discounts under the Securities Act. Each selling stockholder has informed us that it does not have any written or oral agreement or understanding, directly or indirectly, with any person to distribute the securities.

We are required to pay certain fees and expenses incurred by us incident to the registration of the securities. We have agreed to indemnify the selling stockholders against certain losses, claims, damages and liabilities, including liabilities under the Securities Act.

We agreed to keep this prospectus effective until the earlier of the date that the securities (i) have been sold, pursuant to this prospectus or pursuant to Rule 144, or (ii) the date on which the securities may be resold by the selling stockholders without registration and without regard to any volume or manner-of-sale limitations by reason of Rule 144, and without the requirement for us to be in compliance with the current public information under Rule 144 under the Securities Act or any other rule of similar effect. The resale securities will be sold only through registered or licensed brokers or dealers if required under applicable state securities laws. In addition, in certain states, the resale securities covered hereby may not be sold unless they have been registered or qualified for sale in the applicable state or an exemption from the registration or qualification requirement is available and is complied with.

Under applicable rules and regulations under the Exchange Act, any person engaged in the distribution of the resale securities may not simultaneously engage in market making activities with respect to the common stock for the applicable restricted period, as defined in Regulation M, prior to the commencement of the distribution. In addition, the selling stockholders will be subject to applicable provisions of the Exchange Act and the rules and regulations thereunder, including Regulation M, which may limit the timing of purchases and sales of the common stock by the selling stockholders or any other person. We will make copies of this prospectus available to the selling stockholders and have informed them of the need to deliver a copy of this prospectus to each purchaser at or prior to the time of the sale (including by compliance with Rule 172 under the Securities Act).

We will not receive any proceeds from sales of any shares of common stock by the selling stockholders.

We cannot assure you that the selling stockholders will sell all or any portion of the shares of common stock offered hereby. We are registering the resale of shares of our common stock to provide the selling stockholders with freely tradable securities, but the registration of such shares does not necessarily mean that any of such shares will be offered or sold by the selling stockholders pursuant to this prospectus or at all.

To the extent required, this prospectus may be amended and/or supplemented from time to time to describe a specific plan of distribution.

## LEGAL MATTERS

The validity of the common stock being offered by this prospectus has been passed upon for us by Goodwin Procter LLP, Boston, Massachusetts.

## EXPERTS

The consolidated financial statements of Frequency Therapeutics, Inc. as of December 31, 2022 and 2021 and for each of the years in the two-year period ended December 31, 2022 have been audited by RSM US LLP, an independent registered public accounting firm, as stated in their report thereon, and included in this Prospectus and Registration Statement in reliance upon such report and upon the authority of such firm as experts in accounting and auditing.

The consolidated financial statements of Korro Bio Ops, Inc. (formerly Korro Bio, Inc.) at December 31, 2022 and 2021, and for each of the two years in the period ended December 31, 2022, appearing in this Prospectus and Registration Statement have been audited by Ernst & Young LLP, independent registered public accounting firm, as set forth in their report thereon (which contains an explanatory paragraph describing conditions that raise substantial doubt about Korro Bio Ops, Inc.'s ability to continue as a going concern as described in Note 1 to its consolidated financial statements) appearing elsewhere herein, and are included in reliance upon such report given on the authority of such firm as experts in accounting and auditing.

## CHANGE IN AUDITOR

On November 3, 2023, the audit committee of the Board approved a resolution appointing Ernst & Young LLP, or E&Y, as our independent registered public accounting firm to audit our consolidated financial statements for the fiscal year ended December 31, 2023, and RSM US LLP, or RSM, was dismissed from its role as our independent registered public accounting firm.

The reports of RSM on Frequency's consolidated financial statements for the fiscal years ended December 31, 2022 and 2021 did not contain an adverse opinion or disclaimer of opinion and were not qualified or modified as to uncertainty, audit scope or accounting principles.

During Frequency's two most recent fiscal years and the subsequent period from January 1, 2023 to November 3, 2023, there were (i) no disagreements (as defined in Item 304(a)(1)(iv) of Regulation S-K and the related instructions thereto) with RSM on any matter of accounting principles or practices, financial statement disclosure, or auditing scope or procedure, which disagreement, if not resolved to the satisfaction of RSM, would have caused it to make reference to the subject matter of the disagreement in connection with its report and (ii) no reportable events (as described in Item 304(a)(1)(v) of Regulation S-K).

We provided RSM with a copy of the foregoing disclosures and requested RSM to furnish us with a letter addressed to the SEC stating whether it agrees with the statements made by us and, if not, stating the respects in which it does not agree. A copy of RSM's letter is incorporated by reference as Exhibit 16.1 to the Registration Statement.

E&Y served as the independent registered public accounting firm of Legacy Korro prior to the completion of the Merger. During our two most recent fiscal years and the subsequent period from January 1, 2023 to November 3, 2023, we did not consult with E&Y regarding any of the matters or events set forth in Item 304(a)(2)(i) and (ii) of Regulation S-K.

## WHERE YOU CAN FIND MORE INFORMATION

We file annual, quarterly and current reports, proxy statements and other information with the SEC. The SEC maintains a website that contains reports, proxy and information statements and other information about issuers, such as us, who file electronically with the SEC. The address of that website is [www.sec.gov](http://www.sec.gov).

Our website address is [www.korrobio.com](http://www.korrobio.com). The information on our website, however, is not, and should not be deemed to be, a part of this prospectus.

This prospectus and any prospectus supplement are part of a registration statement that we filed with the SEC and do not contain all of the information in the registration statement. The full registration statement may be obtained from the SEC or us, as provided below. Other documents establishing the terms of the offered securities are or may be filed as exhibits to the registration statement or documents incorporated by reference in the registration statement. Statements in this prospectus or any prospectus supplement about these documents are summaries and each statement is qualified in all respects by reference to the document to which it refers. You should refer to the actual documents for a more complete description of the relevant matters. You may inspect a copy of the registration statement through the SEC's website, as provided above.

INDEX TO FINANCIAL STATEMENTS

Frequency Therapeutics, Inc.

**Consolidated Financial Statements September 30, 2023 and September 30, 2022**

<a href="#">Consolidated Balance Sheets</a>	F-2
<a href="#">Consolidated Statements of Operations and Comprehensive Loss</a>	F-3
<a href="#">Consolidated Statements of Convertible Preferred Stock and Stockholders' Deficit</a>	F-5
<a href="#">Consolidated Statements of Cash Flows</a>	F-6
<a href="#">Notes to Unaudited Consolidated Financial Statements</a>	F-7

**Consolidated Financial Statements for the Years Ended December 31, 2022 and 2021**

<a href="#">Report of Independent Registered Public Accounting Firm (PCAOB ID: 49)</a>	F-20
<b>Consolidated Financial Statements</b>	
<a href="#">Consolidated Balance Sheets</a>	F-21
<a href="#">Consolidated Statements of Operations and Comprehensive Loss</a>	F-22
<a href="#">Consolidated Statements of Convertible Preferred Stock and Stockholders' Deficit</a>	F-24
<a href="#">Consolidated Statements of Cash Flows</a>	F-25
<a href="#">Notes to Consolidated Financial Statements</a>	F-26

Korro Bio Ops, Inc.

**Condensed Consolidated Financial Statements September 30, 2023 and September 30, 2022**

<a href="#">Condensed Consolidated Balance Sheets</a>	F-52
<a href="#">Condensed Consolidated Statements of Operations and Comprehensive Loss</a>	F-53
<a href="#">Condensed Consolidated Statements of Convertible Preferred Stock and Stockholders' Deficit</a>	F-54
<a href="#">Condensed Consolidated Statements of Cash Flows</a>	F-55
<a href="#">Notes to Condensed Consolidated Financial Statements</a>	F-56

**Consolidated Financial Statements for the Years Ended December 31, 2022 and 2021**

<a href="#">Report of Independent Registered Public Accounting Firm</a>	F-69
<a href="#">Consolidated Balance Sheets</a>	F-70
<a href="#">Consolidated Statements of Operations and Comprehensive Loss</a>	F-71
<a href="#">Consolidated Statements of Convertible Preferred Stock and Stockholders' Deficit</a>	F-72
<a href="#">Consolidated Statements of Cash Flows</a>	F-73
<a href="#">Notes to Consolidated Financial Statements</a>	F-74

## Frequency Therapeutics, Inc.

**Consolidated Balance Sheets**  
(in thousands, except share and per share amounts)  
(unaudited)

	September 30, 2023	December 31, 2022
<b>Assets</b>		
Current assets:		
Cash and cash equivalents	\$ 41,723	\$ 51,954
Short-term marketable securities	—	31,143
Prepaid expenses and other current assets	423	4,396
Assets held for sale	354	—
Total current assets	42,500	87,493
Property and equipment, net	543	2,739
Right of use assets	1,339	28,980
Restricted cash	1,967	1,699
Other long-term assets	—	327
Total assets	<u>\$ 46,349</u>	<u>\$ 121,238</u>
<b>Liabilities and Stockholders' Equity</b>		
Current liabilities:		
Accounts payable	\$ 338	\$ 3,114
Accrued expenses	7,847	5,891
Lease liabilities, current portion	1,427	2,021
Term loan, current portion	—	10,000
Total current liabilities	9,612	21,026
Lease liabilities, net of current portion	—	26,761
Term loan, net of current portion	—	4,167
Other long-term liabilities	—	89
Total liabilities	9,612	52,043
Stockholders' equity:		
Preferred stock, \$0.001 par value; 10,000,000 shares authorized, no shares issued or outstanding at September 30, 2023 and December 31, 2022	—	—
Common stock, \$0.001 par value; 200,000,000 shares authorized, 738,526 and 705,242 shares issued and outstanding at September 30, 2023 and December 31, 2022, respectively	1	1
Additional paid-in capital	340,344	331,057
Accumulated other comprehensive gain (loss)	10	(198)
Accumulated deficit	(303,618)	(261,665)
Total stockholders' equity	36,737	69,195
Total liabilities and stockholders' equity	<u>\$ 46,349</u>	<u>\$ 121,238</u>

*See accompanying notes.*

## Frequency Therapeutics, Inc.

**Consolidated Statements of Operations**  
**(in thousands, except share and per share amounts)**  
**(unaudited)**

	Three Months Ended September 30,		Nine Months Ended September 30,	
	2023	2022	2023	2022
Operating expenses:				
Research and development	\$ 2,560	\$ 11,715	\$ 18,509	\$ 38,769
General and administrative	10,105	8,560	26,498	26,037
Total operating expenses	12,665	20,275	45,007	64,806
Loss from operations	(12,665)	(20,275)	(45,007)	(64,806)
Interest income	448	351	1,317	871
Interest expense	—	(263)	(284)	(649)
Other income, net	596	617	2,043	357
Loss before income taxes	(11,621)	(19,570)	(41,931)	(64,227)
Income tax	7	23	(22)	9
Net loss	<u>\$ (11,614)</u>	<u>\$ (19,547)</u>	<u>\$ (41,953)</u>	<u>\$ (64,218)</u>
Net loss per share attributable to common stockholders-basic and diluted	<u>\$ (15.73)</u>	<u>\$ (27.73)</u>	<u>\$ (58.26)</u>	<u>\$ (91.71)</u>
Weighted-average shares of common stock outstanding-basic and diluted	<u>738,445</u>	<u>704,954</u>	<u>720,105</u>	<u>700,264</u>

See accompanying notes.



**Frequency Therapeutics, Inc.****Consolidated Statements of Comprehensive Loss  
(in thousands)  
(unaudited)**

	<b>Three Months Ended September 30,</b>		<b>Nine Months Ended September 30,</b>	
	<b>2023</b>	<b>2022</b>	<b>2023</b>	<b>2022</b>
Net loss	<u>\$ (11,614)</u>	<u>\$ (19,547)</u>	<u>\$ (41,953)</u>	<u>\$ (64,218)</u>
Other comprehensive gain (loss):				
Unrealized gain (loss) on marketable securities and money market funds	<u>16</u>	<u>16</u>	<u>208</u>	<u>(314)</u>
Total other comprehensive gain (loss)	<u>16</u>	<u>16</u>	<u>208</u>	<u>(314)</u>
Comprehensive loss	<u>\$ (11,598)</u>	<u>\$ (19,531)</u>	<u>\$ (41,745)</u>	<u>\$ (64,532)</u>

*See accompanying notes.*

Frequency Therapeutics, Inc.

Consolidated Statements Stockholders' Equity  
(in thousands, except share and per share amounts)  
(unaudited)

	Common shares issued	Common par value	Additional paid-in capital	Accumulated other comprehensive income	Accumulated deficit	Total stockholders' equity
<b>Balance, June 30, 2022</b>	<b>699,528</b>	<b>\$ 1</b>	<b>\$ 321,000</b>	<b>\$ (392)</b>	<b>\$ (224,756)</b>	<b>\$ 95,853</b>
Stock-based compensation expense	—	—	5,595	—	—	5,595
Purchase of common stock under Employee Stock Purchase Plan	895	—	57	—	—	57
Issuance of common stock, net	4	—	(1)	—	—	(1)
Issuance of common stock pursuant to restricted stock units	4,817	—	—	—	—	—
Other comprehensive gain	—	—	—	16	—	16
Net loss	—	—	—	—	(19,547)	(19,547)
<b>Balance, September 30, 2022</b>	<b>705,244</b>	<b>\$ 1</b>	<b>\$ 326,651</b>	<b>\$ (376)</b>	<b>\$ (244,303)</b>	<b>\$ 81,973</b>
<b>Balance, June 30, 2023</b>	<b>719,274</b>	<b>\$ 1</b>	<b>\$ 337,417</b>	<b>\$ (6)</b>	<b>\$ (292,004)</b>	<b>\$ 45,408</b>
Stock-based compensation expense	—	—	2,925	—	—	2,925
Purchase of common stock under Employee Stock Purchase Plan	127	—	2	—	—	2
Issuance of common stock pursuant to restricted stock units	19,125	—	—	—	—	—
Other comprehensive gain	—	—	—	16	—	16
Net loss	—	—	—	—	(11,614)	(11,614)
<b>Balance, September 30, 2023</b>	<b>738,526</b>	<b>\$ 1</b>	<b>\$ 340,344</b>	<b>\$ 10</b>	<b>\$ (303,618)</b>	<b>\$ 36,737</b>

	Common shares issued	Common par value	Additional paid-in capital	Accumulated other comprehensive income	Accumulated deficit	Total stockholders' equity
<b>Balance, December 31, 2021</b>	<b>692,224</b>	<b>\$ 1</b>	<b>\$ 310,970</b>	<b>\$ (62)</b>	<b>\$ (180,085)</b>	<b>\$ 130,824</b>
Stock-based compensation expense	—	—	15,425	—	—	15,425
Purchase of common stock under Employee Stock Purchase Plan	1,532	—	196	—	—	196
Issuance of common stock, net	459	—	61	—	—	61
Issuance of common stock pursuant to restricted stock units	11,029	—	(1)	—	—	(1)
Other comprehensive loss	—	—	—	(314)	—	(314)
Net loss	—	—	—	—	(64,218)	(64,218)
<b>Balance, September 30, 2022</b>	<b>705,244</b>	<b>\$ 1</b>	<b>\$ 326,651</b>	<b>\$ (376)</b>	<b>\$ (244,303)</b>	<b>\$ 81,973</b>
<b>Balance, December 31, 2022</b>	<b>705,242</b>	<b>\$ 1</b>	<b>\$ 331,057</b>	<b>\$ (198)</b>	<b>\$ (261,665)</b>	<b>\$ 69,195</b>
Stock-based compensation expense	—	—	9,253	—	—	9,253
Purchase of common stock under Employee Stock Purchase Plan	622	—	33	—	—	33
Issuance of common stock, net	59	—	—	—	—	—
Issuance of common stock pursuant to restricted stock units	32,603	—	1	—	—	1
Other comprehensive gain	—	—	—	208	—	208
Net loss	—	—	—	—	(41,953)	(41,953)
<b>Balance, September 30, 2023</b>	<b>738,526</b>	<b>\$ 1</b>	<b>\$ 340,344</b>	<b>\$ 10</b>	<b>\$ (303,618)</b>	<b>\$ 36,737</b>

See accompanying notes.

**Frequency Therapeutics, Inc.**  
**Consolidated Statements of Cash Flows**  
**(in thousands)**  
**(unaudited)**

	<b>Nine Months Ended</b>	
	<b>September 30,</b>	
	<b>2023</b>	<b>2022</b>
<b>Cash flows from operating activities:</b>		
Net loss	\$(41,953)	\$(64,218)
Adjustments to reconcile net loss to net cash used in operating activities:		
Stock-based compensation	9,253	15,425
Depreciation expense	1,879	2,094
Non-cash lease expense	1,901	1,763
Non-cash interest (income) expense	(214)	421
Changes in operating assets and liabilities:		
Prepaid expenses and other current assets	3,973	3,193
Accounts payable	(2,776)	459
Lease liabilities	(1,615)	(1,359)
Accrued expenses	2,194	(396)
Net cash used in operating activities	<u>(27,358)</u>	<u>(42,618)</u>
<b>Cash flows from investing activities:</b>		
Sale of property and equipment	63	18
Purchase of property and equipment	(100)	—
Purchase of marketable securities	(1,978)	(46,914)
Redemption of marketable securities	33,543	53,469
Net cash provided by investing activities	<u>31,528</u>	<u>6,573</u>
<b>Cash flows from financing activities:</b>		
Proceeds from issuance of common stock, net	1	60
Proceeds from Employee Stock Purchase Plan	33	196
Repayment of Term Loan	(14,167)	—
Net cash (used in) provided by financing activities	<u>(14,133)</u>	<u>256</u>
<b>Net decrease in cash, cash equivalents and restricted cash</b>	<b>(9,963)</b>	<b>(35,789)</b>
Cash, cash equivalents, and restricted cash at beginning of period	53,653	81,334
Cash, cash equivalents, and restricted cash at end of period	<u>\$ 43,690</u>	<u>\$ 45,545</u>
<b>Non-cash items:</b>		
Reduction of right of use assets	<u>\$ 25,740</u>	<u>\$ —</u>
Reduction of lease liabilities	<u>\$ 25,470</u>	<u>\$ —</u>

*See accompanying notes*

**Frequency Therapeutics, Inc.**

**Notes to Unaudited Consolidated Financial Statements  
(Amounts in thousands, except share and per share amounts)**

**1. Organization and basis of presentation**

***Organization***

Frequency Therapeutics, Inc., together with its wholly owned subsidiaries, Frequency Therapeutics, PTY, LTD, and Frequency Therapeutics Securities Corporation (the Company) headquartered in Lexington, Massachusetts, was incorporated in November 2014 as a Delaware corporation. The Company is a preclinical-stage regenerative medicine company focused on developing therapeutics to activate a person's innate regenerative potential to restore function. On February 13, 2023, the Company announced a restructuring of the business which included the discontinuation of its hearing program and a downsizing of personnel by approximately 55%. On May 31, 2023, the Company announced an additional reduction in force of approximately 55% of its remaining personnel. On July 14, 2023, the Company, along with Frequency Merger Sub, Inc. (Merger Sub) and Korro Bio, Inc., (Korro Bio) entered into an Agreement and Plan of Merger (the Merger Agreement), pursuant to which, Merger Sub will merge with and into Korro Bio, with Korro Bio continuing as a wholly owned subsidiary of the Company and the surviving corporation of the merger.

***Liquidity and capital resources***

The Company has funded its operations primarily with proceeds from private and public securities financings, a term loan, and amounts received under a collaboration agreement. The Company has incurred recurring losses since its inception. In addition, as of September 30, 2023, the Company had an accumulated deficit of \$303,618. The Company expects to continue to generate operating losses for the foreseeable future. The future viability of the Company is dependent on its ability to raise additional capital to finance its operations. The Company's inability to raise capital as and when needed could have a negative impact on its financial condition and ability to pursue its business strategies. There can be no assurances that additional funding will be available on terms acceptable to the Company, or at all. The Company believes that existing resources and the cost savings generated from the restructuring and reduction in force announced in February and May 2023, respectively, will be sufficient to fund planned operations for at least twelve months from the date the financial statements were available to be issued.

***Basis of presentation***

The accompanying consolidated financial statements have been prepared in accordance with accounting standards set by the Financial Accounting Standards Board (FASB). The FASB sets generally accepted accounting principles (GAAP) that the Company follows to ensure its financial condition, results of operations, and cash flows are consistently reported. References to GAAP issued by the FASB in these notes to the consolidated financial statements are to the FASB Accounting Standards Codification (ASC).

***Principles of consolidation***

The consolidated financial statements include the accounts of Frequency Therapeutics, Inc. and its wholly owned subsidiaries Frequency Therapeutics Securities Corporation and Frequency Therapeutics PTY, LTD. All intercompany transactions and balances have been eliminated. The significant accounting policies used in preparation of these interim financial statements are consistent with those discussed in Note 2, "Summary of significant accounting policies," in the Company's Annual Report on Form 10-K (the Company's Form 10-K).

***Unaudited interim financial information***

The accompanying consolidated balance sheet as of September 30, 2023 and the consolidated statements of operations, the consolidated statements of comprehensive loss and the consolidated statements of stockholders'

## [Table of Contents](#)

equity for the three and nine months ended September 30, 2023 and 2022 and the consolidated statements of cash flows for the nine months ended September 30, 2023 and 2022 are unaudited. The unaudited interim consolidated financial statements have been prepared on the same basis as the audited annual consolidated financial statements and, in the opinion of management, reflect all adjustments, which include only normal recurring adjustments, necessary for the fair statement of the Company's financial position as of September 30, 2023, the results of its operations for the three and nine months ended September 30, 2023 and 2022, and cash flows for the nine months ended September 30, 2023 and 2022. The financial data and other information disclosed in these notes related to the three and nine months ended September 30, 2023 and 2022 are also unaudited. The results for the three and nine months ended September 30, 2023 are not necessarily indicative of results to be expected for the year ending December 31, 2023, any other interim periods, or any future year or period. The consolidated balance sheet as of December 31, 2022 included herein was derived from the audited consolidated financial statements as of that date. These unaudited consolidated financial statements should be read in conjunction with the Company's audited consolidated financial statements and the notes thereto for the year ended December 31, 2022 included in the Company's Form 10-K.

### 2. Recently adopted and issued accounting standards

From time to time, new accounting pronouncements are issued by the FASB or other standard setting bodies and adopted by the Company as of the specified effective date. The Company is an "emerging growth company" as defined in the Jumpstart Our Business Startups Act of 2012, as amended (the JOBS Act). The JOBS Act provides that an emerging growth company can take advantage of an extended transition period for complying with new or revised accounting standards. Thus, an emerging growth company can delay the adoption of certain accounting standards until those standards would otherwise apply to private companies. The Company elected to avail itself of this extended transition period and, as a result, the Company will not be required to adopt new or revised accounting standards on the relevant dates on which adoption of such standards is required for other public companies.

In June 2016, the FASB issued ASU No. 2016-13, *Financial Instruments—Credit Losses (Topic 326): Measurement of Credit Losses on Financial Instruments*. The FASB has subsequently issued amendments to ASU 2016-13, which have the same effective date and transition date. These standards require that credit losses be reported using an expected losses model rather than the incurred losses model that was previously used, and establishes additional disclosures related to credit risks. For available-for-sale debt securities with unrealized losses, this standard now requires allowances to be recorded instead of reducing the amortized cost of the investment. These standards limit the amount of credit losses to be recognized for available-for-sale debt securities to the amount by which carrying value exceeds fair value and requires the reversal of previously recognized credit losses if fair value increases. The Company adopted the standard on January 1, 2023 and it did not have a material impact on the consolidated financial statements.

### 3. Fair value measurements

The Company's financial assets are measured at fair value on a recurring basis by level within the fair value hierarchy at September 30, 2023 and December 31, 2022 are summarized as follows:

	September 30, 2023	
	Fair Value Hierarchy	Fair Market Value
<b>Cash equivalents:</b>		
Money market funds	Level 1	35,299
<b>Investments:</b>		
Short-term marketable securities	Level 2	—
		<u>\$ 35,299</u>

## [Table of Contents](#)

	December 31, 2022	
	Fair Value Hierarchy	Fair Market Value
<b>Cash equivalents:</b>		
Money market funds	Level 1	30,649
<b>Investments:</b>		
Short-term marketable securities	Level 2	31,143
		<u>\$ 61,792</u>

The carrying amounts reflected in the consolidated balance sheet for prepaid expenses and other current assets, accounts payable, accrued expenses, other liabilities, and term loan are shown at their historical values which approximate their fair values.

Silicon Valley Bank (SVB) was closed on March 10, 2023 by the California Department of Financial Protection and Innovation, which appointed the Federal Deposit Insurance Corporation (FDIC) as receiver. The FDIC then reopened SVB as Silicon Valley Bridge Bank, N.A. (SVBB). At September 30, 2023, SVBB holds the Company's sweep account and one of the Company's deposit accounts. The Company continues to decrease the balances held by SVBB.

#### 4. Investments

The Company did not hold any investments at September 30, 2023. The following table summarizes the Company's investments at December 31, 2022, all of which are classified as available-for-sale and recorded at fair value:

	December 31, 2022		
	Amortization Cost	Unrealized Loss	Fair Market Value
Short-term marketable securities	31,280	(317)	31,143
	<u>\$ 31,280</u>	<u>\$ (317)</u>	<u>\$ 31,143</u>

The Company's short-term marketable securities were held in investment advisory accounts with SVB Asset Management (SAM). On March 27, 2023, following the closure of SVB, SAM's former parent company, and the creation of SVBB, the FDIC entered into a purchase and assumption agreement for certain assets of SVBB with First-Citizens Bank & Trust Company (FCB). As a result of this transaction, SAM became a wholly owned subsidiary of FCB. As of September 30, 2023, the Company does not hold any short-term marketable securities.

The Company determines the appropriate classification of investments at the time of purchase and reviews any investment when its fair value is less than its amortized cost and when evidence indicates that the investment's carrying amount is not recoverable within a reasonable period of time. The Company evaluates whether the decline in fair value has resulted from credit losses or other factors. In making this assessment, the Company considers the extent to which fair value is less than amortized cost, any changes to the rating of the security by a rating agency, and adverse conditions specifically related to the security, among other factors. If this assessment indicates that a credit loss may exist, the present value of cash flows expected to be collected from the investment is compared to its amortized cost basis. If the present value of cash flows expected to be collected is less than the amortized cost basis, a credit loss exists and an allowance for credit losses is recorded on the consolidated balance sheet, limited by the amount that the fair value is less than the amortized cost basis. Any impairment that is not related to a credit loss is recognized in other comprehensive (loss) income. The unrealized losses at September 30, 2023 and December 31, 2022 were attributable to changes in interest rates and do not represent credit losses.

## [Table of Contents](#)

At September 30, 2023, the Company did not own any debt securities. At December 31, 2022, the Company held 14 debt securities that were in an unrealized loss position. The Company does not sell the investments before recovery of their amortized cost bases, which may be at maturity. The following tables summarize the Company's debt securities in an unrealized loss position, aggregated by length of time in a continuous unrealized loss position.

	Less than 12 Months		December 31, 2022 More than 12 Months		Total	
	Fair Market Value	Unrealized Loss	Fair Market Value	Unrealized Loss	Fair Market Value	Unrealized Loss
	Short-term marketable securities in unrealized loss position	\$ 17,303	\$ (78)	\$9,927	\$ (135)	\$ 27,230
	<u>\$ 17,303</u>	<u>\$ (78)</u>	<u>\$9,927</u>	<u>\$ (135)</u>	<u>\$ 27,230</u>	<u>\$ (213)</u>

## 5. Property and equipment

Property and equipment include the following:

	September 30, 2023	December 31, 2022
Lab equipment	\$ 101	\$ 5,706
Furniture and office equipment	3,238	3,238
Software	291	291
Total	3,630	9,235
Accumulated depreciation	(3,087)	(6,496)
Property and equipment, net	<u>\$ 543</u>	<u>\$ 2,739</u>

The Company recognized \$385 and \$1,879 and \$679 and \$2,094 of depreciation expense for the three and nine months ended September 30, 2023 and 2022, respectively.

In connection with the Agreement and Plan of Merger with Korro Bio, Inc., the Company classified certain lab equipment as held for sale in September 2023. The carrying value of the lab equipment at September 30, 2023 has been removed from property and equipment, net and is presented as assets held for sale of \$354 within current assets on the consolidated balance sheets. The Company anticipates the items classified as held for sale to be disposed of in October 2023.

## 6. Accrued expenses

Accrued expenses consist of the following:

	September 30, 2023	December 31, 2022
Payroll and employee related expenses	\$ 1,868	\$ 4,216
Professional fees	3,895	377
Third-party research and development expenses	29	773
Legal settlements	1,675	—
Other	380	525
Total	<u>\$ 7,847</u>	<u>\$ 5,891</u>

## [Table of Contents](#)

### 7. Debt

On December 11, 2020, the Company entered into a Loan and Security Agreement (Loan Agreement) with Silicon Valley Bank for a term loan with a principal balance of \$15,000. The Company made monthly interest only payments through November 30, 2022. The principal balance and interest were to be repaid in equal monthly installments after the interest only period and continue through May 1, 2024 (Loan Maturity Date). On April 3, 2023, the Company prepaid the remaining \$11,667 due under the Loan Agreement. As such, there was no interest expense for the three months ended September 30, 2023. Interest expense related to the Loan Agreement was \$284 for the nine months ended September 30, 2023 and \$263 and \$649 for the three and nine months ended September 30, 2022, respectively.

The final payment of \$150, which the Company had been accruing over the term of the loan, was also paid on April 3, 2023. The Company was not subject to any prepayment premium as the prepayment occurred after the second anniversary of the closing date.

### 8. Net loss per share

Basic net loss per share is computed by dividing net loss attributable to common stockholders by the weighted-average number of shares of common stock outstanding during the period. Diluted net loss per share is computed using the weighted-average number of shares of common stock outstanding during the period and, if dilutive, the weighted-average number of potential shares of common stock. Diluted net loss per share is the same as basic net loss per share for the three and nine months ended September 30, 2023 and 2022 since all potential shares of common stock instruments are anti-dilutive as a result of the loss for such periods.

	Three Months Ended September 30,		Nine Months Ended September 30,	
	2023	2022	2023	2022
Numerator:				
Net Loss	\$ (11,614)	\$ (19,547)	\$ (41,953)	\$ (64,218)
Denominator:				
Weighted-average shares of common stock outstanding-basic and diluted	738,445	704,954	720,105	700,264
Net loss per share attributable to common stockholders-basic and diluted	\$ (15.73)	\$ (27.73)	\$ (58.26)	\$ (91.71)

The Company excluded the following potential shares of common stock from the computation of diluted net loss per share because including them would have had an anti-dilutive effect.

	Nine Months Ended September 30,	
	2023	2022
Unvested restricted stock units	38,603	62,033
Outstanding stock options	93,254	115,067
Total	131,857	177,100

### 9. Stockholders' equity

#### *Preferred stock*

The Company has authorized 10,000,000 shares of \$0.001 par value preferred stock of which no shares were issued or outstanding as of September 30, 2023.



## [Table of Contents](#)

### **Common Stock**

The Company has authorized 200,000,000 shares of \$0.001 par value common stock of which there were 738,526 and 705,242 shares issued and outstanding as of September 30, 2023 and December 31, 2022, respectively. Common shares are voting, and dividends may be paid when, as and if declared by the Board of Directors.

The Company has reserved the following shares of common stock for future issuance as of September 30, 2023 and December 31, 2022:

	September 30, 2023	December 31, 2022
Stock options outstanding	93,254	114,841
Shares available for future grant under incentive plans	60,328	19,764
	<u>153,582</u>	<u>134,605</u>

### **Equity Offerings**

On December 10, 2021, the Company entered into an Equity Distribution Agreement (the Sales Agreement) with Oppenheimer & Co. Inc. (the Sales Agent) to sell shares of the Company's common stock, par value \$0.001 per share, with aggregate gross sales proceeds of up to \$125,000, from time to time, through an "at the market" equity offering program.

During the nine months ended September 30, 2022, the Company sold 255 shares of common stock under the ATM program for net proceeds of approximately \$50. No shares were sold during the three or nine months ended September 30, 2023. On September 26, 2023, the Company's ATM was terminated.

## **10. Stock-based compensation**

### **Stock options**

The below summary includes stock option activity within the Company's 2014 Stock Incentive Plan and 2019 Incentive Award Plan for the nine months ended September 30, 2023:

	Number of shares in Plans	Weighted average exercise price	Weighted average remaining contractual term (in years)	Aggregate intrinsic value
Outstanding as of December 31, 2022	114,841	\$ 117.50	6.69	\$ 9,114
Granted	547	233.00	4.66	—
Exercised	(59)	3.50	—	\$ 1
Forfeited	(22,075)	122.50	—	—
Outstanding as of September 30, 2023	<u>93,254</u>	\$ 117.00	6.20	\$ 3
Options exercisable as of September 30, 2023	<u>86,499</u>	\$ 117.50	5.92	\$ 3
Options unvested as of September 30, 2023	<u>6,756</u>	\$ 111.50	7.28	\$ —

The aggregate intrinsic value of stock options is calculated as the difference between the exercise price of the stock options and the fair value of the Company's common stock for those stock options that had exercise prices lower than the fair value of the Company's common stock.

## [Table of Contents](#)

### ***Stock option valuation***

The assumptions that the Company used to determine the grant-date fair value of stock options granted to employees and directors were as follows, presented on a weighted average basis:

	<u>September 30,</u> <u>2023</u>
Risk-free interest rate	3.6%
Expected term (in years)	6.0
Expected volatility	92.0%
Expected dividend yield	0.0%

The weighted-average grant date fair value of options granted during the three and nine months ended September 30, 2023 was \$0 and \$179, respectively. The weighted-average grant date fair value of options granted during the three and nine months ended September 30, 2022 was \$70 and \$80, respectively.

The total grant date fair value of options vested during the three and nine months ended September 30, 2023 was \$2,171 and \$6,672, respectively. The total grant date fair value of options vested during the three and nine months ended September 30, 2022 was \$3,100 and \$11,390, respectively.

### ***Repricing of stock options***

On August 17, 2022, the Board of Directors approved the repricing of all options granted under the 2019 Incentive Award Plan that were held by then current employees, executives, directors, and consultants for which the exercise price per share was greater than the closing price per share of the Company's common stock on August 17, 2022 (Underwater Options) by reducing the exercise price of each Underwater Option to \$107, the closing price per share of the Company's common stock on August 17, 2022. Except for the modification of the exercise price, all other terms and conditions of the Underwater Options remain in effect.

The option repricing resulted in incremental stock-based compensation of \$2,505, of which \$179 and \$518 was recorded as expense in the three and nine months ended September 30, 2023, respectively. At September 30, 2023, \$357 incremental expense remains which will be recognized as expense over the requisite service period in which the options vest.

### ***Restricted stock units***

The below summary includes restricted stock unit activity within the Company's 2019 Incentive Award Plan for the nine months ended September 30, 2023:

	<u>Number</u> <u>of</u> <u>shares</u>	<u>Weighted</u> <u>average fair</u> <u>value</u>
Unvested, December 31, 2022	62,033	\$ 125.50
Awarded	33,327	239.00
Vested	(32,603)	145.50
Forfeited	(24,154)	179.00
Unvested as of September 30, 2023	<u>38,603</u>	<u>\$ 173.50</u>

## [Table of Contents](#)

### **Stock-based compensation**

The Company recognized stock-based compensation within the accompanying consolidated statements of operations as follows:

	Three Months Ended September 30,		Nine Months Ended September 30,	
	2023	2022	2023	2022
Research and development	\$ 750	\$ 2,095	\$1,760	\$ 5,994
General and administrative	2,175	3,500	7,493	9,431
Total	<u>\$ 2,925</u>	<u>\$ 5,595</u>	<u>\$9,253</u>	<u>\$15,425</u>

As of September 30, 2023, total unrecognized stock-based compensation expense relating to unvested stock options and restricted stock units was \$9,454. This amount is expected to be recognized over a weighted-average period of 1.52 years.

### **11. Employee stock purchase plan**

On September 20, 2019, the Company's board of directors and stockholders approved and adopted the 2019 Employee Stock Purchase Plan (the ESPP) which became effective on the date of the Company's initial public offering of shares of its common stock. The ESPP permits participants to purchase common stock through payroll deductions of up to 15% of their eligible compensation. The number of shares of common stock available for issuance under the ESPP will be automatically increased on the first day of each calendar year during the first ten years of the term of the ESPP, beginning with January 1, 2020 and ending with January 1, 2029, by an amount equal to 1% 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.

637 shares were purchased under the ESPP in January 2022 related to the second offering period of 2021, which concluded on December 31, 2021. 495 shares were purchased in January 2023 related to the second offering period of 2022, which concluded on December 31, 2022. 127 shares were purchased in July 2023 related to the first offering period of 2023, which concluded on June 30, 2023. As of September 30, 2023, a total of 30,941 shares remain available for future issuance under the ESPP.

### **12. Income taxes**

The Company's total provision is based on the United States statutory rate of 21%, increased by state taxes and reduced by a full valuation allowance on the Company's deferred tax assets. The income tax expense for the three and nine months ended September 30, 2023 and 2022 represents state taxes on interest income earned by the Company's subsidiary, Frequency Therapeutics Securities Corporation, a Massachusetts Securities Corporation.

ASC 740 requires a valuation allowance to reduce the deferred tax assets reported if, based on the weight of the evidence, it is more likely than not that some portion or all of the deferred tax assets will not be realized. After consideration of all the evidence, both positive and negative, the Company has recorded a valuation allowance against its deferred tax assets at September 30, 2023 and December 31, 2022 because the Company's management has determined that it is more likely than not that the Company will not recognize the benefits of its federal and state deferred tax assets primarily due to its cumulative loss position.

Since inception in 2014, the Company has generated cumulative federal and state net operating loss and research and development credit carryforwards for which no net tax benefit has been recorded due to uncertainty around utilizing these tax attributes within the respective carryforward periods.

### **13. Collaboration agreement**

In July 2019, the Company entered into a License and Collaboration Agreement with Astellas (the Astellas Agreement), under which the Company granted Astellas an exclusive, royalty-bearing, sub-licensable, nontransferable license to certain patent rights to research, develop, manufacture, have manufactured, use, seek and secure regulatory approval for, commercialize, offer for sale, sell, have sold and import, and otherwise exploit licensed products containing both a GSK-3 inhibitor and an HDAC inhibitor, (the Astellas Licensed Products), including the product candidate FX-322, outside of the United States. The Company also granted Astellas a right of first negotiation and a right of last refusal if it entered into any negotiation or agreement of any kind (other than an acquisition of all of the stock or assets of the Company) with any third party under which such third party would obtain the right to develop, manufacture, or commercialize Astellas Licensed Products in the United States.

As consideration for the licensed rights under the Astellas Agreement, Astellas paid the Company an upfront payment of \$80,000 in July 2019 and had agreed to pay potential development milestone payments up to \$230,000 and commercialization milestones of up to \$315,000. The parties had agreed to share equally, on a 50/50 basis, all out-of-pocket costs and joint study costs for all the joint activities conducted pursuant to the development plans or the joint manufacturing plan.

On April 11, 2023, Astellas sent the Company a notice stating that Astellas would be terminating the Astellas Agreement on April 14, 2023. The Company agreed to the terms of the notice and on April 14, 2023, the Astellas Agreement was terminated. The Company was not subject to any payments or costs as a result of this termination.

The Astellas Agreement contained joint research and development activities that were not within the scope of ASC 606. The Company invoiced Astellas for all joint costs. In the three and nine months ended September 30, 2023 and 2022, the Company invoiced Astellas \$0 and \$81 and \$36 and \$337, respectively, for joint costs.

### **14. License agreements**

#### ***Massachusetts Institute of Technology***

In December 2016, the Company entered into an exclusive patent license agreement (MIT License Agreement) with the Massachusetts Institute of Technology (MIT), under which the Company received an exclusive, worldwide, royalty-bearing license to certain patent rights to develop, make, have made, use, sell, offer to sell, lease and import products (Licensed Products) and to develop and perform processes (Licensed Processes) which incorporate the licensed technology for the treatment of disease, including but not limited to the prevention and remediation of hearing loss. The Company also has the right to grant sublicenses of its rights under the MIT License Agreement.

On April 6, 2023, the Company sent MIT a notice stating that the Company would be terminating the MIT License Agreement in 3-months' time. The termination became final on July 6, 2023. The Company is not subject to any payments or costs as a result of this termination.

#### ***The Scripps Research Institute (California Institute for Biomedical Research)***

In September 2018, the Company entered into a license agreement, (CALIBR License Agreement), with the California Institute for Biomedical Research, (CALIBR), under which the Company received an exclusive, worldwide, royalty-bearing license to certain patent rights to make, have made, use, sell, offer to sell, and import products (CALIBR Licensed Products) which incorporate the licensed technology for the treatment of MS. The Company also has the right to grant sublicenses of its rights under the CALIBR License Agreement. CALIBR reserves the right to use for itself and the right to grant non-exclusive licenses to other nonprofit or academic institutions, for any internal research and educational purposes.

## [Table of Contents](#)

On March 29, 2023, the Company sent CALIBR a notice stating that the Company would be terminating the CALIBR License Agreement in 30 days' time. On April 28, 2023 the CALIBR License Agreement was terminated. The Company is not subject to any payments or costs as a result of this termination.

### ***Massachusetts Eye and Ear (Formerly Massachusetts Eye and Ear Infirmary)***

In February 2019, the Company entered into an Non-Exclusive Patent License Agreement (MEE License Agreement) with the Massachusetts Eye and Ear (MEE) under which it received a non-exclusive, non-sublicensable, worldwide, royalty-bearing license to certain patent rights to develop, make, have made, use, sell, offer to sell, lease and import products and to develop and perform processes which incorporate the licensed technology for the treatment or prevention of hearing loss (MEE licensed products).

On February 21, 2023, the Company sent MEE a notice stating that the Company would be terminating the MEE License Agreement in 30 business days' time. On April 4, 2023, the MEE License Agreement was terminated. The Company is not subject to any payments or costs as a result of this termination.

## **15. Commitments and contingencies**

### ***Contract commitments***

The Company also enters into contracts in the normal course of business with contract research organizations, contract manufacturing organizations, universities, and other third parties for preclinical research studies, clinical trials and testing and manufacturing services. These contracts generally do not contain minimum purchase commitments and are cancelable by the Company upon prior written notice although, purchase orders for clinical materials are generally non-cancelable. Payments due upon cancellation consist only of payments for services provided or expenses incurred, including non-cancelable obligations of the Company's service providers, up to the date of cancellation or upon the completion of a manufacturing run.

### ***Guarantees***

The Company has identified the guarantees described below as disclosable, in accordance with ASC 460, *Guarantees*.

As permitted under Delaware law, the Company indemnifies its officers and directors for certain events or occurrences while the officer or director is, or was, serving at the Company's request in such capacity. The maximum potential amount of future payments the Company could be required to make is unlimited; however, the Company has directors' and officers' insurance coverage that should limit its exposure and enable it to recover a portion of any future amounts paid.

The Company is a party to a number of agreements entered into in the ordinary course of business that contain typical provisions that obligate the Company to indemnify the other parties to such agreements upon the occurrence of certain events. Such indemnification obligations are usually in effect from the date of execution of the applicable agreement for a period equal to the applicable statute of limitations. The aggregate maximum potential future liability of the Company under such indemnification provisions is uncertain.

The Company leases office space in Lexington, Massachusetts. On August 11, 2023, the Company entered into a termination agreement under which its operating lease will terminate on January 31, 2024. In connection with the termination agreement, the Company reduced the right of use asset and lease liabilities to reflect the remaining lease term. The \$1,699 security deposit for this lease is classified as restricted cash as of September 30, 2023. The Company has standard indemnification arrangements under this lease that require it to indemnify the landlord against all costs, expenses, fines, suits, claims, demands, liabilities, and actions directly resulting from any breach, violation, or nonperformance of any covenant or condition of the lease.

## Table of Contents

As of September 30, 2023, the Company had not experienced any losses related to these indemnification obligations, and no material claims with respect thereto were outstanding. The Company does not expect significant claims related to these indemnification obligations and, consequently, concluded that the fair value of these obligations is negligible, and no related reserves have been established.

### ***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.

On June 3, 2021 and June 22, 2021, purported stockholders of the Company filed putative class action lawsuits in the U.S. District Court for the District of Massachusetts against the Company and the Company's Chief Executive Officer, President, and Director, David Lucchino. On March 21, 2022, the two lawsuits were consolidated into a single lawsuit, Quinones et al. v. Frequency Therapeutics, Inc. et al. and on May 16, 2022, the Company's Chief Development Officer, Dr. Carl LeBel, was added as a defendant. The plaintiffs alleged violations of Sections 10(b), 20(a) and Rule 10b5 of the Securities Exchange Act of 1934, as amended (the Exchange Act), due to allegedly false and misleading statements and omissions about the Company's Phase 2a clinical trial (FX-322-202) for its product candidate FX-322 in the Company's public disclosures between October 29, 2020 and March 22, 2021. The lawsuit sought, among other things, damages in connection with the Company's allegedly artificially inflated stock price between October 29, 2020 and March 22, 2021 as a result of those allegedly false and misleading statements and omissions, as well as interest, attorneys' fees and costs. The Company filed a motion to dismiss the Amended Complaint on July 15, 2022. On March 29, 2023, the Company's motion to dismiss was granted and the lawsuit was dismissed in its entirety. On April 27, 2023, Plaintiff filed a notice of appeal to the United States Court of Appeals for the First Circuit from the order dismissing the lawsuit. On August 2, 2023, Plaintiff-Appellant submitted its opening brief to the First Circuit. The Company filed its response brief on October 27, 2023. This matter is at the very early stages of the legal process, and as a result, the Company is not able to estimate a range of possible loss. Since an estimate of the possible loss or range of loss cannot be made at this time, no accruals have been recorded as of September 30, 2023.

On June 21, 2022, the Delaware Chancery Court dismissed a lawsuit brought by two purported stockholders against the Company and others. For previously reported information on this lawsuit, refer to Part I, Item 3, "Legal Proceedings" of the Company's 2021 Form 10-K. On August 16, 2022, these same two purported stockholders of the Company filed a similar lawsuit in Delaware Superior Court against (i) the Company, (ii) Computershare Inc., and (iii) Computershare Trust Company, N.A., entitled The Gregory J. Parseghian Revocable Trust, et al. v. Frequency Therapeutics, Inc., et al. The lawsuit alleges causes of action against the Company for breach of the statutory duty of care, negligence, conversion, and unjust enrichment, based on allegations that actions were taken to prevent the purported stockholders from selling their shares in the Company. The Company filed a motion to dismiss the complaint on November 14, 2022. On May 18, 2023, the Court issued an order granting in part and denying in part the Company's motion, dismissing the claims for breach of the statutory duty of care and unjust enrichment but leaving the remaining claims intact. On October 31, 2023, the parties reached an agreement to resolve all issues related to or arising from the allegations in the lawsuit. The Company agreed to pay \$1,675 to the two purported stockholders in exchange for a release of all claims. This payment is accrued as of September 30, 2023.

## [Table of Contents](#)

On June 30, 2022, a purported stockholder of the Company filed a shareholder derivative complaint in the U.S. District Court for the District of Delaware purportedly on the Company's behalf against members of the Company's board of directors and the Company as a nominal defendant, entitled *Dewey v. Cohen et. al.* The complaint alleges (i) violations of Section 10(b) and Rule 10b5 of the Exchange Act, (ii) breach of fiduciary duty, (iii) aiding and abetting breach of fiduciary duty, (iv) unjust enrichment, and (v) waste of corporate assets. The claims are based on the same underlying allegations as the *Quinones* case (described above). The complaint seeks, among other things, monetary damages, interest, attorneys' fees and costs. On September 27, 2022, this lawsuit was stayed pending final resolution of the *Quinones* case. This matter was voluntarily dismissed by the plaintiff on October 17, 2023.

### 16. Sublease

On July 8, 2022, the Company entered into a Sublease Agreement with a sublessee to sublease approximately 30,040 rentable square feet of the Company's office space in Lexington, MA for a two-year term. The base sublease rent per month for the first and second year of the sublease is \$197 and \$203, respectively. In addition to base rent, the sublessee will pay 49% of operating costs and taxes payable under the Company's lease for the Lexington, MA office space. On August 11, 2023 the Company entered into a Sublease Termination Agreement with the sublessee, pursuant to which the parties agreed to terminate the Sublease Agreement on January 31, 2024. The Company is not subject to any payments or costs as a result of the termination.

Since commencement, the Company has accounted for the Lexington, MA office space as an operating lease. In accordance with ASC 842, the Company concluded the sublease is also an operating lease. The Company recognized sublease income of \$580 and \$1,766 for the three and nine months ended September 30, 2023. The below table shows the expected future sublease income as of September 30, 2023.

	Years Ending December 31,	Sublease Income
2023		574
2024		191
Total future sublease income		<u>765</u>

### 17. Restructuring

On February 13, 2023, the Company announced the topline results for the Phase 2b study of FX-322 (FX-322-208) which failed to achieve its primary efficacy endpoint of an improvement in speech perception. As a result, the Company also announced that it would be discontinuing the FX-322 and FX-345 hearing development programs and focusing resources on its remyelination in MS development program. This restructuring resulted in a 55% reduction in the Company's workforce.

In the nine months ended September 30, 2023, the Company incurred \$4,329 in restructuring-related expenses. The total restructuring charges consist of accelerated depreciation expense of \$360, accelerated hearing program expense of \$129, and severance and other benefit-related costs of \$3,840.

During the nine months ended September 30, 2023, the following restructuring-related charges were included in the Consolidated Statement of Operations:

	Severance and other benefit-related costs	Accelerated depreciation charges	Accelerated hearing program charges	Total
Research and development	\$ 2,138	\$ 360	\$ 129	\$2,627
General and administrative	1,702	—	—	1,702
Total	<u>\$ 3,840</u>	<u>\$ 360</u>	<u>\$ 129</u>	<u>\$4,329</u>

## [Table of Contents](#)

At September 30, 2023, the liability for the restructuring is classified as current and included in accrued expenses in the Consolidated Balance Sheets.

	Accelerated hearing program charges	Severance and other benefit-related costs	Total
Liability balance as of December 31, 2022	\$ —	\$ —	\$—
Net charges	6	916	922
Liability balance as of September 30, 2023	<u>\$ 6</u>	<u>\$ 916</u>	<u>\$922</u>

### 18. Subsequent Event

The Company has evaluated subsequent events for recognition, remeasurement and disclosure purposes. The identified subsequent event is as follows:

On November 3, 2023, the Company effected a reverse stock split of its common stock at a ratio of 1-for-50 (the “Reverse Split”). Upon the effectiveness of the Reverse Split, (i) every 50 shares of outstanding common stock were reclassified and combined into one share of common stock, and (ii) the number of shares of common stock for which each outstanding option to purchase common stock is exercisable was proportionally decreased and the exercise price of each outstanding option to purchase common stock proportionally increased. No fractional shares were issued as a result of the Reverse Split. Accordingly, all share and per share amounts for all periods presented in these financial statements and notes thereto have been adjusted retroactively, where applicable, to reflect the Reverse Split and adjustment of the exercise price of each outstanding option as if the transaction had occurred as of the beginning of the earliest period presented.



**Report of Independent Registered Public Accounting Firm**

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

**Opinion on the Financial Statements**

We have audited the accompanying consolidated balance sheets of Frequency Therapeutics, Inc. and its subsidiaries (the Company) as of December 31, 2022 and 2021, the related consolidated statements of operations, comprehensive loss, stockholders' equity and cash flows for the years then ended, and the related notes to the consolidated financial statements (collectively, the financial statements). In our opinion, the financial statements present fairly, in all material respects, the financial position of the Company as of December 31, 2022 and 2021, and the results of its operations and its cash flows for the years then ended, in conformity with accounting principles generally accepted in the United States of America.

**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 U.S. federal securities laws and the applicable rules and regulations of the Securities and Exchange Commission and the PCAOB.

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

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

/s/ RSM US LLP

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

Boston, Massachusetts  
March 10, 2023, except for the effect of the  
reverse stock split discussed in Note 19b, as  
to which the date is December 1, 2023.

## Frequency Therapeutics, Inc.

Consolidated Balance Sheets  
(in thousands, except share and per share amounts)

	December 31, 2022	December 31, 2021
<b>Assets</b>		
Current assets:		
Cash and cash equivalents	\$ 51,954	\$ 79,635
Short-term marketable securities	31,143	51,072
Prepaid expenses and other current assets	4,396	4,041
Total current assets	87,493	134,748
Long-term marketable securities	—	11,719
Property and equipment, net	2,739	5,522
Right of use assets	28,980	31,350
Restricted cash	1,699	1,699
Other long-term assets	327	320
Total assets	<u>\$ 121,238</u>	<u>\$ 185,358</u>
<b>Liabilities and Stockholders' Equity</b>		
Current liabilities:		
Accounts payable	\$ 3,114	\$ 2,748
Accrued expenses	5,891	6,101
Lease liabilities, current portion	2,021	1,747
Term loan, current portion	10,000	833
Total current liabilities	21,026	11,429
Lease liabilities, net of current portion	26,761	28,851
Term loan, net of current portion	4,167	14,167
Other long-term liabilities	89	87
Total liabilities	<u>52,043</u>	<u>54,534</u>
Stockholders' equity:		
Preferred stock, \$0.001 par value; 10,000,000 shares authorized, no shares issued or outstanding at December 31, 2022 and December 31, 2021, respectively	—	—
Common stock, \$0.001 par value; 200,000,000 shares authorized, 705,242 and 692,224 shares issued and outstanding at December 31, 2022 and December 31, 2021, respectively	1	1
Additional paid-in capital	331,057	310,970
Accumulated other comprehensive loss	(198)	(62)
Accumulated deficit	(261,665)	(180,085)
Total stockholders' equity	69,195	130,824
Total liabilities and stockholders' equity	<u>\$ 121,238</u>	<u>\$ 185,358</u>

See accompanying notes.

**Frequency Therapeutics, Inc.**  
**Consolidated Statements of Operations**  
**(in thousands, except share and per share amounts)**

	Year Ended	
	December 31,	
	2022	2021
Revenue	\$ —	\$ 14,068
Operating expenses:		
Research and development	49,418	60,923
General and administrative	33,584	37,176
Total operating expenses	83,002	98,099
Loss from operations	(83,002)	(84,031)
Interest income	1,327	397
Interest expense	(961)	(764)
Realized gain (loss) on investments	3	(23)
Foreign exchange (loss) gain	(5)	16
Other income (expense), net	1,056	(266)
Loss before income taxes	(81,582)	(84,671)
Tax benefit (provision)	2	(15)
Net loss	\$ (81,580)	\$ (84,686)
Net loss per share-basic and diluted	\$ (116.29)	\$ (123.26)
Weighted-average shares of common stock outstanding-basic and diluted	701,518	687,025

*See accompanying notes.*

Frequency Therapeutics, Inc.

Consolidated Statements of Comprehensive Loss  
(in thousands, except share and per share amounts)

	Year Ended December 31,	
	2022	2021
Net loss	<u>\$ (81,580)</u>	<u>\$ (84,686)</u>
Other comprehensive loss:		
Unrealized loss on marketable securities	<u>(136)</u>	<u>(89)</u>
Total comprehensive loss	<u>(136)</u>	<u>(89)</u>
Comprehensive loss	<u>\$ (81,716)</u>	<u>\$ (84,775)</u>

*See accompanying notes.*

Frequency Therapeutics, Inc.

Consolidated Statement of Stockholders' Equity  
(in thousands, except share and per share amounts)

	Common shares issued	Common par value	Additional paid-in capital	Accumulated other comprehensive loss	Accumulated deficit	Total stockholders' equity
<b>Balance, December 31, 2020</b>	<u>679,280</u>	<u>\$ 1</u>	<u>\$ 287,863</u>	<u>\$ 27</u>	<u>\$ (95,399)</u>	<u>\$ 192,492</u>
Stock-based compensation expense	—	—	21,750	—	—	21,750
Purchases under Employee Stock Purchase Plan	141	—	60	—	—	60
Issuance of common stock upon exercise of stock options	12,846	—	1,297	—	—	1,297
Forfeiture of restricted stock	(43)	—	—	—	—	—
Other comprehensive loss	—	—	—	(89)	—	(89)
Net loss	—	—	—	—	(84,686)	(84,686)
<b>Balance, December 31, 2021</b>	<u>692,224</u>	<u>\$ 1</u>	<u>\$ 310,970</u>	<u>\$ (62)</u>	<u>\$ (180,085)</u>	<u>\$ 130,824</u>
Stock-based compensation expense	—	—	19,831	—	—	19,831
Purchases under Employee Stock Purchase Plan	1,532	—	196	—	—	196
Issuance of common stock upon exercise of stock options	201	—	11	—	—	11
Issuance of common stock under equity offering	255	—	50	—	—	50
Issuance of common stock pursuant to restricted stock units	11,030	—	(1)	—	—	(1)
Other comprehensive loss	—	—	—	(136)	—	(136)
Net loss	—	—	—	—	(81,580)	(81,580)
<b>Balance, December 31, 2022</b>	<u>705,242</u>	<u>\$ 1</u>	<u>\$ 331,057</u>	<u>\$ (198)</u>	<u>\$ (261,665)</u>	<u>\$ 69,195</u>

See accompanying notes

**Frequency Therapeutics, Inc.**  
**Consolidated Statements of Cash Flows**  
**(in thousands)**

	<b>Year Ended</b>	
	<b>December 31,</b>	
	<b>2022</b>	<b>2021</b>
<b>Cash flows from operating activities:</b>		
Net loss	\$(81,580)	\$ (84,686)
Adjustments to reconcile net loss to net cash used in operating activities:		
Stock-based compensation	19,831	21,750
Depreciation expense	2,766	2,775
Non-cash lease expense	2,370	1,066
Non-cash interest expense	396	347
Loss on disposal of assets	—	16
Changes in operating assets and liabilities:		
Prepaid expenses and other assets	681	(173)
Accounts payable	(677)	(2,292)
Deferred revenue	—	(14,068)
Lease liabilities	(1,816)	(396)
Accrued expenses	(208)	(398)
Net cash used in operating activities	<u>(58,237)</u>	<u>(76,059)</u>
<b>Cash flows from investing activities:</b>		
Sale of property and equipment	17	—
Purchase of property and equipment	—	(2,914)
Purchase of marketable securities	(54,222)	(92,445)
Redemption of marketable securities	85,338	29,233
Net cash provided by (used in) investing activities	<u>31,133</u>	<u>(66,126)</u>
<b>Cash flows from financing activities:</b>		
Proceeds from issuance of common stock	60	1,298
Proceeds from Employee Stock Purchase Plan	196	60
Repayment of term loan	(833)	—
Net cash (used in) provided by financing activities	<u>(577)</u>	<u>1,358</u>
<b>Net decrease in cash, cash equivalents, and restricted cash</b>	<u>(27,681)</u>	<u>(140,827)</u>
Cash, cash equivalents, and restricted cash at beginning of period	81,334	222,161
Cash, cash equivalents, and restricted cash at end of period	<u>\$ 53,653</u>	<u>\$ 81,334</u>
<b>Supplemental disclosures:</b>		
Cash paid for interest	<u>\$ 914</u>	<u>\$ 703</u>

*See accompanying notes*

**Frequency Therapeutics, Inc.**

**Notes to Consolidated Financial Statements**  
**(Amounts in thousands, except share and per share amounts)**

**1. Organization**

Frequency Therapeutics, Inc., together with its wholly owned subsidiaries, Frequency Therapeutics, PTY, LTD, Frequency Therapeutics Securities Corporation and Frequency Therapeutics Japan KK (Frequency Japan) (the Company), headquartered in Lexington, Massachusetts, was incorporated in November 2014 as a Delaware corporation. Frequency Japan was closed down in February 2021. The Company is a preclinical-stage regenerative medicine company focused on developing therapeutics to activate a person's innate regenerative potential to restore function.

***Liquidity and capital resources***

The Company has funded its operations primarily with proceeds from private and public securities financings, a term loan, and amounts received under a collaboration agreement. The Company has incurred recurring losses since its inception. In addition, as of December 31, 2022, the Company had an accumulated deficit of \$261,665. The Company expects to continue to generate operating losses for the foreseeable future. The future viability of the Company is dependent on its ability to raise additional capital to finance its operations. The Company's inability to raise capital as and when needed could have a negative impact on its financial condition and ability to pursue its business strategies. There can be no assurances that additional funding will be available on terms acceptable to the Company, or at all. The Company believes that existing resources will be sufficient to fund planned operations for at least 12 months from the date the financial statements were available to be issued.

**2. Summary of significant accounting policies**

***Basis of presentation***

The accompanying consolidated financial statements have been prepared in accordance with accounting standards set by the Financial Accounting Standards Board (FASB). The FASB sets generally accepted accounting principles (GAAP) that the Company follows to ensure its financial condition, results of operations, and cash flows are consistently reported. References to GAAP issued by the FASB in these notes to the consolidated financial statements are to the FASB *Accounting Standards* Codification (ASC).

***Principles of consolidation***

The consolidated financial statements include the accounts of Frequency Therapeutics, Inc. and its wholly owned subsidiaries Frequency Therapeutics Securities Corporation, Frequency Therapeutics PTY, LTD and Frequency Japan through the date of its dissolution. All intercompany transactions and balances have been eliminated.

***Use of estimates***

The preparation of the Company's consolidated financial statements in conformity with GAAP requires management to make estimates and assumptions that affect the reported amounts of assets, liabilities, revenue, expenses and related disclosure of contingent assets and liabilities at the date of the consolidated financial statements and reported amounts of expenses during the reporting period. On an ongoing basis, the Company's management evaluates its estimates, which include but are not limited to management's judgments of accrued expenses, revenue recognition, fair value of common stock, valuation of share-based awards, present value of lease liabilities and income taxes. Actual results could differ from those estimates.

***Comprehensive loss***

Components of comprehensive loss, including net loss, are reported in the financial statements in the period in which they are recognized. Other comprehensive loss is defined as the change in equity during a period from

## [Table of Contents](#)

transactions and other events and circumstances from non-owner sources. Net loss and other comprehensive loss are reported net of any related tax effect to arrive at comprehensive loss. Comprehensive loss includes net loss as well as other changes in stockholders' equity that result from transactions and economic events other than those with stockholders which for the years ended December 31, 2022 and 2021 consist of unrealized loss on marketable securities.

### ***Segment information***

Operating segments are defined as components of an enterprise about which separate discrete information is available for evaluation by the chief operating decision-maker in deciding how to allocate resources and assess performance. The Company and the Company's chief operating decision-maker, the Company's chief executive officer, view the Company's operations and manage its business as a single operating segment, which is in the business of developing therapeutics to activate a person's innate regenerative potential to restore function.

### ***Foreign currency***

All periods presented are reported in US dollars. The functional currency for entities outside the United States is the US dollar. Realized and unrealized gains and losses from foreign currency transactions are reflected in the consolidated statements of operations as other expense. During the years ended December 31, 2022 and 2021 the Company recorded \$5 of foreign currency exchange loss and \$16 of foreign currency exchange gain, respectively.

### ***Cash and cash equivalents***

The Company considers all highly liquid investments with an original maturity of six months or less at acquisition to be cash equivalents which are stated at fair market value. Cash and cash equivalents at December 31, 2022 and 2021 consists entirely of cash and money market funds.

### ***Restricted cash***

The Company has \$1,699 of restricted cash as of December 31, 2022 and December 31, 2021, which represents a security deposit on the Company's Lexington, Massachusetts facility.

### ***Marketable securities***

Marketable securities represent holdings of available-for-sale marketable debt securities in accordance with the Company's investment policy. Short-term marketable securities mature within one year from the balance sheet date while long-term marketable securities mature after one year. Investments in marketable securities are recorded at fair value, with any unrealized gains and losses reported within accumulated other comprehensive income as a separate component of stockholders' equity until realized or until a determination is made that an other-than-temporary decline in market value has occurred. The amortized cost of debt securities is adjusted for amortization of premiums and accretion of discounts to maturity. Such amortization and accretion are reflected as a component of other expense. Interest on securities sold is determined based on the specific identification method and reflected as interest income. Any realized gains or losses on the sale of investment are reflected as realized gain (loss) on investments.

### ***Concentration of credit risk and off-balance sheet risk***

Financial instruments that potentially expose the Company to concentrations of credit risk consist primarily of cash and cash equivalents and marketable securities. The Company maintains its cash, cash equivalents, and restricted cash at several accredited financial institutions, in amounts that exceed federally insured limits. Marketable securities consist of short term and long term investments. Management believes that the Company is not exposed to significant credit risk due to the financial position of the depository institutions in which its money market accounts are maintained.



## Table of Contents

The Company has no significant off-balance sheet arrangements such as foreign exchange contracts, option contracts, or other foreign hedging arrangements.

### ***Significant suppliers***

The Company is dependent on third-party manufacturers to supply products for research and development activities of its programs, including preclinical and clinical testing. In particular, the Company relies and expects to continue to rely on a single manufacturer of its product candidates for use in clinical trials. The Company would be adversely affected by a significant interruption in the supply of product for use in clinical programs.

### ***Fair value measurements***

Fair value is defined as the price that would be received upon sale of an asset or paid to transfer a liability between market participants at measurement dates. ASC Topic 820, *Fair Value Measurement* (ASC 820), establishes a three-level valuation hierarchy for instruments measured at fair value. The hierarchy is based on the transparency of inputs to the valuation of an asset or liability as of the measurement date. The hierarchy defines three levels of valuation inputs, of which the first two are considered observable and the last is considered unobservable:

Level 1 Quoted prices in active markets for identical assets or liabilities.

Level 2 Inputs other than quoted prices included within Level 1 that are either directly or indirectly observable, such as quoted market prices, interest rates and yield curves.

Level 3 Unobservable inputs developed using estimates or assumptions developed by the Company, which reflect those that a market participant would use in pricing the asset or liability.

To the extent that the valuation is based on models or inputs that are less observable or unobservable in the market, the determination of fair value requires more judgment. Accordingly, the degree of judgment exercised by the Company in determining fair value is greatest for instruments categorized in Level 3. A financial instrument's level within the fair value hierarchy is based on the lowest level of any input that is significant to the fair value measurement.

The carrying amounts reflected in the consolidated balance sheet for prepaid expenses and other current assets, accounts payable, accrued expenses, other liabilities, and term loan are shown at their historical values which approximate their fair values.

### ***Property and equipment, net***

Property and equipment consist of lab equipment, furniture and office equipment and software recorded at cost. These amounts are depreciated using the straight-line method over the estimated useful lives of the assets as follows:

	<u>Estimated useful life</u>
Lab equipment	3 years
Software	3 years
Furniture and office equipment	3 years

Upon retirement or sale, the cost of the assets disposed of and the related accumulated depreciation are eliminated from the balance sheet and related gains or losses are reflected in the consolidated statements of operations.

### ***Impairment of long-lived assets***

The Company continually evaluates long-lived assets for potential impairment when events or changes in circumstances indicate the carrying value of the assets may not be recoverable. Recoverability is measured by comparing the book values of the assets to the expected future net undiscounted cash flows that the assets are expected to generate. If such assets are considered to be impaired, the impairment to be recognized is measured by the amount by which the book values of the assets exceed their fair value. The Company did not recognize any impairment losses for the years ended December 31, 2022 and 2021.

### ***Research and development costs and accruals***

Research and development expenses include salaries and benefits, materials and supplies, preclinical and clinical trial expenses, stock-based compensation expense, depreciation of equipment, contract services and other outside expenses. The Company has entered into various research and development-related contracts with research institutions, contract research organizations, contract manufacturers and other companies. These agreements are generally cancelable, and related payments are recorded as research and development expenses as incurred. Costs of certain development activities, such as manufacturing, preclinical and clinical trial expenses, are recognized based on an evaluation of the progress to completion of specific tasks. Payments for these activities are based on the terms of the individual arrangements, which may differ from the pattern of costs incurred, and are reflected in the consolidated financial statements as prepaid or accrued research and development costs. Nonrefundable advance payments for goods or services to be received in the future for use in research and development activities are deferred and capitalized. The capitalized amounts are expensed as the related goods are delivered or the services are performed. Costs incurred in obtaining technology licenses are charged to research and development expense as acquired in-process research and development if the technology licensed has not reached technological feasibility and has no alternative future use.

### ***Leases***

The Company accounts for leases under ASC 842, *Leases*. The Company determines if an arrangement is, or contains, a lease at inception and, if so, records a right-of-use (ROU) asset and a lease liability on the consolidated balance sheet for any lease with a term longer than 12 months.

ROU 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. ROU assets and liabilities are recognized at the lease commencement date based on the present value of lease payments to be made over the lease term. The ROU asset also includes any lease payments made at or before the lease commencement date and excludes lease incentives received. As the Company's lease does not provide an implicit rate, the Company uses its incremental borrowing rate based on the information available at the lease commencement date in determining the present value of lease payments. The lease terms may include options to extend or terminate the lease when it is reasonably certain that the Company will exercise that option. Operating lease expense is recognized on a straight-line basis over the lease term. The Company has elected to not apply the recognition requirements of ASC 842 for short-term leases, which is defined as a lease that, at the lease commencement date, has a lease term of 12 months or less and does not include an option to purchase the underlying asset that the Company is reasonably certain to exercise.

For real estate lease agreements entered into or modified after the adoption of ASC 842 that include lease and non-lease components, the Company has elected to account for the lease and non-lease components, such as common area maintenance charges, as a single lease component.

### ***Collaborative arrangements***

The Company analyzes its collaborative arrangements to assess whether they are within the scope of ASC 808, *Collaborative Arrangements* (ASC 808) to determine whether such arrangements involve joint operating

## [Table of Contents](#)

activities performed by parties that are both active participants in the activities and exposed to significant risks and rewards dependent on the commercial success of such activities. This assessment is performed throughout the life of the arrangement based on changes in the responsibilities of all parties in the arrangement. For collaboration arrangements within the scope of ASC 808 that contain multiple elements, the Company first determines which elements of the collaboration are deemed to be within the scope of ASC 808 and those that are more reflective of a vendor-customer relationship (e.g., a licensing arrangement) where the contracted party has obtained goods or services that are an output of the Company's ordinary activities in exchange for a consideration and therefore within the scope of ASC 606, *Revenue from Contracts with Customers* (ASC 606). For those elements of the arrangement that are accounted for pursuant to ASC 606, including those to which ASC 606 is applied by analogy, the Company applies the five-step model described in the Company's revenue recognition policy. For elements of collaborative arrangements that are accounted for pursuant to ASC 808, an appropriate and rational recognition method is determined and applied consistently. Reimbursements from the counterparty that are the result of a collaborative relationship with the counterparty, instead of a customer relationship, such as co-development or clinical activities, are recorded as a reduction to research and development expense as the services are performed. Similarly, amounts that are owed to a collaboration partner related to the co-development clinical activities are recognized as research and development expense.

The Company enters into out-licensing agreements that are within the scope of ASC 606. The terms of such out-license agreements include licenses to functional intellectual property (IP), given the functionality of the intellectual property is not expected to change substantially as a result of the licensor's ongoing activities. Such arrangements typically include payment of one or more of the following: non-refundable up-front license fees; reimbursement of certain costs; development and regulatory milestone payments and milestone payments based on the level of sales; and royalties on net sales of licensed products.

The Company considers the economic and regulatory characteristics of the licensed IP, research, development, manufacturing and commercialization capabilities of the licensee and the availability of the associated expertise in the general marketplace to determine if it has standalone value at the inception of the licensing arrangement, which would make the license distinct. In addition, the Company considers whether the licensee can benefit from a promise for its intended purpose without the receipt of any additional good or services promised in the contract, whether the value of the license is dependent on the remaining goods and services, whether there are other vendors that could provide the remaining promise, and whether the license is separately identifiable from the remaining good and services. For licenses that are combined with other goods and services, 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 progress and related revenue recognition. The measure of progress, and thereby periods over which revenue should be recognized, are subject to estimates by management and may change over the course of the research and development and licensing agreement. Such a change could have a material impact on the amount of revenue the Company records in future periods.

Revenue is allocated to the licensed IP on a relative standalone selling price basis and, for functional IP, is recognized at a point when the licensed IP is made available for the customer's use and benefit, which generally occurs at the inception of the arrangement. However, in cases, where the functionality of the IP is expected to substantively change as a result of activities of the Company that do not transfer additional promised goods or services, or in cases, where there is an expectation that the Company will undertake activities to change the standalone functionality of the IP and the customer is contractually or practically required to use the latest version of the IP, revenue for the license to functional IP is recognized over time.

Development and regulatory milestone fees, which are a type of variable consideration, are recognized as revenue to the extent that it is probable that a significant reversal will not occur. The Company recognizes royalty revenue and sales-based milestones at the later of (i) when the related sales occur, or (ii) when the performance obligation to which the royalty has been allocated has been satisfied.

## [Table of Contents](#)

The Company has entered into a collaboration arrangement with Astellas Pharma Inc. (Astellas), as further described in Note 13, “*Collaboration agreement*”, of notes to consolidated financial statements.

### **Revenue recognition**

The Company accounts for contracts with customers in accordance with ASC 606, including all amendments thereto. This standard applies to all contracts with customers, except for contracts that are within the scope of other standards, such as collaborative arrangements and leases. The Company’s disclosure within the below sections or elsewhere within these consolidated financial statements reflects the Company’s accounting policies in compliance with this standard.

Under ASC 606, an entity recognizes revenue when or as its customer obtains control of promised goods or services, in an amount that reflects the consideration that the entity expects to receive in exchange for those goods or services. To recognize revenue for arrangements that an entity determines are within the scope of ASC 606, the entity performs the following five steps: (i) identify the contract(s) with a customer; (ii) identify the performance obligations in the contract; (iii) determine the transaction price, including variable consideration, if any; (iv) allocate the transaction price to the performance obligations in the contract; and (v) recognize revenue when (or as) the entity satisfies its performance obligations. The Company only applies the five-step model to contracts when it is probable that the entity will collect substantially all of the consideration to which it will be entitled in exchange for the goods or services it transfers to the customer. Once a contract is determined to be within the scope of ASC 606, the Company assesses the goods or services promised within each contract and identifies as a performance obligation each promise to transfer to the customer either (a) a good or service (or bundle of goods and services) that is distinct, or (b) a series of distinct goods and services that are substantially the same and have been the same pattern of transfer to the customer.

The Company assesses whether each promised good or service is distinct for the purpose of identifying the performance obligations in the contract. This assessment involves subjective determinations and requires management to make judgments about the individual promised goods or services and whether such are separable from the other aspects of the contractual relationship. Promised goods and services are considered distinct provided that: (i) the customer can benefit from the good or service either on its own or together with other resources that are readily available to the customer (that is, the good or service is capable of being distinct) and (ii) the entity’s promise to transfer the good or service to the customer is separately identifiable from other promises in the contract (that is, the promise to transfer the good or service is distinct within the context of the contract). In assessing whether a promised good or service is distinct, the Company considers factors such as the research, manufacturing and commercialization capabilities of the collaboration partner (the “customer” in this type of arrangement) and the availability of the associated expertise in the general marketplace. The Company also considers the intended benefit of the contract in assessing whether a promised good or service is separately identifiable from other promises in the contract. If a promised good or service is not distinct, an entity is required to combine that good or service with other promised goods or services until it identifies a bundle of goods or services that is distinct. For each arrangement that results in revenues, the Company identifies all performance obligations, which may include, for example, a license to IP and know-how, research and development activities, and/or manufacturing services.

In addition to any upfront payment, if the consideration promised in a contract includes a variable amount, the Company estimates the amount of consideration to which it will be entitled in exchange for transferring the promised goods or services to a customer. The Company determines the amount of variable consideration by using the expected value method or the most likely amount method. The Company includes the estimated variable consideration in the transaction price to the extent it is probable that a significant reversal of cumulative revenue recognized will not occur. At the end of each subsequent reporting period, the Company re-evaluates the estimated variable consideration included in the transaction price 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 in the period of adjustment.

## Table of Contents

If an arrangement includes development and regulatory milestone payments, the Company evaluates whether the milestones are considered probable of being reached and estimates the amount to be included in the transaction price using the most likely amount method. There is considerable judgment involved in determining whether it is probable that a significant revenue reversal would not occur. If it is probable that a significant revenue reversal will not occur, the associated milestone value is included in the transaction price. Milestone payments that are not within the control of the Company or of the licensee such as regulatory approvals, are generally not considered probable of being achieved until those approvals are received. At the end of each subsequent reporting period, the Company re-evaluates the probability of achievement of all milestones subject to 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.

For contracts that include sales-based royalties (including milestone payments based on the level of sales) promised in the exchange for licenses of intellectual property, and the license is deemed to be the predominant item to which the royalties relate, the Company recognizes royalty revenue and sales-based milestone payments 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. In determining the transaction price, the Company adjusts the promised amount of consideration for the effects of the time value of money if the timing of payments provides the Company or the Company's customer with a significant benefit of financing the transfer of goods and services. The Company does not assess whether a contract has a significant financing component if the expectation at contract inception is such that the period between payment by the licensees and the transfer of the promised goods or services to the licensees will be one year or less. The Company assesses each of its revenue generating arrangements in order to determine whether a significant financing component exists. The Company recognizes as revenue the amount of the transaction price that is allocated to the respective performance obligation when (or as) each performance obligation is satisfied, either at a point in time or over time. For performance obligations satisfied over time, the Company measures progress toward completion of its performance obligations using an input method based on the Company's efforts and inputs to satisfy its performance obligations relative to total expected inputs to the satisfaction of that performance obligation.

Amounts received from a customer prior to revenue recognition are recorded as deferred revenue. Amounts received from a customer that are expected to be recognized as revenue within the 12 months following the balance sheet date are classified as a current liability in the accompanying consolidated balance sheets.

### ***Patent costs***

The Company expenses patent application and related legal costs as incurred and classifies such costs as general and administrative expenses in the accompanying consolidated statements of operations.

### ***Stock-based compensation***

The Company accounts for its stock-based compensation in accordance with ASC Topic 718, *Compensation—Stock Compensation* (ASC 718). ASC 718 requires all share-based payments to employees and directors to be recognized as expense in the consolidated statements of operations and comprehensive loss based on their grant date fair values. The Company adopted FASB Accounting Standards Update (ASU) 2016-09 which identifies areas for simplification of several areas of share-based payment transactions. The Company treats non-employee grants in a manner consistent with employee grants. The Company estimates the fair value of options granted using the Black-Scholes option pricing model for stock option grants to both employees and non-employees. The Company believes the fair value of the stock options granted to non-employees is more reliably determinable than the fair value of the services provided.

The Black-Scholes option pricing model requires inputs based on certain subjective assumptions, including (a) the expected stock price volatility, (b) the expected term of the award, (c) the risk-free interest rate and (d) expected dividends. Due to the lack of sufficient company-specific historical and implied volatility data, the

## [Table of Contents](#)

Company has based its computation of expected volatility on the historical volatility of a representative group of public companies with similar characteristics to the Company, including stage of product development and life science industry focus. The historical volatility is calculated based on a period of time commensurate with the expected term assumption. The Company uses the simplified method as prescribed by the SEC Staff Accounting Bulletin No. 107, Share-Based Payment, to calculate the expected term for options granted to employees as it does not have sufficient historical exercise data to provide a reasonable basis upon which to estimate the expected term. The expected term is applied to the stock option grant group as a whole, as the Company does not expect substantially different exercise or post-vesting termination behavior among its employee population. For options granted to non-employees, the Company utilizes the contractual term of the share-based payment as the basis for the expected term assumption. The risk-free interest rate is based on a treasury instrument whose term is consistent with the expected term of the stock options. The expected dividend yield is assumed to be zero as the Company has never paid dividends and has no current plans to pay any dividends on its common stock.

The Company expenses the fair value of its share-based compensation awards to employees and non-employees on a straight-line basis over the requisite service period, which is generally the vesting period.

### ***Income taxes***

The Company accounts for income taxes using the asset and liability method in accordance with ASC Topic 740, *Income Taxes* (ASC 740) which requires the recognition of deferred tax assets and liabilities for the expected future tax consequences of events that have been recognized in the consolidated financial statements or in the Company's tax returns. Deferred tax assets and liabilities are determined on the basis of the differences between the financial statement and tax basis of assets and liabilities using enacted tax rates in effect for the year in which the differences are expected to reverse. Changes in deferred tax assets and liabilities are recorded in the provision for income taxes. The Company assesses the likelihood that its deferred tax assets will be recovered from future taxable income and, to the extent it believes, based upon the weight of available evidence, that it is more likely than not that all or a portion of the deferred tax assets will not be realized, a valuation allowance is established through a charge to income tax expense. Potential for recovery of deferred tax assets is evaluated by estimating the future taxable profits expected and considering prudent and feasible tax planning strategies. At December 31, 2022 and 2021, the Company has concluded that a full valuation allowance is necessary for its deferred tax assets (see Note 11, *Income taxes*”).

### ***Net loss per share***

Basic net loss per share is computed by dividing net loss by the weighted-average number of shares of common stock outstanding during the period. Diluted net loss per share is computed using the weighted-average number of shares of common stock outstanding during the period and, if dilutive, the weighted-average number of potential shares of common stock. Diluted net loss per share is the same as basic net loss per share for the years ended December 31, 2022 and 2021 since all potential shares of common stock instruments are anti-dilutive as a result of the loss for such periods.

Basic and diluted net loss per share attributable to common stockholders was calculated as follows:

	Year Ended December 31,	
	2022	2021
Numerator:		
Net loss	\$ (81,580)	\$ (84,686)
Denominator:		
Weighted-average shares of common stock outstanding-basic and diluted	701,518	687,025
Net loss per share-basic and diluted	<u>\$ (116.29)</u>	<u>\$ (123.26)</u>

**Recently issued and adopted accounting pronouncements**

From time to time, new accounting pronouncements are issued by the FASB or other standard setting bodies and adopted by the Company as of the specified effective date. The Company is an “emerging growth company” as defined in the Jumpstart Our Business Startups Act of 2012, as amended (Jobs Act). The Jobs Act provides that an emerging growth company can take advantage of an extended transition period for complying with new or revised accounting standards. Thus, an emerging growth company can delay the adoption of certain accounting standards until those standards would otherwise apply to private companies. The Company elected to avail itself of this extended transition period and, as a result, we will not be required to adopt new or revised accounting standards on the relevant dates on which adoption of such standards is required for other public companies.

In June 2016, the FASB issued ASU No. 2016-13, *Financial Instruments—Credit Losses* (Topic 326): Measurement of Credit Losses on Financial Instruments. The FASB has subsequently issued amendments to ASU 2016-13, which have the same effective date and transition date. These standards require that credit losses be reported using an expected losses model rather than the incurred losses model that was previously used, and establishes additional disclosures related to credit risks. For available-for-sale debt securities with unrealized losses, this standard now requires allowances to be recorded instead of reducing the amortized cost of the investment. These standards limit the amount of credit losses to be recognized for available-for-sale debt securities to the amount by which carrying value exceeds fair value and requires the reversal of previously recognized credit losses if fair value increases. The Company adopted this standard on January 1, 2023 and it did not have a material impact on the consolidated financial statements.

**3. Fair value measurements**

The Company’s financial assets measures at fair value on a recurring basis by level within the fair value hierarchy at December 31, 2022 and 2021 are summarized as follows:

	Fair Value Hierarchy	December 31, 2022		Fair Market Value
		Amortization Cost	Unrealized Gain (Loss)	
Money market funds	Level 1	\$ 30,648	\$ 1	\$ 30,649
Short-term marketable securities	Level 2	31,280	(137)	31,143
		<u>\$ 61,928</u>	<u>\$ (136)</u>	<u>\$ 61,792</u>

	Fair Value Hierarchy	December 31, 2021		Fair Market Value
		Amortization Cost	Unrealized Loss	
Money market funds	Level 1	\$ 48,160	\$ —	\$ 48,160
Short-term marketable securities	Level 2	51,116	(44)	51,072
Long-term marketable securities	Level 2	11,764	(45)	11,719
		<u>\$ 111,040</u>	<u>\$ (89)</u>	<u>\$ 110,951</u>

## [Table of Contents](#)

At December 31, 2022 and 2021, we held 14 and 18 debt securities, respectively, that were in an unrealized loss position. The unrealized losses at December 31, 2022 and 2021 were attributable to changes in interest rates and do not represent credit losses. The Company does not intend to sell the investments before recovery of their amortized cost bases, which may be at maturity. All investments mature within twelve months from December 31, 2022. The following tables summarize the Company's debt securities in an unrealized loss position, aggregated by length of time in a continuous unrealized loss position.

	December 31, 2022					
	Less than 12 Months		More than 12 Months		Total	
	Fair Market Value	Unrealized Loss	Fair Market Value	Unrealized Loss	Fair Market Value	Unrealized Loss
Short-term marketable securities	\$ 17,303	\$ (78)	\$ 9,927	\$ (135)	\$ 27,230	\$ (213)
	<u>\$ 17,303</u>	<u>\$ (78)</u>	<u>\$ 9,927</u>	<u>\$ (135)</u>	<u>\$ 27,230</u>	<u>\$ (213)</u>

	December 31, 2021					
	Less than 12 Months		More than 12 Months		Total	
	Fair Market Value	Unrealized Loss	Fair Market Value	Unrealized Loss	Fair Market Value	Unrealized Loss
Short-term marketable securities	\$ 32,991	\$ (29)	\$ —	\$ —	\$ 32,991	\$ (29)
Long-term marketable securities	11,719	(45)	—	—	11,719	(45)
	<u>\$ 44,710</u>	<u>\$ (74)</u>	<u>\$ —</u>	<u>\$ —</u>	<u>\$ 44,710</u>	<u>\$ (74)</u>

#### 4. Prepaid expenses and other current assets

Prepaid expenses and other current assets consisted of the following:

	December 31, 2022	December 31, 2021
Rent and deposits	\$ —	\$ 470
Research and development expenses	2,084	858
Accounts receivable	449	144
Insurance	1,608	2,384
Other	255	185
Total	<u>\$ 4,396</u>	<u>\$ 4,041</u>

#### 5. Property and equipment

Property and equipment include the following:

	December 31, 2022	December 31, 2021
Lab equipment	\$ 5,706	\$ 6,177
Furniture and office equipment	3,238	3,238
Software	291	291
Total	9,235	9,706
Accumulated depreciation	(6,496)	(4,184)
Property and equipment, net	<u>\$ 2,739</u>	<u>\$ 5,522</u>

The Company recognized \$2,766 and \$2,775 of depreciation expense for the years ended December 31, 2022 and 2021, respectively.



## [Table of Contents](#)

### 6. Accrued expenses

Accrued expenses consist of the following:

	December 31, 2022	December 31, 2021
Payroll and employee related expenses	\$ 4,216	\$ 4,375
Professional fees	377	767
Third-party research and development expenses	773	840
Other	525	119
Total	<u>\$ 5,891</u>	<u>\$ 6,101</u>

### 7. Debt

On December 11, 2020, the Company entered into a Loan and Security Agreement (Loan Agreement) with a commercial bank for a term loan with a principal balance of \$15,000. The Company made monthly interest only payments through November 30, 2022. The principal balance and interest will be repaid in equal monthly installments after the interest only period and continue through May 1, 2024 (Loan Maturity Date). Advances under the Loan Agreement will bear an interest rate equal to the greater of either (i) 1.50% plus the Prime Rate (as reported in *The Wall Street Journal*, subject to an interest rate floor of zero) or (ii) 4.75%. The interest rate at December 31, 2022 was 9.0%. Interest expense related to the Loan Agreement was \$961 for the year ended December 31, 2022 and \$764 for the year ended December 31, 2021.

The Company may prepay the advance made under the Loan Agreement in whole, at any time subject to a prepayment premium equal to: (a) 2.0% of the then-outstanding principal amount of the advance, if such prepayment occurs on or prior to the first anniversary of the Closing Date; (b) 1.0% of the then-outstanding principal amount of the advance, if such prepayment occurs after the first anniversary of the Closing Date and on or prior to the second anniversary of the Closing Date; and (c) 0.0% of the then-outstanding principal amount of the advance, if such prepayment occurs after the second anniversary of the Closing Date. The prepayment premium is waived if the term loan is refinanced by the bank (in its sole and absolute discretion) on or prior to the Loan Maturity Date.

The Company will pay a final payment of \$150, which will occur on the earliest of: (i) the Loan Maturity Date; (ii) the date that the Company prepays all of the outstanding principal in full; (iii) the date the loan payments are accelerated due to an event of default; or (iv) the termination of the Loan Agreement. The Company is accruing the final payment over the term of the loan. The term loan is secured by substantially all of the Company's assets, excluding intellectual property.

### 8. Stockholders' equity

#### *Preferred stock*

The Company has authorized 10,000,000 shares of \$0.001 par value preferred stock of which no shares were issued or outstanding as of December 31, 2022.

#### *Common stock*

The Company has authorized 200,000,000 shares of \$0.001 par value common stock of which 705,242 were issued and outstanding as of December 31, 2022. Common shares are voting, and dividends may be paid when, as and if declared by the Board of Directors.

## Table of Contents

The Company has reserved the following shares of common stock for future issuance as of December 31, 2022 and 2021:

	<b>December 31, 2022</b>	<b>December 31, 2021</b>
Stock options outstanding	114,841	136,601
Shares available for future grant under stock option plan	19,764	31,053
	<u>134,605</u>	<u>167,654</u>

### *Equity Offerings*

On December 10, 2021, the Company entered into an Equity Distribution Agreement (Sales Agreement) with Oppenheimer & Co. Inc. (Sales Agent) to sell shares of the Company's common stock, par value \$0.001 per share, with aggregate gross sales proceeds of up to \$125,000, from time to time, through an "at the market" equity offering program. Subject to the terms and conditions of the Sales Agreement, the Sales Agent may sell the shares by methods deemed to be an "at the market offering" as defined in Rule 415 promulgated under the Securities Act of 1933, as amended, including sales made through The Nasdaq Global Select Market, on any other existing trading market for the Common Stock, to or through a market maker, or, if expressly authorized by the Company, in privately negotiated transactions. The Company or Sales Agent may terminate the Sales Agreement upon notice to the other party and subject to other conditions. The Company will pay the Sales Agent a commission equal to 3.0% of the gross proceeds of any Common Stock sold through the Sales Agent under the Sales Agreement and has provided the Sales Agent with customary indemnification rights.

Issuance costs incurred related to the Sales Agreement are classified as long-term assets on the balance sheet at December 31, 2022.

### **9. Stock-based compensation**

On November 13, 2014, the Company adopted the 2014 Stock Incentive Plan (2014 Plan). All of the Company's employees, officers, directors, and consultants are eligible to be granted options to purchase common shares and restricted stock under the terms of the 2014 Plan. The Company reserved an aggregate of 171,008 shares of common stock for issuance under the 2014 Plan. As of December 31, 2022, there were no shares of common stock available for future grants under the 2014 Plan.

On September 17, 2019, the Company's board of directors and on September 19, 2019, its stockholders approved and adopted the 2019 Incentive Award Plan (2019 Plan). Under the 2019 Plan, the Company may grant stock options, stock appreciation rights, restricted stock, restricted stock units, and other stock and cash-based awards to individuals who are then employees, officers, directors or consultants of the Company, and employees and consultants of the Company's subsidiaries. A total of 62,000 shares of common stock were approved to be initially reserved for issuance under the 2019 plan. The number of shares under the 2014 Plan subject to outstanding awards as of the effective date of the 2019 Plan that are subsequently canceled, forfeited or repurchased by the Company will be added to the shares reserved under the 2019 Plan. In addition, the number of shares of common stock available for issuance under the 2019 Plan will be automatically increased on the first day of each calendar year during the ten-year term of the 2019 Plan, beginning with January 1, 2020 and ending with January 1, 2029, by the amount equal to 4% 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.

All stock option grants are non-statutory stock options except option grants to employees (including officers and directors) intended to qualify as incentive stock options under the Internal Revenue Code of 1986, as amended. Incentive stock options may not be granted at less than the fair market value of the Company's common stock on the date of grant, as determined in good faith by the Board of Directors at its sole discretion. Nonqualified stock options may be granted at an exercise price established by the Board of Directors at its sole discretion (which has

## [Table of Contents](#)

not been less than fair market value on the date of grant) and the vesting periods may vary. Vesting periods are generally four years and are determined by the Board of Directors. Stock options become exercisable as they vest. Options granted under the 2014 Plan and the 2019 Plan expire no more than ten years from the date of grant.

### **Stock options**

A summary of the stock option activity under the 2014 Plan and the 2019 Plan are as follows:

	<b>Number of shares</b>	<b>Weighted average exercise price (1)</b>	<b>Weighted average remaining contractual term (in years)</b>	<b>Aggregate intrinsic value</b>
Outstanding as of December 31, 2020	136,336	\$ 505.50	8.45	\$ 171,415
Granted	27,149	1,638.00	8.07	—
Exercised	(12,846)	101.00	—	\$ 11,652
Forfeited	(14,038)	824.00	—	—
Outstanding as of December 31, 2021	136,601	\$ 267.50	7.76	\$ 6,987
Granted	4,424	89.00	8.32	—
Exercised	(201)	62.00	—	\$ 37
Forfeited	(25,983)	902.00	—	—
Outstanding as of December 31, 2022	114,841	\$ 117.50	6.69	\$ 9,114
Options exercisable as of December 31, 2022	91,590	\$ 120.00	6.39	\$ 7,071
Options unvested as of December 31, 2022	23,251	\$ 106.00	7.84	\$ 2,043

The aggregate intrinsic value of stock options is calculated as the difference between the exercise price of the stock options and the fair value of the Company's common stock for those stock options that had exercise prices lower than the fair value of the Company's common stock.

(1) On August 17, 2022, the Company's Board of Directors approved the repricing of all options granted under the 2019 Incentive Award Plan that were held by then current employees, executives, directors, and consultants for which the exercise price per share was greater than the closing price per share of the Company's common stock on August 17, 2022 (Underwater Options) by reducing the exercise price of each Underwater Option to \$107.00, the closing price per share of the Company's common stock on August 17, 2022. See "Repricing of stock options" section for more information.

### **Stock option valuation**

The assumptions that the Company used to determine the grant-date fair value of stock options granted to employees and directors were as follows, presented on a weighted average basis:

	<b>Year Ended December 31,</b>	
	<b>2022</b>	<b>2021</b>
Risk-free interest rate	3.0%	0.5%
Expected term (in years)	6.0	6.0
Expected volatility	80.0%	79.8%
Expected dividend yield	0.0%	0.0%

The weighted-average grant date fair value of options granted to employees during the years ended December 31, 2022 and 2021 was \$79.00 and \$1,119.50 respectively.

The total grant date fair value of options vested during the years ended December 31, 2022 and 2021 was \$14,219 and \$16,304, respectively.

## [Table of Contents](#)

### ***Repricing of stock options***

On August 17, 2022, the Board of Directors approved the repricing of each Underwater Option to \$107.00, the closing price per share of the Company's common stock on August 17, 2022. Except for the modification of the exercise price, all other terms and conditions of the Underwater Options remain in effect.

The option repricing resulted in incremental stock-based compensation of \$2,505, of which \$1,630 was recorded as expense in the year ended December 31, 2022 and \$875 will be recognized as expense over the remaining vesting period.

### ***Restricted stock units***

The below summary includes restricted stock unit activity within the Company's 2019 Incentive Award Plan for the year ended December 31, 2022.

	<u>Number of shares</u>	<u>Weighted average fair value</u>
Unvested, December 31, 2021	12,526	\$477.00
Awarded	71,533	150.50
Vested	(11,029)	477.00
Forfeited	(10,997)	253.00
Unvested, December 31, 2022	<u>62,033</u>	<u>\$ 140.00</u>

### ***Stock-based compensation***

Stock-based compensation expense of \$19,831 and \$21,750 for the years ended December 31, 2022 and 2021 respectively, is included in research and development and general and administrative expenses in the Company's consolidated statements of operations and comprehensive loss.

As of December 31, 2022 and 2021, total unrecognized stock-based compensation expense relating to unvested stock options and restricted stock units was \$19,537 and \$39,112, respectively. This amount is expected to be recognized over a weighted-average period of 1.55 years and 2.49 years, respectively.

## **10. Employee stock purchase plan**

On September 20, 2019, the Company's board of directors and stockholders approved and adopted the 2019 Employee Stock Purchase Plan (ESPP) which became effective on the date of the Company's initial public offering of shares of its common stock. The ESPP permits participants to purchase common stock through payroll deductions of up to 15% of their eligible compensation. The number of shares of common stock available for issuance under the ESPP will be automatically increased on the first day of each calendar year during the first ten years of the term of the ESPP, beginning with January 1, 2020 and ending with January 1, 2029, by an amount equal to 1% 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.

The Company's first offering period of 2021 concluded on June 30, 2021 with the purchase of 141 shares in July 2021 related to this offering period. The Company's second offering period of 2021 concluded on December 31, 2021 with the purchase of 637 shares in January 2022. The Company's first offering period of 2022 concluded on June 30, 2022 with the purchase of 895 shares in July 2022 related to this offering period. As of December 31, 2022, a total of 24,511 shares remain for future offering periods. The Company's second offering period of 2022 concluded on December 31, 2022 with the purchase of 495 shares in January 2023 related to this offering.

## 11. Income taxes

Since inception in 2014, the Company has generated cumulative federal and state net operating loss and research and development credit carryforwards for which the Company has not recorded any net tax benefit due to uncertainty around utilizing these tax attributes within the respective carryforward periods.

As of December 31, 2022, the Company had federal net operating loss carryforwards of approximately \$174,107 and Massachusetts state operating loss carryforwards of approximately \$141,318 which may be available to offset future taxable income. The U.S. federal net operating loss carryforwards include \$22,399 available to reduce future taxable income through 2037 and approximately \$151,708 which do not expire and are available to reduce future taxable income indefinitely. The state net operating loss carryforwards are available to offset future taxable income through 2042. As of December 31, 2022, the Company also had federal and Massachusetts research and development tax credit carryforwards of \$8,177 and \$3,556, respectively, which are available to offset federal and state tax liabilities through 2042 and 2037, respectively.

Realization of future tax benefits is dependent on many factors, including the Company's ability to generate taxable income within the net operating loss carryforward period. Net operating loss and tax credit carryforwards may become subject to an annual limitation in the event of certain cumulative changes in the ownership interest of significant shareholders over a three-year period in excess of 50%, as provided under Sections 382 and 383 of the Code, respectively, as well as similar state provisions. These ownership changes may limit the number of carryforwards that can be utilized annually to offset future taxable income. In general, an ownership change, as defined by Section 382 of the Code, results from transactions increasing the ownership of certain shareholders or public groups in the stock of a corporation by more than 50% over a rolling three-year period. The Company has completed several financings and has conducted a study to assess whether a change of control has occurred or whether there have been multiple changes of control since inception and has determined that an ownership change did occur in March 2017. Accordingly, utilization of \$12,400 of the U.S. net operating loss carryforwards which were incurred prior to March 2017 (pre-ownership change) is limited under Section 382 of the Code. After the limitations under Section 382 of the Code, the Company may utilize approximately \$10,800 of its pre-ownership change net operating loss carryforwards based upon an annual usage of approximately \$1,600 for each of the next five years after the ownership change and approximately \$180 for each of the 15 years thereafter. The remaining pre-March 2017 ownership change net operating losses of approximately \$1,600 were written off due to expiration under limitation. The limitation has been determined by first multiplying the value of our stock at the time of the ownership change by the applicable long-term tax-exempt rate. These carryforwards may be subject to further annual limitations under Section 382 of the Code in the event of future changes in ownership. Additionally, the Company has determined an ownership change occurred in October of 2019 as a result of the IPO. Accordingly, utilization of approximately \$46,123 of the U.S. net operating loss carryforwards incurred prior to October 2019 is also limited under Section 382 of the Code. The Company has determined it will be able to utilize the entire \$46,123 of its pre-ownership change net operating loss carryforwards based upon the limitations calculated from the October 2019 ownership change. These carryforwards may be subject to further annual limitations under Section 382 of the Code in the event of future changes in ownership.

ASC 740 requires a valuation allowance to reduce the deferred tax assets reported if, based on the weight of the evidence, it is more likely than not that some portion or all of the deferred tax assets will not be realized. After consideration of all the evidence, both positive and negative, the Company has recorded a valuation allowance against its deferred tax assets at December 31, 2022 and 2021 because the Company's management has determined that it is more likely than not that the Company will not recognize the benefits of its federal and state deferred tax assets primarily due to its cumulative loss position and, as a result, a valuation allowance of approximately \$77,288 and \$50,931 as of December 31, 2022 and 2021 has been established.

The Company has no unrecognized tax benefits. The Company has not, as yet, conducted a study of its research and development credit carryforwards. Such a study 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

## Table of Contents

amounts are being presented as an uncertain tax position. A full valuation allowance has been provided against the Company's research and development credits and, if an adjustment were required, this adjustment would be offset by an adjustment to the valuation allowance. Thus, there would be no impact to the consolidated balance sheet or consolidated statements of operations if an adjustment were required. The Company has elected to recognize interest and penalties related to income tax matters as a component of income tax expense, of which no interest or penalties were recorded for the years ended December 31, 2022 and 2021.

The Company files income tax returns in the U.S. and Massachusetts. The statute of limitations for assessment by the Internal Revenue Service and Massachusetts tax authorities remains open for all years since 2014. To the extent the Company has tax attribute carryforwards, the tax years in which the attribute was generated may still be adjusted upon examination by the Internal Revenue Service or state authorities to the extent utilized in a future period. No federal or state tax audits are currently in process.

A reconciliation of the Company's pre-tax loss for the years ended December 31, 2022 and 2021 is as follows:

	<u>2022</u>	<u>2021</u>
Domestic	\$(81,586)	\$(84,624)
Foreign	4	(47)
Total	<u>\$(81,582)</u>	<u>\$(84,671)</u>

The Company's provision at December 31, 2022 and 2021 consist of the following:

	<u>2022</u>	<u>2021</u>
Current:		
Federal	\$—	\$—
State	(2)	15
Foreign	—	—
Total current	<u>\$ (2)</u>	<u>\$ 15</u>
Deferred:		
Federal	—	—
State	—	—
Foreign	—	—
Total deferred	<u>\$—</u>	<u>\$—</u>
Total (benefit) provision	<u>\$ (2)</u>	<u>\$ 15</u>

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

	<u>2022</u>	<u>2021</u>
U.S federal statutory income tax rate	21.0%	21.0%
Permanent differences	(0.1)	—
State income taxes, net of federal benefit	5.4	2.7
Research and development tax credits	5.1	3.6
State rate changes	3.7	—
Stock compensation deductions	(2.8)	1.6
Other items	—	(0.7)
Change in deferred tax asset valuation allowance	<u>(32.3)</u>	<u>(28.2)</u>
Effective income tax rate	<u>— %</u>	<u>— %</u>

## [Table of Contents](#)

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

	2022	2021
Deferred tax assets:		
Net operating loss carryforwards	\$ 45,512	\$ 36,590
Research and development tax credits	11,163	7,026
Capitalized research and development costs	10,042	—
Intangibles	478	392
Stock compensation	9,507	6,554
Accrued expenses	—	107
Deferred revenue	—	—
Other	357	176
Fixed assets	282	265
Lease liability	7,735	7,269
Gross deferred tax asset	85,076	58,379
Valuation allowance	(77,288)	(50,931)
Net deferred tax assets	\$ 7,788	\$ 7,448
Deferred tax liabilities:		
Right of use asset	(7,788)	(7,448)
Net deferred tax asset (liability)	\$ —	\$ —

## 12. Research and license agreements

### *Massachusetts Institute of Technology*

In December 2016, the Company entered into an exclusive patent license agreement (MIT License Agreement), with the Massachusetts Institute of Technology (MIT), under which the Company received an exclusive, worldwide, royalty-bearing license to certain patent rights to develop, make, have made, use, sell, offer to sell, lease and import products (Licensed Products) and to develop and perform processes (Licensed Processes) which incorporate the licensed technology for the treatment of disease, including but not limited to the prevention and remediation of hearing loss. The Company also has the right to grant sublicenses of its rights under the MIT License Agreement.

The Company is required to use diligent efforts to develop and commercialize the Licensed Products or Processes, and to make such products or processes reasonably available to the public and to spend certain minimum amounts on research and development of Licensed Products and/or Processes each year until the first commercial sale of a Licensed Product and/or a first commercial performance of a Licensed Process. The Company is also subject to certain development obligations with regards to a first Licensed Product. The Company has satisfied certain obligations related to preclinical studies and the filing of an IND for a first Licensed Product with its development activities related to FX-322. The Company's future development obligations are: (i) to commence a Phase 3 clinical trial for such Product within five years of the IND filing for such product, (ii) to file a New Drug Application or equivalent with the FDA or comparable European regulatory agency for such Product within nine years of the IND filing for such Product, and (iii) to make a first commercial sale of such Product within 11 years of the IND filing for such Product. The Company also has certain development obligations for a second Licensed Product. In the event that the Company has failed to fulfill the development timeline obligation with respect to a second Licensed Product and fails to cure such breach within ninety (90) days of written notice by MIT, MIT may restrict the licensed field to the prevention and remediation of hearing loss in humans and animals. The Company does not have the right to control prosecution of the in-licensed patent applications, and its rights to enforce the in-licensed patents are subject to certain limitations.

Upon entering into the MIT License Agreement, the Company paid a \$50 license fee payment and issued to MIT shares of our common stock equal to 5% of total then-outstanding capital stock. The Company is required to pay certain annual license maintenance fees which may be credited to running royalties during the same calendar

## Table of Contents

year, if any, and to make potential milestone payments up to \$2,900 on each Licensed Product or Licensed Process. In addition, the Company is required to pay a low single-digit royalty on Licensed Products and Licensed Processes and a low-twenties royalty on sublicense revenues.

The MIT License Agreement will remain in effect until the expiration or abandonment of all issued patents and filed patent applications licensed thereunder remain in effect, unless terminated earlier. The Company has the right to terminate for any reason upon a 3-month prior written notice. MIT shall have the right to terminate if the Company ceases to carry on any business related to the MIT License Agreement. MIT may terminate the MIT License Agreement for the Company's material breach uncured within ninety (90) days (or thirty (30) days in the case of nonpayment). MIT may also terminate the MIT License Agreement if the Company or our affiliates commence any action against MIT to declare or render any claim of the licensed patent rights invalid, unpatentable, unenforceable, or non-infringed (a patent challenge), or if our sublicensee commences such actions and the Company does not terminate such sublicense within thirty (30) days after MIT's demand. MIT has the right to increase all payments due, instead of terminating the MIT License Agreement in the case of a patent challenge.

In May 2019, the Company entered into an amendment with MIT, updating the diligence milestones for a second Licensed Product.

In March 2022, the Company entered into an amendment with MIT, removing a patent and certain patent applications from the MIT License Agreement which were unrelated to the Company's hearing and MS programs and which were not being utilized by the Company.

The patents in-licensed by the Company from MIT pursuant to the MIT License claim inventions created by, among others, Dr. Langer, one of the Company's directors. Pursuant to MIT's policy on the ownership, distribution and commercial development of MIT technology, or the MIT Policy, inventors of intellectual property invented at MIT, including the inventors of patents licensed to the Company under the MIT License, are entitled to a portion of the net royalty income derived by MIT from such inventions, but not amounts received by MIT from the sale of common stock previously issued by the Company to MIT pursuant to the MIT License. Accordingly, pursuant to the MIT Policy, Dr. Langer is entitled to receive a portion of the amounts the Company pays to MIT under the MIT License, including the Astellas Royalty Payment and future milestone payments or royalties, if any, that the Company may receive pursuant to the Astellas Agreement. Accordingly, Dr. Langer has received \$11 and \$6 from MIT under the MIT Policy during the years ended December 31, 2022 and 2021, respectively. Refer to Note 18, "*Related party transactions*", for all related party disclosures.

### ***The Scripps Research Institute (California Institute for Biomedical Research)***

In September 2018, the Company entered into a license agreement (CALIBR License Agreement) with the California Institute for Biomedical Research (CALIBR) under which the Company received an exclusive, worldwide, royalty-bearing license to certain patent rights to make, have made, use, sell, offer to sell, and import products (CALIBR Licensed Products) which incorporate the licensed technology for the treatment of multiple sclerosis. The Company also have the right to grant sublicenses of our rights under the CALIBR License Agreement. CALIBR reserves the right to use for itself and the right to grant non-exclusive licenses to other nonprofit or academic institutions, for any internal research and educational purposes.

The Company is required to use commercially reasonable efforts to develop, manufacture, and sell at least one CALIBR Licensed Product. The Company is also subject to certain milestone timeline obligations, which may be extended in certain circumstances as set forth in the CALIBR License Agreement. In October 2021, the Company entered into an amendment with CALIBR which updated the milestone obligations to: (i) initiate a Phase 2 clinical trial (or equivalent) for a CALIBR Licensed Product by December 31, 2023 and (ii) initiate a Phase 3 clinical trial (or equivalent) for a CALIBR Licensed Product by December 31, 2025. The Company does not have the right to control prosecution of the in-licensed patent applications, and the Company's rights to enforce the in-licensed patents are subject to certain limitations.



## [Table of Contents](#)

Upon entering into the CALIBR License Agreement, the Company made a \$1,000 license fee payment and is required to make milestone payments up to \$26,000 for each Category of CALIBR Licensed Products (Category 1 is any CALIBR Licensed Products containing a compound that modulates any muscarinic receptor and Category 2 is any CALIBR Licensed Products not included in Category 1 that could differentiate oligodendrocyte precursor cells from *in vitro* studies and/or are active in animal models relevant to MS). The Company is also required to pay a middle single-digit royalty on CALIBR Licensed Products and a royalty on sublicense revenues ranging from low-teen percentage to 50%.

The CALIBR License Agreement shall continue in effect until expiration of all Company obligations to pay royalties. Royalties shall be payable on a country-by-country and CALIBR Licensed Product-by-CALIBR Licensed Product basis upon the later of (1) the expiration or abandonment of all valid claims of the licensed patent rights in such country and (2) ten years from the first commercial sale of each CALIBR Licensed Product. The Company may terminate the CALIBR License Agreement at will upon a 30-day prior written notice. The Company may also elect to terminate its license to one or more licensed patents in any or all jurisdictions by giving ninety (90) days' prior written notice to CALIBR. CALIBR may terminate the CALIBR License Agreement for material breach uncured within thirty (30) days. CALIBR has the right to terminate or reduce the license to a non-exclusive license if the Company fails to use diligent efforts to develop and commercially exploit CALIBR Licensed Products.

### ***Massachusetts Eye and Ear (Formerly Massachusetts Eye and Ear Infirmary)***

In February 2019, the Company entered into an Non-Exclusive Patent License Agreement (MEE License Agreement) with the Massachusetts Eye and Ear (MEE) under which it received a non-exclusive, non-sublicensable, worldwide, royalty-bearing license to certain patent rights to develop, make, have made, use, sell, offer to sell, lease and import products and to develop and perform processes which incorporate the licensed technology for the treatment or prevention of hearing loss (MEE licensed products).

The Company is obligated to use diligent efforts to develop and commercialize the MEE licensed products. The Company met one of its milestone timeline obligations by dosing a first subject in a Phase 2 trial by December 31, 2020. The Company is still subject to a milestone timeline obligation to dose a first subject in a Phase 3 trial by December 31, 2024. The Company does not control the filing, prosecution, enforcement, and defense of any licensed patent rights.

Upon entering the MEE License, the Company made a \$20 license fee payment. The Company is obligated to pay certain annual license maintenance fees between \$5 and \$7.5 per each MEE patent family case number included in the licensed MEE patent rights prior to first commercial sale of an MEE licensed product. The Company is also obligated to pay a minimum annual royalty payment of \$15 per each MEE patent family case number included in the licensed MEE patent rights after first commercial sale of an MEE licensed product. The Company is also obligated to make milestone payments up to \$350 on each product or process that incorporates the licensed patent rights. In addition, the Company has agreed to pay a low single-digit royalty on products and processes that incorporate the licensed patent rights.

The MEE License Agreement shall remain in effect until all issued patents and filed patent applications within the licensed patent rights have expired or been abandoned, unless terminated earlier. The Company has the right to terminate the MEE License Agreement at will by giving thirty (30) business days advance written notice to MEE. MEE has the right to terminate the MEE License Agreement if the Company fails to make any payment due within thirty (30) business days after MEE notifies the Company of such failure. MEE shall have the right to terminate if the Company fails to maintain the required insurance. MEE shall also have the right to terminate the MEE License Agreement upon forty-five (45) business days written notice if the Company becomes insolvent. MEE has the right to terminate for any other default not cured within sixty (60) business days written notice. MEE also has the right to terminate if the Company or its affiliates challenge the validity of the licensed patent rights.

### **13. Collaboration agreement**

In July 2019, the Company entered into a License and Collaboration Agreement with Astellas (Astellas Agreement), under which the Company granted Astellas an exclusive, royalty-bearing, sub-licensable, nontransferable license to certain patent rights to research, develop, manufacture, have manufactured, use, seek and secure regulatory approval for, commercialize, offer for sale, sell, have sold and import, and otherwise exploit licensed products containing both a GSK-3 inhibitor and an HDAC inhibitor (Astellas Licensed Products), including the product candidate FX-322, outside of the United States. The Company also granted Astellas a right of first negotiation and a right of last refusal if it entered into any negotiation or agreement of any kind (other than an acquisition of all of the stock or assets of the Company) with any third party under which such third party would obtain the right to develop, manufacture, or commercialize Astellas Licensed Products in the United States.

These parties have agreed to use commercially reasonable efforts to carry out development activities assigned to it under an agreed-upon development plan. Astellas has agreed to use commercially reasonable efforts to obtain regulatory approval for at least one Astellas Licensed Product in sensorineural hearing loss and in age-related hearing loss, in each case, in one major Asian country and one major European country. The Company has agreed to use commercially reasonable efforts to obtain regulatory approval for at least one Astellas Licensed Product in the United States. Astellas has the sole right to commercialize the Astellas Licensed Products outside of the United States, and the Company has the sole right to commercialize the Astellas Licensed Products in the United States. Astellas has agreed to use commercially reasonable efforts to commercialize Astellas Licensed Products in a major Asian country and a major European country following receipt of regulatory approval in such countries.

The collaboration is governed by a joint steering committee (JSC) established under the Astellas Agreement and shall be comprised of three representatives each from the Company and Astellas. The JSC shall oversee and coordinate the overall conduct of the development, manufacture and commercialization of the Astellas Licensed Products. All decisions of JSC shall be taken through a unanimous vote with each party's representatives collectively having one vote. Both the parties shall be responsible for carrying out the development and manufacturing activities in their defined territory in accordance with the plan as reviewed and approved in the JSC.

As consideration for the licensed rights under the Astellas Agreement, Astellas paid the Company an upfront payment of \$80,000 in July 2019 and has agreed to pay potential development milestone payments up to \$230,000 and commercialization milestones of up to \$315,000. Specifically, the Company would receive development milestone payments of \$65,000 and \$25,000 upon the first dosing of a subject in a Phase 2b clinical trial for SNHL in Europe and Asia, respectively and \$100,000 and \$40,000 upon the first dosing of a subject in a Phase 3 clinical trial for SNHL in Europe and Asia, respectively. If the Astellas Licensed Products are successfully commercialized, the Company would be eligible for up to \$315,000 in potential commercial milestone payments and also tiered royalties at rates ranging from low- to mid-teen percentages. The parties shall share equally, on a 50/50 basis, all out-of-pocket costs and joint study costs for all the joint activities conducted pursuant to the development plans or the joint manufacturing plan.

The Astellas Agreement remains in effect until the expiration of all royalty obligations. Royalties are paid on a licensed product-by-licensed product and country-by-country basis until the latest of (i) the expiration of the last valid claim in the licensed patent rights with respect to such Astellas Licensed Product in such country or (ii) a set number of years from the first commercial sale of such Astellas Licensed Product in such country. Astellas may terminate the Astellas Agreement at will upon 60 days' written notice. Each party has the right to terminate the Astellas Agreement due to the other party's material breach if such breach remains uncured for 90 days (or 45 days in the case of nonpayment) or if the other party becomes bankrupt.

## [Table of Contents](#)

The Astellas Agreement is a collaborative agreement that is within the scope of ASC 808. The Company analyzed the joint research and development activities to assess whether they fall within the scope of ASC 808, and will reassess this throughout the life of the arrangement based on changes in the roles and responsibilities of the parties. Based on the terms of the arrangement as outlined above, both parties are deemed to be active participants in the collaboration. Both parties are performing research and development activities in their defined territory and will be performing joint clinical studies in accordance with the development plan and the study protocol approved by the JSC. Additionally, Astellas and the Company are exposed to significant risks and rewards dependent on the commercial success of any product candidates that may result from the collaboration. As such, the collaboration arrangement is deemed to be within the scope of ASC 808.

The arrangement consists of two components; the license of IP and the research and development activities, including committee participation, to support the co-development and research plan. Under the provisions of ASC 808, the Company has determined that it will apply the guidance in ASC 606 to recognize the revenue related to the license since that component of the arrangement is more reflective of a vendor-customer relationship. The Company determined that the license and the related research and development services associated with the Phase 2a clinical study were not distinct from one another, as the license has limited value to Astellas without the performance of the research and development activities and the Phase 2a study is essential to the use of the license. As such, the Company determined that these activities should be accounted for as a single combined performance obligation.

Revenue associated with this single performance obligation was recognized as the research and development work was performed, using an input method on the basis of research and development costs incurred to date relative to total research and development costs expected to be incurred. The transfer of control occurred over this time period and, in management's judgment, was the best measure of progress towards satisfying the performance obligation. The Company determined that the period of performance of the research and development services began upon the signing of the Astellas Agreement and continued until the completion of the Phase 2a clinical trial of FX-322 (FX-322-202). The transaction price of \$80,000 was allocated to the single combined performance obligation and recorded as deferred revenue in July 2019 when it was received. This upfront payment was recognized as revenue over the period from July 2019 until June 30, 2021, the completion date of the Phase 2a clinical trial (FX-322-202), using the input method.

The potential development and regulatory milestone payments are fully constrained until the Company can conclude that achievement of the milestone is probable and that it is probable that recognition of revenue related to the milestone will not result in a significant reversal in the amount of cumulative revenue recognized when the uncertainty associated with the variable consideration is ultimately resolved and as such these have been excluded from the transaction price. As part of its evaluation of the constraint, the Company considers numerous factors, including the fact that achievement of the milestones is outside the control of the Company and contingent upon the future success of clinical trials, the licensee's efforts, and the receipt of regulatory approval. Any consideration related to sales-based milestones (including royalties) will be recognized when the related sales occur as these amounts have been determined to relate predominantly to the license granted to Astellas and therefore are recognized at the later of when the performance obligation is satisfied, or the related sales of licensed products occur. The Company re-evaluates the transaction price, including its estimated variable consideration included in the transaction price and all constrained amounts, at each reporting period and as uncertain events are resolved or other changes in circumstances occur, 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.

The Astellas Agreement contains joint research and development activities that are not within the scope of ASC 606. The Company will recognize research and development expense related to the joint study costs for all the joint activities in future periods and reimbursements received from Astellas will be recognized as an offset to research and development expense on the consolidated statements of operations during the development period. In the year ended December 31, 2022 and 2021, the Company invoiced Astellas \$392 and \$885 for joint costs.

## [Table of Contents](#)

### 14. Leases

On December 11, 2020, the Company entered into an Agreement for Termination of Lease and Voluntary Surrender of Premises (Lease Termination Agreement) with ARE-MA Region No. 20, LLC (Landlord) for the Company's office and laboratory space in Woburn, Massachusetts. The Lease Termination Agreement provides that the Lease Agreement, dated as of August 14, 2016, by and between the Company and Landlord (as the same may have been amended, the Lease) will terminate on March 31, 2021, unless the Company elects to extend the term of the Lease. The Company exercised the option to extend the lease until May 31, 2021.

On January 7, 2020 the Company entered into an indenture of lease (Lexington Lease) with HCP/KING 75 Hayden LLC, for the lease of approximately 61,307 square feet of rentable area in Lexington, Massachusetts or (Lexington Premises). The Lexington Lease commenced on December 11, 2020. In the second quarter of 2021, the Company began using the Lexington Premises as its principal executive offices and laboratory for research and development. The term of the Lexington Lease is expected to end on May 31, 2031. The Company also has the option to extend the Initial Term for two additional terms of five years each.

The Company's rent expense for the years ended December 31, 2022 and 2021 was \$4,802 and \$4,960, respectively.

<u>Other information</u>	<u>December 31, 2022</u>
Weighted-average remaining operating lease term	8.4 years
Weighted-average discount rate	8.5%

The table below reconciles the undiscounted cash flows to the operating lease liability recorded on the consolidated balance sheet as of December 31, 2022.

2023	4,273
2024	4,402
2025	4,534
2026	4,670
2027	4,810
Thereafter	17,530
Total minimum lease payments	40,219
Less: amount of lease payments representing interest	(11,437)
Present value of future lease payments	28,782
Less: current lease liabilities	(2,021)
Noncurrent lease liabilities	<u>\$ 26,761</u>

Future aggregate minimum payments under the noncancelable operating lease as of December 31, 2022 are as follows:

2023	\$ 4,273
2024	4,402
2025	4,534
2026	4,670
2027 and beyond	22,340
Total minimum lease payments	<u>\$ 40,219</u>

### 15. Sublease

On July 8, 2022, the Company entered into a Sublease Agreement with SalioGen Therapeutics, Inc. (SalioGen) to sublease approximately 30,040 rentable square feet of the Company's office space in Lexington, MA for a two-year term. The base sublease rent per month for the first and second year of the sublease is \$197 and \$203,

## [Table of Contents](#)

respectively. In addition to base rent, SalioGen will pay 49% of operating costs and taxes payable under the Company's lease for the Lexington, MA office space.

Since commencement, the Company has accounted for the Lexington, MA office space as an operating lease. In accordance with ASC 842, the Company concluded the sublease is also an operating lease. The Company recognized sublease income of \$1,186 for the year ended December 31, 2022. The below table shows the expected future sublease income as of December 31, 2022.

	Years Ending December 31,	Sublease Income
2023		\$ 2,371
2024		1,383
Total future sublease income		<u>\$ 3,754</u>

## 16. Commitments and contingencies

### *Contract commitments*

The Company enters into contracts in the normal course of business with CROs, CMOs, universities, and other third parties for preclinical research studies, clinical trials and testing and manufacturing services. These contracts generally do not contain minimum purchase commitments and are cancelable by us upon prior written notice although, purchase orders for clinical materials are generally non-cancelable. Payments due upon cancellation consist only of payments for services provided or expenses incurred, including non-cancelable obligations of our service providers, up to the date of cancellation or upon the completion of a manufacturing run.

### *Guarantees*

The Company has identified the guarantees described below as disclosable, in accordance with ASC 460, *Guarantees*.

As permitted under Delaware law, the Company indemnifies its officers and directors for certain events or occurrences while the officer or director is, or was, serving at the Company's request in such capacity. The maximum potential amount of future payments the Company could be required to make is unlimited; however, the Company has directors' and officers' insurance coverage that should limit its exposure and enable it to recover a portion of any future amounts paid.

The Company is a party to a number of agreements entered into in the ordinary course of business that contain typical provisions that obligate the Company to indemnify the other parties to such agreements upon the occurrence of certain events. Such indemnification obligations are usually in effect from the date of execution of the applicable agreement for a period equal to the applicable statute of limitations. The aggregate maximum potential future liability of the Company under such indemnification provisions is uncertain.

The Company leases office space in Lexington, Massachusetts under a ten-year noncancelable lease. The \$1,699 security deposit for this lease is classified as restricted cash as of December 31, 2022. The Company exited the Woburn, Massachusetts facility in the second quarter of 2021. The Company has standard indemnification arrangements under these leases that require it to indemnify the landlord against all costs, expenses, fines, suits, claims, demands, liabilities, and actions directly resulting from any breach, violation, or nonperformance of any covenant or condition of the lease.

As of December 31, 2022 and 2021, the Company had not experienced any losses related to these indemnification obligations, and no material claims with respect thereto were outstanding. The Company does not expect significant claims related to these indemnification obligations and, consequently, concluded that the fair value of these obligations is negligible, and no related reserves have been established.

### ***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.

On June 3, 2021 and June 22, 2021, purported stockholders of the Company filed putative class action lawsuits in the U.S. District Court for the District of Massachusetts against the Company and the Company's Chief Executive Officer, President, and Director, David Lucchino. On March 21, 2022, the two lawsuits were consolidated into a single lawsuit, *Quinones et al. v. Frequency Therapeutics, Inc. et al.* and on May 16, 2022, the Company's Chief Development Officer, Dr. Carl LeBel, was added as a defendant. The plaintiffs allege violations of Sections 10(b), 20(a) and Rule 10b5 of the Securities Exchange Act of 1934, as amended (the Exchange Act), due to allegedly false and misleading statements and omissions about the Company's Phase 2a clinical trial (FX-322-202) for its product candidate FX-322 in the Company's public disclosures between October 29, 2020 and March 22, 2021. The lawsuit seeks, among other things, damages in connection with the Company's allegedly artificially inflated stock price between October 29, 2020 and March 22, 2021 as a result of those allegedly false and misleading statements and omissions, as well as interest, attorneys' fees and costs. The Company intends to vigorously defend against all claims asserted in the lawsuit. The Company filed a motion to dismiss the Amended Complaint on July 15, 2022. This matter is at the very early stages of the legal process, and as a result, the Company is not able to estimate a range of possible loss. Since an estimate of the possible loss or range of loss cannot be made at this time, no accruals have been recorded as of December 31, 2022.

On June 21, 2022, the Delaware Chancery Court dismissed a lawsuit brought by two purported stockholders against the Company and others. For previously reported information on this lawsuit, refer to Part I, Item 3, "Legal Proceedings" of the Company's 2021 Form 10-K. On August 16, 2022, these same two purported stockholders of the Company filed a similar lawsuit in Delaware Superior Court against (i) the Company, (ii) Computershare Inc., and (iii) Computershare Trust Company, N.A., entitled *The Gregory J. Parseghian Revocable Trust, et al. v. Frequency Therapeutics, Inc., et al.* The lawsuit alleges causes of action against the Company for breach of the statutory duty of care, negligence, conversion, and unjust enrichment, based on allegations that actions were taken to prevent the purported stockholders from selling their shares in the Company. The Company intends to vigorously defend against all claims asserted in the lawsuit. This matter is at the very early stages of the legal process, and as a result, the Company is not able to estimate a range of possible loss. Since an estimate of the possible loss or range of loss cannot be made at this time, no accruals have been recorded as of December 31, 2022.

On June 30, 2022, a purported stockholder of the Company filed a shareholder derivative complaint in the U.S. District Court for the District of Delaware purportedly on the Company's behalf against members of the Company's board of directors and the Company as a nominal defendant, entitled *Dewey v. Cohen et al.* The complaint alleges (i) violations of Section 10(b) and Rule 10b5 of the Exchange Act, (ii) breach of fiduciary duty, (iii) aiding and abetting breach of fiduciary duty, (iv) unjust enrichment, and (v) waste of corporate assets. The claims are based on the same underlying allegations as the *Quinones* case (described above). The complaint seeks, among other things, monetary damages, interest, attorneys' fees and costs. On September 27, 2022, this lawsuit was stayed pending resolution of the *Quinones* case. This matter is at the very early stages of the legal process, and as a result, the Company is not able to estimate a range of possible loss. The Company's board members are each party to an indemnification agreement with the Company that may require the Company

## [Table of Contents](#)

to reimburse the board members for certain expenses and other costs related to this lawsuit. Since an estimate of the possible loss or range of loss cannot be made at this time, no accruals have been recorded as of December 31, 2022.

### **17. Employee benefit plan**

Employees of the Company are eligible to participate in the Company's 401(k) retirement plan (401(k) Plan). Participants may contribute up to 90% of their annual compensation to the 401(k) Plan, subject to statutory limitations. Under the 401(k) Plan Safe Harbor Match, the Company matches 100% of the first 5% of employee contributions and vests 100% at time of match. For the years ended December 31, 2022 and 2021, the Company made matching contributions of \$550 and \$723, respectively.

### **18. Related party transactions**

As disclosed in Note 12, "*Research and license agreements*", the Company entered into the MIT License Agreement in December 2016. The patents in-licensed by the Company from MIT pursuant to the MIT License Agreement claim inventions created by, among others, Dr. Langer, one of the Company's directors. Accordingly, Dr. Langer has received \$11 and \$6 from MIT under the MIT Policy during the years ended December 31, 2022 and 2021, respectively.

The Company's lease for its Woburn, Massachusetts facility, terminated in May 2021 as disclosed in Note 14, "*Leases*", was with an entity affiliated with one of the Company's directors and shareholders.

### **19. Subsequent events**

The Company has evaluated subsequent events for recognition, remeasurement and disclosure purposes. The identified subsequent events are as follows:

- a) On February 13, 2023, the Company announced a restructuring in which its hearing program was discontinued. As a result, the Company reduced its workforce by approximately 55% to better align with the needs of its business. The total personnel costs related to the restructuring are estimated to be approximately \$4,000 in future cash outlays primarily related to severance costs and related expenses.
- b) On November 3, 2023, the Company effected a reverse stock split of its common stock at a ratio of 1-for-50 (the "Reverse Split"). Upon the effectiveness of the Reverse Split, (i) every 50 shares of outstanding common stock were reclassified and combined into one share of common stock, and (ii) the number of shares of common stock for which each outstanding option to purchase common stock is exercisable was proportionally decreased and the exercise price of each outstanding option to purchase common stock proportionally increased. No fractional shares were issued as a result of the Reverse Split. Accordingly, all share and per share amounts for all periods presented in these financial statements and notes thereto have been adjusted retroactively, where applicable, to reflect the Reverse Split and adjustment of the exercise price of each outstanding option as if the transaction had occurred as of the beginning of the earliest period presented.

[Table of Contents](#)

**Korro Bio, Inc.**  
**Condensed Consolidated Financial Statements**

**Table of Contents**

<a href="#">Condensed Consolidated Balance Sheets</a>	F-52
<a href="#">Condensed Consolidated Statements of Operations and Comprehensive Loss</a>	F-53
<a href="#">Condensed Consolidated Statements of Convertible Preferred Stock and Stockholders' Deficit</a>	F-54
<a href="#">Condensed Consolidated Statements of Cash Flows</a>	F-55
<a href="#">Notes to Condensed Consolidated Financial Statements</a>	F-56



**Korro Bio, Inc.**  
**Condensed Consolidated Balance Sheets**  
**(unaudited)**  
**(amounts in thousands, except par value amounts)**

	September 30, 2023	December 31, 2022
<b>Assets:</b>		
Current assets:		
Cash and cash equivalents	\$ 46,119	\$ 36,333
Short-term investments	—	18,915
Prepaid expenses and other current assets	3,026	1,835
Total current assets	49,145	57,083
Property and equipment, net	12,892	9,866
Advance payments for property and equipment	351	76
Operating lease right-of-use assets	26,425	2,024
Other non-current assets	7,018	4,693
Total assets	<u>\$ 95,831</u>	<u>\$ 73,742</u>
<b>Liabilities, convertible preferred stock and stockholders' deficit</b>		
Current liabilities:		
Accounts payable	\$ 2,836	\$ 2,605
Accrued expenses and other current liabilities	5,711	3,175
Operating lease liabilities, current portion	992	2,921
Total current liabilities	9,539	8,701
Operating lease liabilities, net of current portion	30,228	209
Total liabilities	39,767	8,910
Series Seed convertible preferred stock, \$0.001 par value		
13,781 shares authorized, issued and outstanding at September 30, 2023 and December 31, 2022 (aggregate liquidation preference of \$16,115 at September 30, 2023 and December 31, 2022)	15,924	15,924
Series A convertible preferred stock, \$0.001 par value		
40,848 shares authorized, issued and outstanding at September 30, 2023 and December 31, 2022 (aggregate liquidation preference of \$91,500 at September 30, 2023 and December 31, 2022)	77,736	77,736
Series B-1 convertible preferred stock, \$0.001 par value		
22,222 shares authorized, issued and outstanding at September 30, 2023 and December 31, 2022 (aggregate liquidation preference of \$58,000 at September 30, 2023 and December 31, 2022)	57,703	57,703
Series B-2 convertible preferred stock, \$0.001 par value		
20,863 shares authorized at September 30, 2023 and December 31, 2022; 20,863 and 4,496 shares issued and outstanding at September 30, 2023 and December 31, 2022, respectively (aggregate liquidation preference of \$58,000 and \$12,500 at September 30, 2023 and December 31, 2022, respectively)	57,958	12,500
Stockholders' deficit		
Common stock, \$0.001 par value; 117,138 and 115,838 shares authorized at September 30, 2023 and December 31, 2022, respectively; 6,006 and 5,462 shares issued at September 30, 2023 and December 31, 2022, respectively; 6,002 and 5,404 shares outstanding at September 30, 2023 and December 31, 2022, respectively	7	5
Additional paid-in capital	4,315	2,802
Accumulated other comprehensive loss	—	(5)
Accumulated deficit	(157,579)	(101,833)
Total stockholders' deficit	(153,257)	(99,031)
Total liabilities, convertible preferred stock and stockholders' deficit	<u>\$ 95,831</u>	<u>\$ 73,742</u>

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

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

	<b>Nine Months Ended September 30,</b>	
	<b>2023</b>	<b>2022</b>
Operating expenses:		
Research and development	\$ 41,828	\$ 30,052
General and administrative	15,813	12,485
Total operating expenses	<u>57,641</u>	<u>42,537</u>
Loss from operations	(57,641)	(42,537)
Other income, net	1,895	539
Net loss	<u>\$ (55,746)</u>	<u>\$ (41,998)</u>
Net loss per share, basic and diluted	\$ (9.98)	\$ (8.30)
Weighted-average common shares outstanding, basic and diluted	5,583	5,058
Comprehensive loss:		
Net loss	\$ (55,746)	\$ (41,998)
Other comprehensive income (loss):		
Unrealized gain (loss) on available-for-sale investments	5	(3)
Comprehensive loss	<u>\$ (55,741)</u>	<u>\$ (42,001)</u>

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

**Korro Bio, Inc.**  
**Condensed Consolidated Statements of Convertible Preferred Stock and Stockholders' Deficit**  
**(unaudited)**  
**(amounts in thousands)**

	Series Seed Convertible Preferred Stock		Series A Convertible Preferred Stock		Series B-1 Convertible Preferred Stock		Series B-2 Convertible Preferred Stock		Common Stock		Additional Paid-In Capital	Accumulated Other Comprehensive Loss	Accumulated Deficit	Total Stockholders' Deficit
	Shares	Amount	Shares	Amount	Shares	Amount	Shares	Amount	Shares	Amount				
<b>Balance at December 31, 2022</b>	13,781	\$ 15,924	40,848	\$ 77,736	22,222	\$ 57,703	4,496	\$ 12,500	5,404	\$ 5	\$ 2,802	\$ (5)	\$ (101,833)	\$ (99,031)
Issuance of Series B-2 convertible preferred stock, net of issuance costs of \$42	—	—	—	—	—	—	16,367	45,458	—	—	—	—	—	—
Issuance of common stock for services rendered	—	—	—	—	—	—	—	—	6	—	6	—	—	6
Exercises of stock options	—	—	—	—	—	—	—	—	538	2	359	—	—	361
Vesting of restricted common stock	—	—	—	—	—	—	—	—	54	—	—	—	—	—
Stock-based compensation expense	—	—	—	—	—	—	—	—	—	—	1,148	—	—	1,148
Other comprehensive income	—	—	—	—	—	—	—	—	—	—	—	5	—	5
Net loss	—	—	—	—	—	—	—	—	—	—	—	—	(55,746)	(55,746)
<b>Balance at September 30, 2023</b>	<b>13,781</b>	<b>\$ 15,924</b>	<b>40,848</b>	<b>\$ 77,736</b>	<b>22,222</b>	<b>\$ 57,703</b>	<b>20,863</b>	<b>\$ 57,958</b>	<b>6,002</b>	<b>\$ 7</b>	<b>\$ 4,315</b>	<b>\$ —</b>	<b>\$ (157,579)</b>	<b>\$ (153,257)</b>

	Series Seed Convertible Preferred Stock		Series A Convertible Preferred Stock		Series B-1 Convertible Preferred Stock		Series B-2 Convertible Preferred Stock		Common Stock		Additional Paid-In Capital	Accumulated Other Comprehensive Loss	Accumulated Deficit	Total Stockholders' Deficit
	Shares	Amount	Shares	Amount	Shares	Amount	Shares	Amount	Shares	Amount				
<b>Balance at December 31, 2021</b>	13,781	\$ 15,924	40,848	\$ 77,736	22,222	\$ 57,703	4,496	\$ 12,500	4,788	\$ 5	\$ 1,595	\$ (7)	\$ (43,801)	\$ (42,208)
Exercises of stock options	—	—	—	—	—	—	—	—	144	—	49	—	—	49
Issuance of common stock for services rendered	—	—	—	—	—	—	—	—	10	—	11	—	—	11
Vesting of restricted common stock	—	—	—	—	—	—	—	—	381	—	5	—	—	5
Stock-based compensation expense	—	—	—	—	—	—	—	—	—	—	894	—	—	894
Other comprehensive loss	—	—	—	—	—	—	—	—	—	—	—	(3)	—	(3)
Net loss	—	—	—	—	—	—	—	—	—	—	—	—	(41,998)	(41,998)
<b>Balance at September 30, 2022</b>	<b>13,781</b>	<b>\$ 15,924</b>	<b>40,848</b>	<b>\$ 77,736</b>	<b>22,222</b>	<b>\$ 57,703</b>	<b>4,496</b>	<b>\$ 12,500</b>	<b>5,323</b>	<b>\$ 5</b>	<b>\$ 2,554</b>	<b>\$ (10)</b>	<b>\$ (85,799)</b>	<b>\$ (83,250)</b>

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

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

	<b>Nine Months Ended September 30,</b>	
	<b>2023</b>	<b>2022</b>
<b>Operating Activities:</b>		
Net loss	\$ (55,746)	\$ (41,998)
Adjustments to reconcile net loss to net cash used in operating activities:		
Non-cash lease expense	2,376	977
Stock-based compensation expense	1,154	905
Depreciation expense	2,645	1,760
Non-cash interest expense	—	30
Net amortization of premiums and discounts on investments	(80)	42
Changes in operating assets and liabilities:		
Prepaid expenses and other current assets	(14)	(616)
Accounts payable	309	2,186
Accrued expenses	1,730	(264)
Operating lease liabilities	1,313	(1,525)
Other non-current assets and liabilities	137	(109)
Net cash used in operating activities	<u>(46,176)</u>	<u>(38,612)</u>
<b>Investing Activities:</b>		
Purchases of investments	—	(37,213)
Proceeds from maturities of investments	19,000	48,985
Purchases of property and equipment	(5,830)	(3,725)
Advance payments for property and equipment not yet received	(351)	(76)
Net cash provided by investing activities	<u>12,819</u>	<u>7,971</u>
<b>Financing Activities:</b>		
Proceeds from Series B-2 convertible preferred stock, net of issuance costs	45,458	—
Proceeds from exercises of stock options	349	48
Other financing activities, net	(2,634)	(44)
Net cash provided by financing activities	<u>43,173</u>	<u>4</u>
Net increase (decrease) in cash, cash equivalents and restricted cash	9,816	(30,637)
Cash, cash equivalents and restricted cash, beginning of period	41,477	84,044
Cash, cash equivalents and restricted cash, end of period	<u>\$ 51,293</u>	<u>\$ 53,407</u>
<b>Non-cash investing and financing activities:</b>		
Purchases of property and equipment in accounts payable and accrued expenses	\$ 167	\$ 183
Financing costs in accounts payable and accrued expenses	\$ 965	\$ —
Operating lease liabilities arising from right-of-use assets	\$ 26,777	\$ 5,287
Stock option exercise receivables in prepaid expenses and other current assets	\$ 12	\$ 1
<b>Supplemental cash flow information:</b>		
Cash paid for operating lease liabilities	\$ 2,244	\$ 1,600

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

**Korro Bio, Inc.**  
**Notes to Unaudited Condensed Consolidated Financial Statements**

**1. The Company and Liquidity**

*Nature of Business*

Korro Bio, Inc. (the “Company”) is an RNA editing company focused on the discovery and development of novel genetic medicines. The Company was incorporated in September 2018 as RNABIO, Inc. and subsequently renamed in November 2018.

*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. Product candidates currently under development will require significant additional research and development efforts, including extensive pre-clinical and clinical testing and regulatory approval, prior to commercialization. These efforts 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.

*Merger Agreement & Pre-Closing Financing*

On July 14, 2023, the Company entered into an Agreement and Plan of Merger (the “Merger Agreement”) with Frequency Therapeutics, Inc., a Delaware corporation (“Frequency”) and Frequency Merger Sub, Inc., a Delaware corporation and wholly owned subsidiary of Frequency (“Merger Sub”). Upon the terms and subject to the satisfaction of the conditions described in the Merger Agreement, Merger Sub will be merged with and into Korro Bio, Inc., with Korro Bio, Inc. surviving as a wholly owned subsidiary of Frequency (the “Merger”). In contemplation of the Merger, the Company also entered into a subscription agreement with certain parties to purchase shares of the Company’s common stock for an aggregate purchase price of approximately \$117.3 million (the “Pre-Closing Financing”).

On November 3, 2023 (the “Closing Date”), following approval by the stockholders of the Company and Frequency, the Pre-Closing Financing closed immediately prior to consummation of the Merger.

Subject to the terms and conditions of the Merger Agreement, immediately prior to the Closing Date, each then outstanding share of the Company’s common stock (including common stock issued upon the conversion of the Company’s preferred stock but excluding the common stock issued in the Pre-Closing Financing) converted into the right to receive 5,161,114 shares of Frequency’s common stock calculated in accordance with the Merger Agreement.

The Company’s Pre-Closing Financing was contingent on and occurred prior to the closing of the Merger, subject to customary closing conditions. Shares of the Company’s common stock issued pursuant to the Pre-Closing Financing were converted into the right to receive 2,077,864 shares of Frequency common stock calculated in accordance with Merger Agreement immediately prior to closing.

The Merger will be accounted for as a reverse recapitalization with the Company being the accounting acquirer and Frequency as the acquired company for accounting purposes.

### ***Going Concern***

Pursuant to Financial Accounting Standards Board (“FASB”) Accounting Standards Codification (“ASC”) Topic 205-40, *Presentation of Financial Statements—Going Concern*, an entity is required to assess whether there are conditions and events, considered in the aggregate, that raise substantial doubt about an entity’s ability to continue as a going concern within one year after the date that the financial statements are issued.

As of September 30, 2023, the Company had cash, cash equivalents and short-term investments of \$46.1 million. On November 3, 2023, the Company issued additional shares of common stock in the Pre-Closing Financing for aggregate proceeds of \$117.3 million and the Company received \$26.9 million from the Merger. The Company expects that its cash and cash equivalents outstanding as of September 30, 2023, together with the proceeds from the sale of shares of common stock issued in the Pre-Closing Financing and the Merger on November 3, 2023, will be sufficient to fund its obligations for at least 12 months from the date of issuance of these condensed consolidated financial statements.

## **2. Basis of Presentation and Summary of Significant Accounting Policies**

### ***Basis of Presentation and Consolidation***

The condensed consolidated financial statements include the accounts of Korro Bio, Inc. and its wholly-owned subsidiary, Korro Mass Securities, Inc., which was established in December 2020. All intercompany transactions and balances have been eliminated in consolidation.

### ***Summary of Significant Accounting Policies***

The Company’s significant accounting policies are disclosed in the audited financial statements for the years ended December 31, 2022 and 2021, included in Exhibit 99.6 of Frequency’s Current Report on Form 8-K of which this Exhibit 99.5 is part. Since the date of those annual financial statements, there have been no changes to the Company’s significant accounting policies, except as noted below.

### ***Unaudited Interim Financial Information***

The accompanying condensed consolidated balance sheet as of September 30, 2023, and the condensed consolidated statements of operations and comprehensive loss, condensed consolidated statements of convertible preferred stock and stockholders’ deficit and condensed consolidated statements of cash flows for the nine months ended September 30, 2023 and 2022 are unaudited. The condensed consolidated interim financial statements have been prepared on the same basis as the audited annual financial statements and, in the opinion of management, reflect all adjustments, which include only normal recurring adjustments necessary for the fair presentation of the Company’s financial position as of September 30, 2023 and the results of its operations and its cash flows for the nine months ended September 30, 2023 and 2022. The financial data and other information disclosed in these notes related to the nine months ended September 30, 2023 and 2022 are also unaudited. The results for the nine months ended September 30, 2023 are not necessarily indicative of results to be expected for the full year or for any other subsequent interim period.

### ***Use of Estimates***

The preparation of financial statements in conformity with generally accepted accounting principles in the United States of America (“GAAP”) requires management to make estimates and assumptions that affect the amounts reported in the financial statements and accompanying notes. On an ongoing basis, the Company’s management evaluates its estimates which include, but are not limited to, accrued expenses and stock-based compensation expense. The Company bases its estimates on historical experience and other market specific or other relevant assumptions it believes to be reasonable under the circumstances. Actual results could differ from those estimates.

## [Table of Contents](#)

### **Recently Adopted Accounting Pronouncements**

In June 2016, the FASB issued ASU 2016-13, *Financial Instruments—Credit Losses (Topic 326): Measurement of Credit Losses on Financial Instruments*. This standard requires that credit losses be reported using an expected losses model rather than the incurred losses model that is currently used, and it establishes additional disclosure requirements related to credit risks. For available-for-sale debt securities with expected credit losses, this standard now requires allowances to be recorded instead of reducing the amortized cost of the investment. The Company adopted this new standard effective January 1, 2023, and there was no impact to the condensed consolidated financial statements as a result of the adoption of this guidance.

### **3. Fair Value Measurements**

The Company measures the fair value of money market funds based on quoted prices in active markets for identical securities. Investments also include commercial paper and government securities which 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 condensed 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 measured at fair value on a recurring basis as of September 30, 2023 were as follows (in thousands):

	<u>Total</u>	<u>Quoted Prices in Active Markets for Identical Assets (Level 1)</u>	<u>Significant Other Observable Inputs (Level 2)</u>	<u>Significant Unobservable Inputs (Level 3)</u>
Money market funds, included in cash and cash equivalents	\$43,490	\$ 43,490	\$ —	\$ —
Total	<u>\$43,490</u>	<u>\$ 43,490</u>	<u>\$ —</u>	<u>\$ —</u>

Assets measured at fair value on a recurring basis as of December 31, 2022 were as follows (in thousands):

	<u>Total</u>	<u>Quoted Prices in Active Markets for Identical Assets (Level 1)</u>	<u>Significant Other Observable Inputs (Level 2)</u>	<u>Significant Unobservable Inputs (Level 3)</u>
Money market funds, included in cash and cash equivalents	\$14,904	\$ 14,904	\$ —	\$ —
Short-term investments:				
Commercial paper	14,935	—	14,935	—
Government securities	3,980	—	3,980	—
Total	<u>\$33,819</u>	<u>\$ 14,904</u>	<u>\$ 18,915</u>	<u>\$ —</u>

There were no liabilities measured at fair value on a recurring basis as of September 30, 2023 or December 31, 2022.

There were no changes in valuation techniques, nor were there any transfers among the fair value hierarchy levels during the nine months ended September 30, 2023 or during the year ended December 31, 2022.

## [Table of Contents](#)

### 4. Investments

The Company did not have short-term investments as of September 30, 2023.

Short-term investments as of December 31, 2022 were comprised as follows (in thousands):

	<u>Amortized Cost</u>	<u>Unrealized Gains</u>	<u>Unrealized Losses</u>	<u>Fair Value</u>
Commercial paper	\$ 14,935	\$ —	\$ —	\$ 14,935
Government securities	3,985	—	(5)	3,980
Total	<u>\$ 18,920</u>	<u>\$ —</u>	<u>\$ (5)</u>	<u>\$ 18,915</u>

As of September 30, 2023, the Company held no securities that were in an unrealized loss position. As of December 31, 2022, the aggregate fair value of securities that were in an unrealized loss position for less than twelve months was \$4.0 million. The Company did not record any charges for credit-related impairments during the nine months ended September 30, 2023.

### 5. Restricted Cash

As of September 30, 2023, the Company maintained current restricted cash of \$1.8 million and non-current restricted cash of \$3.4 million. As of December 31, 2022, the Company maintained current restricted cash of \$0.6 million and non-current restricted cash of \$4.5 million. Such current amounts are included within "Prepaid expenses and other current assets" and such non-current amounts are included within "Other non-current assets" in the condensed consolidated balance sheets. All restricted cash amounts are comprised solely of letters of credit required pursuant to the Company's facility leases.

The following table provides a reconciliation of cash, cash equivalents and restricted cash as of September 30, 2023 and 2022 that sums to the total of the same amounts shown in the condensed consolidated statements of cash flows (in thousands):

	<u>September 30,</u>	
	<u>2023</u>	<u>2022</u>
Cash and cash equivalents	\$ 46,119	\$ 48,113
Restricted cash	5,174	5,294
Cash, cash equivalents and restricted cash	<u>\$ 51,293</u>	<u>\$ 53,407</u>

### 6. Accrued Expenses and Other Current Liabilities

Accrued expenses and other current liabilities as of September 30, 2023 and December 31, 2022 were comprised as follows (in thousands):

	<u>September 30,</u>	<u>December 31,</u>
	<u>2023</u>	<u>2022</u>
Annual bonus	\$ 2,356	\$ 2,198
External research and development services	1,910	274
Other employee compensation and benefits	146	426
Financing costs	808	—
Other operating expenses	491	277
Total accrued expenses and other current liabilities	<u>\$ 5,711</u>	<u>\$ 3,175</u>



## [Table of Contents](#)

### 7. Common Stock

As of September 30, 2023, the Company was authorized to issue 117,138,030 shares of common stock. 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 September 30, 2023, no dividends had been declared.

As of September 30, 2023 and December 31, 2022, the Company had reserved for future issuance the following number of shares of common stock (in thousands):

	September 30, 2023	December 31, 2022
Conversion of outstanding Series Seed Preferred Stock	13,781	13,781
Conversion of outstanding Series A Preferred Stock	40,848	40,848
Conversion of outstanding Series B-1 Preferred Stock	22,222	22,222
Conversion of outstanding Series B-2 Preferred Stock	20,863	4,496
Future issuances of Series B-2 Preferred Stock	—	16,367
Vesting of restricted common stock	4	58
Exercises of outstanding stock options	12,304	9,280
Exercise of outstanding warrant	162	162
Future issuances under 2019 Stock Incentive Plan	950	3,218
Total reserved for future issuance	<u>111,134</u>	<u>110,432</u>

### 8. Preferred Stock

#### *Series Seed Preferred Stock*

In May 2019, the Company entered into a Series Seed Stock Purchase Agreement (the "Series Seed 1 and 2 Agreement"). Under this Series Seed 1 and 2 Agreement, the Company sold an aggregate of 4,000,000 shares of Series Seed Preferred Stock at a price of \$1.00 per share. In addition, the Company was previously party to a Simple Agreement for Future Equity (the "SAFE") with Atlas Venture Fund XI, L.P. ("Atlas") whereby the Company received \$2.0 million in exchange for granting Atlas the right to participate in a future equity financing. In conjunction with the execution of the Series Seed 1 and 2 Agreement, the SAFE converted into 2,000,000 additional shares of Series Seed Preferred Stock. Subsequently, the Company entered into a Series Seed 3 Preferred Stock Purchase Agreement (the "Series Seed 3 Agreement") in August 2019 under which it sold 7,780,769 additional shares of Series Seed Preferred Stock at a price of \$1.30 per share.

Under the Series Seed 1 and 2 Agreement and the Series Seed 3 Agreement, the Company received aggregate net cash proceeds of \$13.9 million, after deducting offering expenses paid by the Company.

The Company assessed the terms and features of the Series Seed Preferred Stock and concluded that it should be classified outside of permanent equity in the condensed consolidated balance sheets, as the Series Seed Preferred Stock is contingently redeemable upon the occurrence of a deemed liquidation event that is outside of the Company's control. Accordingly, the Company has classified the Series Seed Preferred Stock within temporary equity in the condensed consolidated balance sheets. As of September 30, 2023, the Series Seed Preferred Stock is not being accreted to redemption as a deemed liquidation event is not considered to be probable. Further information on the rights, preferences and privileges of the Series Seed Preferred Stock is outlined below.

### ***Series A Preferred Stock***

In June 2020, the Company entered into the Series A Preferred Stock Purchase Agreement (the “Series A Agreement”). Under the Series A Agreement, the Company sold 18,191,965 shares at an initial closing in June 2020 and 2,232,143 shares at an additional closing in July 2020, both at a price of \$2.24 per share. The Company received aggregate net cash proceeds of \$45.5 million from these sales, after deducting offering expenses paid by the Company.

The Series A Agreement also included a right (the “Series A Tranche Right”) whereby investors would be obligated to purchase, and the Company obligated to sell, an additional 20,424,108 shares of Series A Preferred Stock at \$2.24 per share upon the achievement of certain research and development milestones prior to December 31, 2021 (the “Series A Milestone Closing”). Investors could also elect to waive the conditions of the Series A Milestone Closing and purchase their allotment of additional shares at any time prior to the Series A Milestone Closing.

The Company assessed the terms and features of the Series A Preferred Stock and concluded that it should be classified outside of permanent equity in the condensed consolidated balance sheets, as the Series A Preferred Stock is contingently redeemable upon the occurrence of a deemed liquidation event that is outside of the Company’s control. Accordingly, the Company has classified the Series A Preferred Stock within temporary equity in the condensed consolidated balance sheets. As of September 30, 2023, the Series A Preferred Stock is not being accreted to redemption as a deemed liquidation event is not considered to be probable. Further information on the rights, preferences and privileges of the Series A Preferred Stock is outlined below.

The Company also assessed the Series A Tranche Right and concluded that it met the definition of a freestanding financial instrument as it was both legally detachable and separately exercisable from the Series A Preferred Stock. In accordance with ASC Topic 480, *Distinguishing Liabilities from Equity*, the Series A Tranche Right was initially classified as a liability in the consolidated balance sheet since the underlying Series A Preferred Stock is contingently redeemable upon the occurrence of a deemed liquidation event that is outside of the Company’s control.

The Company first allocated the Series A Preferred Stock proceeds to the Series A Tranche Right based upon its fair value at the date of issuance, and the remaining proceeds were allocated to the Series A Preferred Stock. The fair value of the Series A Tranche Right on the date of issuance was determined to be \$11.1 million. As the Series A Tranche Right was classified as a liability, it was subsequently re-measured at fair value at each reporting period.

In July 2021, the holders of the Series A Preferred Stock elected to waive the conditions of the Series A Milestone Closing and exercise the Series A Tranche Right. Accordingly, the holders purchased 20,424,108 additional shares of Series A Preferred Stock at a price of \$2.24 per share. The Company received aggregate net cash proceeds of \$45.7 million from this sale, after deducting offering expenses paid by the Company. The Company recognized a \$13.5 million gain from the settlement of the Series A Tranche Right and subsequently extinguished the preferred stock tranche asset in conjunction with the issuance of the related Series A Preferred Stock.

### ***Series B Preferred Stock***

In November 2021, the Company entered into the Series B Preferred Stock Purchase Agreement (the “Series B Agreement”). Under the Series B Agreement, the Company initially sold 17,289,273 shares of Series B-1 Preferred Stock at a price of \$2.61 per share. The Series B Agreement also contemplated the issuance of Series B-2 Preferred Stock, as outlined further below. The Series B-1 Preferred Stock and the Series B-2 Preferred Stock are collectively referred to as the “Series B Preferred Stock” unless specifically noted.

The Series B Agreement also included a right (the “Series B Tranche Right”) whereby investors would be obligated to purchase, and the Company obligated to sell, 16,232,013 shares of Series B-2 Preferred Stock at

## Table of Contents

\$2.78 per share upon the achievement of a certain research and development milestone (the “Series B Milestone Closing”). Investors could also elect to waive the conditions of the Series B Milestone Closing and purchase their allotment of Series B-2 Preferred Stock at any time prior to the Series B Milestone Closing.

In December 2021, the Company subsequently amended the Series B Agreement (the “Series B Agreement Amendment”) to include two additional investors. Under the Series B Agreement Amendment, the Company sold an additional 4,932,950 shares of Series B-1 Preferred Stock at a price of \$2.61 per share. Additionally, one investor elected to waive the conditions of the Series B Milestone Closing and purchase 4,496,403 shares of Series B-2 Preferred Stock at a price of \$2.78 per share. The other investor included in the Series B Agreement Amendment maintained the Series B Tranche Right to purchase 134,892 shares of Series B-2 Preferred Stock.

In total during November and December 2021, the Company received aggregate net cash proceeds of \$57.7 million from the sale of Series B-1 Preferred Stock and \$12.5 million from the sale of Series B-2 Preferred Stock, after deducting offering expenses paid by the Company.

The Company also assessed the Series B Tranche Right and concluded that, while separately exercisable, it was not legally detachable from the Series B Preferred Stock. Accordingly, the Company concluded that the Series B Tranche Right did not meet the definition of a freestanding financial instrument and was instead an embedded feature of the Series B Preferred Stock.

In March 2023, the holders of the Series B Preferred Stock elected to waive the conditions of the Series B Milestone Closing and exercise the Series B Tranche Right. Accordingly, the holders purchased 16,366,905 shares of Series B-2 Preferred Stock at a price of \$2.78 per share. The Company received aggregate net cash proceeds of \$45.5 million from this sale, after deducting offering expenses paid by the Company.

The Company assessed the terms and features of the Series B Preferred Stock and concluded that it should be classified outside of permanent equity in the condensed consolidated balance sheets, as the Series B Preferred Stock is contingently redeemable upon the occurrence of a deemed liquidation event that is outside of the Company’s control. Accordingly, the Company has classified the Series B Preferred Stock within temporary equity in the condensed consolidated balance sheets. As of September 30, 2023, the Series B Preferred Stock is not being accreted to redemption as a deemed liquidation event is not considered to be probable. Further information on the rights, preferences and privileges of the Series B Preferred Stock is outlined below.

### ***Rights, Preferences and Privileges of Preferred Stock***

The rights, preferences and privileges of the Series Seed Preferred Stock, the Series A Preferred Stock, the Series B-1 Preferred Stock and the Series B-2 Preferred Stock are as follows. In the discussion below, the Series Seed Preferred Stock and the Series A Preferred Stock, Series B-1 Preferred Stock and the Series B-2 Preferred Stock are collectively referred to as the “Preferred Stock” unless specifically noted.

#### *Conversion*

Each share of Preferred Stock shall be convertible, at the option of the holder thereof, at any time and from time to time, and without the payment of additional consideration by the holder thereof, into such number of fully paid and non-assessable shares of common stock as is determined by dividing the original issuance price by the conversion price in effect at the time of conversion. The original conversion price of the Series Seed 1 Preferred Stock and Series Seed 2 Preferred Stock is \$1.00, the original conversion price of the Series Seed 3 Preferred Stock is \$1.30, the original conversion price of the Series A Preferred Stock is \$2.24, the original conversion price of the Series B-1 Preferred Stock is \$2.61 and the original conversion price of the Series B-2 Preferred Stock is \$2.78. Shares of preferred stock are subject to adjustments to reflect the issuance of common stock, options, warrants, or other rights to subscribe for or to purchase common stock for a consideration per share, less than the conversion price then in effect and subsequent stock dividends, stock splits, combinations, or recapitalizations.

## Table of Contents

The Preferred Stock is subject to mandatory conversion upon the closing of a sale of common stock to the public at a price of at least \$5.56 per share (subject to appropriate adjustment in the event of a stock dividend, stock split, combination or other similar recapitalization) in a firm-commitment underwritten public offering resulting in at least \$75.0 million of gross proceeds to the Company. The Preferred Stock is also subject to mandatory conversion upon the vote or written consent of the holders of at least 66% of the then-outstanding shares of Preferred Stock, voting as a single class on an as-converted to common stock basis.

### *Dividends*

The holders of Preferred Stock, in preference to common stockholders, are entitled to receive, when, as and if declared by the Company's Board of Directors, dividends at a rate of 8% annually. Dividends on Preferred Stock are non-cumulative and are payable only when and if declared by the Company's Board of Directors. The holders of Preferred Stock are entitled to participate in dividends on common stock on an as-converted basis when and if declared by the Company's Board of Directors. Since the Company's inception, no dividends have been declared.

### *Liquidation Preference*

In the event of any voluntary or involuntary liquidation, dissolution, winding up or deemed liquidation event of the Company, the holders of shares of Preferred Stock then outstanding shall be entitled to be paid out of the assets of the Company available for distribution to its stockholders before any payment shall be made to the holders of common stock, an amount equal to the original issue price per share plus any dividends declared but unpaid thereon. For clarity, the original issue price of the Series Seed 1 Preferred Stock and Series Seed 2 Preferred Stock was \$1.00 per share, the original issue price of the Series Seed 3 Preferred Stock was \$1.30 per share, the original issue price of the Series A Preferred Stock was \$2.24 per share, the original issue price of the Series B-1 Preferred Stock was \$2.61 per share and the original issue price of the Series B-2 Preferred Stock was \$2.78 per share.

If upon any voluntary or involuntary liquidation, dissolution, winding up or deemed liquidation event of the Company, the assets of the Company available for distribution are insufficient to pay the holders of Preferred Stock the full amount to which they are entitled, the holders of shares of Preferred Stock shall share ratably in any distribution of the assets available for distribution in proportion to the respective amounts which would otherwise be payable in respect of the shares held by them upon such distribution if all amounts payable on or with respect to such shares were paid in full.

### *Redemption*

The Preferred Stock is contingently redeemable upon the occurrence of a deemed liquidation event, which includes a merger or a sale of substantially all of the assets of the Company. As of September 30, 2023, a deemed liquidation event is not considered to be probable.

### *Voting Rights*

The holders of Preferred Stock are entitled to vote based on the number of common shares that their preferred shares convert into on as-converted basis at the time of such vote. Except in specific circumstances, holders of Preferred Stock shall vote as a single class with the common stockholders.

The holders of record of the shares of the Series Seed Preferred Stock, voting exclusively and as a separate class on an as-converted to common stock basis, are entitled to elect two members to the Company's Board of Directors. The holders of record of the shares of the Series A Preferred Stock, voting exclusively and as a separate class on an as-converted to common stock basis, are entitled to elect two members to the Company's Board of Directors. The holders of record of the shares of the Series B Preferred Stock, voting exclusively and as a separate class on an as-converted to common stock basis, are entitled to elect two members to the Company's Board of Directors.

**Conversion of Preferred Stock**

Pursuant to the terms of the Merger Agreement, immediately prior to closing of the Merger, each share of Preferred Stock issued and outstanding immediately prior to the Closing of the Merger was converted into shares of the Company’s common stock, and then exchanged in the Merger for shares of Frequency common stock using an exchange ratio of 0.049688. The conversion was approved by greater than 66% of the then-outstanding shares of Preferred Stock, voting as a single class on an as-converted to common stock basis.

**9. Stock-based Compensation**

**2019 Stock Incentive Plan**

In January 2019, the Company’s Board of Directors adopted the 2019 Stock Incentive Plan (the “2019 Plan”). The 2019 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 2019 Plan initially provided for the issuance of up to 2,219,565 shares of common stock. The 2019 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 2019 Plan. Subsequent to the March 2023 amendment to the 2019 Plan, the Company can now issue up to 15,048,960 shares of common stock under the 2019 Plan. As of September 30, 2023, there were 949,921 shares available for future issuance under the 2019 Plan.

**Stock-based Compensation Expense**

Total stock-based compensation expense recognized in the condensed consolidated statements of operations and comprehensive loss for the nine months ended September 30, 2023 and 2022 was as follows (in thousands):

	Nine Months Ended September 30,	
	2023	2022
Research and development	\$ 402	\$ 182
General and administrative	752	723
Total stock-based compensation expense	<u>\$ 1,154</u>	<u>\$ 905</u>

**Restricted Common Stock Activity**

Prior to the adoption of the 2019 Plan, the Company issued shares of restricted common stock to its founders as well as to certain employees. The restrictions on the common stock generally lapse over two to four years. In the event that a recipient ceases to provide service to the Company, the Company has the right to repurchase any unvested shares of restricted common stock at their original purchase price. As a result of this repurchase right, the Company recorded the issuance of such restricted common stock as a liability in the condensed consolidated balance sheets. Amounts are reclassified to common stock at par and additional paid-in capital as the restricted common stock vests and restrictions lapse.

The following table summarizes restricted common stock activity during the nine months ended September 30, 2023 (in thousands, except per share amounts):

	Shares	Weighted-Average Grant Date Fair Value per Share
Unvested as of December 31, 2022	58	\$ 0.03
Granted	—	\$ —
Vested	(54)	\$ 0.01
Repurchased	—	\$ —
Unvested as of September 30, 2023	<u>4</u>	<u>\$ 0.04</u>

## [Table of Contents](#)

The aggregate fair value of restricted common stock that vested during the nine months ended September 30, 2023, based upon the fair value of the underlying restricted common stock on the day of vesting, was less than \$0.1 million, and for the nine months ended September 30, 2022 was \$0.4 million.

### **Stock Option Activity**

The fair value of stock options granted during the nine months ended September 30, 2023 and 2022 was calculated on the date of grant using the following weighted-average assumptions:

	Nine Months Ended September 30,	
	2023	2022
Risk-free interest rate	3.6%	1.9%
Expected dividend yield	— %	— %
Expected term (in years)	6.0	6.1
Expected volatility	69.5%	73.4%

Using the Black-Scholes option pricing model, the weighted-average grant date fair value of stock options granted during the nine months ended September 30, 2023 and 2022 was \$0.69 and \$0.74 per share, respectively.

The following table summarizes changes in stock option activity during the nine months ended September 30, 2023 (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, 2022	9,280	\$ 0.74	8.0	\$ 2,953
Granted	4,050	\$ 1.06		
Exercised	(533)	\$ 0.66		
Cancelled	(488)	\$ 1.00		
Outstanding as of September 30, 2023	12,309	\$ 0.84	8.1	\$ 3,135
Exercisable at September 30, 2023	5,480	\$ 0.67	7.3	\$ 2,306

The aggregate intrinsic value of stock options exercised during the nine months ended September 30, 2023 and 2022 was \$0.2 million and \$0.1 million, respectively.

As of September 30, 2023, there was unrecognized stock-based compensation expense related to unvested stock options of \$3.9 million, which the Company expects to recognize over a weighted-average period of approximately 2.7 years.

### **10. Genevant Agreement**

In March 2023, the Company 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 condensed consolidated statement of operations for the nine months ended September 30, 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.

## Table of Contents

- 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 September 30, 2023, no milestones have been achieved and the Company has recorded reimbursements of \$0.8 million within research and development expense in the condensed consolidated statement of operations.

### **11. Leases**

The Company's building leases consist of office and laboratory space under non-cancelable leases that have remaining terms from approximately 3 months to 11 years.

The Company is party to an operating lease at One Kendall Square, Cambridge, Massachusetts and occupies 22,561 square feet of laboratory and office space (the "OKS Facility") which expires on December 31, 2023, and an operating sublease agreement at Cummings Park in Woburn, Massachusetts and occupies 18,148 square feet of laboratory and office space (the "Cummings Park Sublease") which expires on July 31, 2024.

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 \$2.1 million of the \$13.1 million tenant improvement allowance as of September 30, 2023. 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.

Future minimum lease payments for all leases, net of \$11.0 million expected to be received and intended to be used related to the remaining tenant improvement allowance and rent credits associated with the 60 First Street Lease, as of September 30, 2023 were as follows (in thousands):

	<u>As of September 30, 2023</u>
Remaining of 2023	\$ 548
2024	(8,956)
2025	6,247
2026	7,341
2027	7,557
Thereafter	52,498
Total future minimum lease payments	<u>65,235</u>
Less: interest	(34,015)
Present value of operating lease liabilities	<u>\$ 31,220</u>

As of September 30, 2023, the weighted average remaining lease term was 10.4 years and the weighted average incremental borrowing rate used to determine the operating lease liability was 11.1%.

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 right-of-use assets and lease liabilities, but rather are expensed when the event determining the amount of variable consideration to be paid occurs.

## [Table of Contents](#)

The following table summarizes the effect of lease costs in the Company's condensed consolidated statement of operations and comprehensive loss of its operating leases (in thousands):

	Nine Months Ended September 30,	
	2023	2022
Operating lease costs	\$ 4,335	\$ 1,648
Variable lease costs	742	534
Total lease costs	\$ 5,077	\$ 2,182

## 12. Net Loss per Share

For purposes of the diluted net loss per share calculation, convertible preferred stock, outstanding stock options, outstanding warrants and unvested restricted common stock are considered to be potentially dilutive securities, however the following common stock equivalents were excluded from the calculation of diluted net loss per share because their effect would be anti-dilutive (in thousands):

	September 30, 2023	December 31, 2022
Series Seed Preferred Stock	13,781	13,781
Series A Preferred Stock	40,848	40,848
Series B-1 Preferred Stock	22,222	22,222
Series B-2 Preferred Stock	20,863	4,496
Unvested restricted common stock	4	58
Outstanding stock options	12,304	9,280
Outstanding warrant	162	162
Total	110,184	90,847

## 13. Subsequent Events

The Company has completed an evaluation of all subsequent events after the unaudited condensed consolidated balance sheet date of September 30, 2023 through November 6, 2023, the date these condensed consolidated financial statements were issued, to ensure that these condensed consolidated financial statements include appropriate disclosure of events both recognized in the condensed consolidated financial statements as of September 30, 2023, and events that occurred subsequently but were not recognized in the condensed consolidated financial statements. Except as disclosed elsewhere in Note 1 to the condensed consolidated financial statements, the Company concluded that no events or transactions have occurred that require disclosure in the accompanying condensed consolidated financial statements.



[Table of Contents](#)

**Korro Bio, Inc.**  
**Consolidated Financial Statements for the Years Ended December 31, 2022 and 2021**

<a href="#">Report of Independent Registered Public Accounting Firm</a>	F-69
<a href="#">Consolidated Balance Sheets</a>	F-70
<a href="#">Consolidated Statements of Operations and Comprehensive Loss</a>	F-71
<a href="#">Consolidated Statements of Convertible Preferred Stock and Stockholders' Deficit</a>	F-72
<a href="#">Consolidated Statements of Cash Flows</a>	F-73
<a href="#">Notes to Consolidated Financial Statements</a>	F-74

## 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, 2022 and 2021, the related consolidated statements of operations and comprehensive loss, convertible preferred stock and stockholders' deficit and cash flows for the years then ended, and the related notes (collectively referred to as the "consolidated financial statements"). In our opinion, the consolidated financial statements present fairly, in all material respects, the financial position of the Company at December 31, 2022 and 2021, and the results of its operations and its cash flows for the years then ended, in conformity with U.S. generally accepted accounting principles.

### The Company's Ability to Continue as a Going Concern

The accompanying consolidated financial statements have been prepared assuming that the Company will continue as a going concern. As discussed in Note 1 to the consolidated financial statements, the Company is not currently generating revenue, expects to continue incurring significant operating losses and negative operating cash flows for the foreseeable future, requires additional financing and has stated that substantial doubt exists about the Company's ability to continue as a going concern. Management's evaluation of the events and conditions and management's plans regarding these matters are also described in Note 1. The consolidated financial statements do not include any adjustments that might result from the outcome of this uncertainty.

### Basis for Opinion

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

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

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

/s/ Ernst & Young LLP

We have served as the Company's auditor since 2020.

Boston, Massachusetts

July 27, 2023

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

	December 31,	
	2022	2021
<b>Assets:</b>		
Current assets:		
Cash and cash equivalents	\$ 36,333	\$ 83,492
Short-term investments	18,915	35,040
Prepaid expenses and other current assets	1,835	1,243
Total current assets	57,083	119,775
Property and equipment, net	9,866	6,446
Advance payments for property and equipment	76	695
Operating lease right-of-use assets	2,024	—
Other non-current assets	4,693	659
Total assets	<u>\$ 73,742</u>	<u>\$ 127,575</u>
<b>Liabilities, convertible preferred stock and stockholders' deficit</b>		
Current liabilities:		
Accounts payable	\$ 2,605	\$ 789
Accrued expenses and other current liabilities	3,175	3,221
Deferred rent, current portion	—	939
Operating lease liabilities, current portion	2,921	—
Total current liabilities	8,701	4,949
Deferred rent, net of current portion	—	969
Operating lease liabilities, net of current portion	209	—
Other non-current liabilities	—	2
Total liabilities	8,910	5,920
Commitments and contingencies (Note 13)		
Series Seed convertible preferred stock, \$0.001 par value 13,781 shares authorized, issued and outstanding at December 31, 2022 and 2021 (aggregate liquidation preference of \$16,115 at December 31, 2022 and 2021)	15,924	15,924
Series A convertible preferred stock, \$0.001 par value 40,848 shares authorized, issued and outstanding at December 31, 2022 and 2021 (aggregate liquidation preference of \$91,500 at December 31, 2022 and 2021)	77,736	77,736
Series B-1 convertible preferred stock, \$0.001 par value 22,222 shares authorized, issued and outstanding at December 31, 2022 and 2021 (aggregate liquidation preference of \$58,000 at December 31, 2022 and 2021)	57,703	57,703
Series B-2 convertible preferred stock, \$0.001 par value 20,863 shares authorized and 4,496 shares issued and outstanding at December 31, 2022 and 2021 (aggregate liquidation preference of \$12,500 at December 31, 2022 and 2021)	12,500	12,500
Stockholders' deficit Common stock, \$0.001 par value; 115,838 shares authorized at December 31, 2022 and 2021; 5,462 and 5,276 shares issued at December 31, 2022 and 2021, respectively; 5,404 and 4,788 shares outstanding at December 31, 2022 and 2021, respectively	5	5
Additional paid-in capital	2,802	1,595
Accumulated other comprehensive loss	(5)	(7)
Accumulated deficit	(101,833)	(43,801)
Total stockholders' deficit	(99,031)	(42,208)
Total liabilities, convertible preferred stock and stockholders' deficit	<u>\$ 73,742</u>	<u>\$ 127,575</u>

*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 per share amounts)**

	<u>Years Ended December 31,</u>	
	<u>2022</u>	<u>2021</u>
Operating expenses:		
Research and development	\$ 42,201	\$ 23,805
General and administrative	16,797	11,689
Total operating expenses	<u>58,998</u>	<u>35,494</u>
Loss from operations	(58,998)	(35,494)
Other income, net		
Change in fair value of preferred stock tranche liability	—	13,505
Other income, net	976	32
Total other income, net	<u>976</u>	<u>13,537</u>
Loss before provision for income taxes	(58,022)	(21,957)
Provision for income taxes	10	2
Net loss	<u>\$ (58,032)</u>	<u>\$ (21,959)</u>
Net loss per share, basic and diluted	\$ (11.30)	\$ (4.94)
Weighted-average common shares outstanding, basic and diluted	5,136	4,447
Comprehensive loss:		
Net loss	\$ (58,032)	\$ (21,959)
Other comprehensive income (loss):		
Unrealized gain (loss) on available-for-sale investments	2	(7)
Comprehensive loss	<u>\$ (58,030)</u>	<u>\$ (21,966)</u>

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

**Korro Bio, Inc.**  
**Consolidated Statements of Convertible Preferred Stock and Stockholders' Deficit**  
(amounts in thousands)

	Series Seed Convertible Preferred Stock		Series A Convertible Preferred Stock		Series B-1 Convertible Preferred Stock		Series B-2 Convertible Preferred Stock		Common Stock		Additional Paid-In Capital	Accumulated Other Comprehensive Loss	Accumulated Deficit	Total Stockholders' Deficit
	Shares	Amount	Shares	Amount	Shares	Amount	Shares	Amount	Shares	Amount				
<b>Balance at December 31, 2020</b>	13,781	\$ 15,924	20,424	\$ 34,479	—	\$ —	—	\$ —	4,072	\$ 4	\$ 682	\$ —	\$ (21,842)	\$ (21,156)
Issuance of Series A convertible preferred stock, net of issuance costs of \$42	—	—	20,424	45,708	—	—	—	—	—	—	—	—	—	—
Reclassification of preferred stock tranche asset upon issuance of Series A convertible preferred stock	—	—	—	(2,451)	—	—	—	—	—	—	—	—	—	—
Issuance of Series B-1 convertible preferred stock, net of issuance costs of \$297	—	—	—	—	22,222	57,703	—	—	—	—	—	—	—	—
Issuance of Series B-2 convertible preferred stock, net of issuance costs of \$0	—	—	—	—	—	—	4,496	12,500	—	—	—	—	—	—
Exercises of stock options	—	—	—	—	—	—	—	—	246	—	28	—	—	28
Vesting of restricted common stock	—	—	—	—	—	—	—	—	470	1	6	—	—	7
Issuance of warrant to purchase common stock	—	—	—	—	—	—	—	—	—	—	72	—	—	72
Stock-based compensation expense	—	—	—	—	—	—	—	—	—	—	807	—	—	807
Other comprehensive loss	—	—	—	—	—	—	—	—	—	—	—	(7)	—	(7)
Net loss	—	—	—	—	—	—	—	—	—	—	—	—	(21,959)	(21,959)
<b>Balance at December 31, 2021</b>	13,781	15,924	40,848	77,736	22,222	57,703	4,496	12,500	4,788	5	1,595	(7)	(43,801)	(42,208)
	Series Seed Convertible Preferred Stock		Series A Convertible Preferred Stock		Series B-1 Convertible Preferred Stock		Series B-2 Convertible Preferred Stock		Common Stock		Additional Paid-In Capital	Accumulated Other Comprehensive Loss	Accumulated Deficit	Total Stockholders' Deficit
	Shares	Amount	Shares	Amount	Shares	Amount	Shares	Amount	Shares	Amount				
Exercises of stock options	—	—	—	—	—	—	—	—	176	—	62	—	—	62
Vesting of restricted common stock	—	—	—	—	—	—	—	—	430	—	5	—	—	5
Issuance of common stock for services rendered	—	—	—	—	—	—	—	—	10	—	11	—	—	11
Stock-based compensation expense	—	—	—	—	—	—	—	—	—	—	1,129	—	—	1,129
Other comprehensive income	—	—	—	—	—	—	—	—	—	—	—	2	—	2
Net loss	—	—	—	—	—	—	—	—	—	—	—	—	(58,032)	(58,032)
<b>Balance at December 31, 2022</b>	<b>13,781</b>	<b>\$ 15,924</b>	<b>40,848</b>	<b>\$ 77,736</b>	<b>22,222</b>	<b>\$ 57,703</b>	<b>4,496</b>	<b>\$ 12,500</b>	<b>5,404</b>	<b>\$ 5</b>	<b>\$ 2,802</b>	<b>\$ (5)</b>	<b>\$ (101,833)</b>	<b>\$ (99,031)</b>

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

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

	<u>Years Ended December 31,</u>	
	<u>2022</u>	<u>2021</u>
<b>Operating Activities:</b>		
Net loss	\$ (58,032)	\$ (21,959)
Adjustments to reconcile net loss to net cash used in operating activities:		
Change in fair value of preferred stock tranche liability	—	(13,505)
Non-cash lease expense	1,396	—
Stock-based compensation expense	1,140	807
Depreciation expense	2,511	1,595
Non-cash interest expense	118	36
Net amortization of premiums and discounts on investments	(145)	20
Loss on disposal of property and equipment	—	8
Changes in operating assets and liabilities:		
Prepaid expenses and other current assets	(28)	(398)
Accounts payable	1,755	56
Accrued expenses	(39)	1,961
Operating lease liabilities	(2,198)	—
Deferred rent	—	(686)
Other non-current assets	(123)	(29)
Net cash used in operating activities	<u>(53,645)</u>	<u>(32,094)</u>
<b>Investing Activities:</b>		
Purchases of investments	(37,213)	(35,067)
Proceeds from maturities of investments	53,485	—
Purchases of property and equipment	(5,136)	(3,752)
Advance payments for property and equipment not yet received	(76)	(695)
Proceeds from sale of property and equipment	—	13
Net cash provided by (used in) investing activities	<u>11,060</u>	<u>(39,501)</u>
<b>Financing Activities:</b>		
Proceeds from Series A convertible preferred stock, net of issuance costs	—	45,708
Proceeds from Series B-1 convertible preferred stock, net of issuance costs	—	57,739
Proceeds from Series B-2 convertible preferred stock, net of issuance costs	—	12,500
Proceeds from exercises of stock options	62	28
Other financing activities, net	(44)	(30)
Net cash provided by financing activities	<u>18</u>	<u>115,945</u>
Net (decrease) increase in cash, cash equivalents and restricted cash	(42,567)	44,350
Cash, cash equivalents and restricted cash, beginning of period	84,044	39,694
Cash, cash equivalents and restricted cash, end of period	<u>\$ 41,477</u>	<u>\$ 84,044</u>
<b>Non-cash investing and financing activities:</b>		
Property and equipment capitalized under tenant improvement allowance	\$ —	\$ 522
Purchases of property and equipment in accounts payable and accrued expenses	\$ 402	\$ 301
Financing costs in accounts payable and accrued expenses	\$ —	\$ 44
Operating lease liabilities arising from right-of-use assets	\$ 5,629	\$ —
<b>Supplemental cash flow information:</b>		
Cash paid for income taxes	\$ 11	\$ —
Cash paid for operating lease liabilities	\$ 2,335	\$ —

*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. (the “Company”) is an RNA editing company focused on the discovery and development of novel genetic medicines. The Company was incorporated in September 2018 as RNABIO, Inc. and subsequently renamed in November 2018.

***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. Product candidates currently under development will require significant additional research and development efforts, including extensive pre-clinical and clinical testing and regulatory approval, prior to commercialization. These efforts 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.

***Going Concern***

Pursuant to Financial Accounting Standards Board (“FASB”) Accounting Standards Codification (“ASC”) Topic 205-40, *Presentation of Financial Statements-Going Concern*, an entity is required to assess whether there are conditions and events, considered in the aggregate, that raise substantial doubt about an entity’s ability to continue as a going concern within one year after the date that the financial statements are issued.

The Company has been financed from its inception through December 31, 2022 primarily through \$15.9 million of net cash proceeds received from the sale of Series Seed convertible preferred stock (the “Series Seed Preferred Stock”), \$91.2 million of net cash proceeds received from the sale of Series A convertible preferred stock (the “Series A Preferred Stock”), \$57.7 million of net cash proceeds received from the sale of Series B-1 convertible preferred stock (the “Series B-1 Preferred Stock”) and \$12.5 million of net cash proceeds received from the sale of Series B-2 convertible preferred stock (the “Series B-2 Preferred Stock”). As outlined further within Note 16, “Subsequent Events”, the Company also received \$45.5 million of net cash proceeds in March 2023 from the sale of additional shares of Series B-2 Preferred Stock.

The Company is not currently generating revenue, expects to continue incurring significant operating losses and negative operating cash flows for the foreseeable future and has no currently available sources of financing. As such, the Company will require 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 and product candidates. There is no assurance that the Company will be successful in obtaining sufficient financing on acceptable terms to continue funding its operations.

Based upon the above considerations, the Company has concluded that there is substantial doubt about its ability to continue as a going concern within one year from July 27, 2023, the date these consolidated financial statements were issued.

## **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 subsidiary, Korro Mass Securities, Inc., which was established in December 2020. All intercompany transactions and balances have been eliminated in consolidation.

### ***Segment Information***

Operating segments are defined as components of an enterprise about which separate discrete information is available for evaluation by the chief operating decision-maker in deciding how to allocate resources and assess performance. The Company and the Company’s chief operating decision maker, the Company’s chief executive officer, views the Company’s operations and manages its business as a single operating segment. The Company operates only in the United States.

### ***Use of Estimates***

The preparation of financial statements in conformity with GAAP requires management to make estimates and assumptions that affect the amounts reported in the financial statements and accompanying notes. On an ongoing basis, the Company’s management evaluates its estimates, which include, but are not limited to, accrued expenses and stock-based compensation expense. During the year ended December 31, 2021, the Company’s estimates also included the valuation of the preferred stock tranche asset and liability related to the Series A Preferred Stock. The Company bases its estimates on historical experience and other market specific or other relevant assumptions it believes to be reasonable under the circumstances. Actual results could differ from those estimates.

### ***Fair Value of Financial Instruments***

ASC Topic 820, *Fair Value Measurement*, (“ASC 820”) establishes a fair value hierarchy for instruments 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. Financial assets and liabilities are classified in their entirety based on the lowest level of input that is significant to the fair value measurement.



## [Table of Contents](#)

To the extent that the valuation is based on models or inputs that are less observable or unobservable in the market, the determination of fair value requires more judgment. Accordingly, the degree of judgment exercised by the Company in determining fair value is greatest for instruments categorized in Level 3. A financial instrument's level within the fair value hierarchy is based on the lowest level of any input that is significant to the fair value measurement.

### ***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".

### ***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 did not maintain any long-term investments as of December 31, 2022 or 2021.

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.

### ***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 capital leases, is calculated over the estimated useful lives of the assets using the straight-line method.

### ***Impairment of Long-lived Assets***

The Company reviews long-lived assets when events or changes in circumstances indicate that the carrying value of an asset may not be recoverable. Recoverability is measured by comparing the carrying value of the asset to the future undiscounted cash flows from the use and eventual disposition of the asset. If an asset is considered to be impaired, the impairment loss to be recognized is measured as the amount by which the carrying value of the asset exceeds its fair value.

### ***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, 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 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.

The Company estimates the grant date fair value of its common stock using an appropriate valuation methodology, in accordance with the framework of the American Institute of Certified Public Accountants' Technical Practice Aid, *Valuation of Privately-Held Company Equity Securities Issued as Compensation*. Historically, the Company has utilized a market approach to determine its total equity value and the option pricing method ("OPM") to allocate this equity value among various classes of securities. The OPM treats common stock and convertible preferred stock as call options on the total equity value of a company, with exercise prices based on the value thresholds at which the allocation among the various holders of a company's securities changes. Under the OPM, the common stock has value only if the funds available for distribution to stockholders exceeds the value of the convertible preferred stock liquidation preferences at the time of the liquidity event, such as a strategic sale or a merger. A discount for lack of marketability of the common stock is

## [Table of Contents](#)

then applied to arrive at an indication of value for the common stock. Each valuation methodology includes estimates and assumptions that require the Company's judgment. These estimates and assumptions include a number of objective and subjective factors, including external market conditions, guideline public company information, the prices at which the Company sold convertible preferred stock to third parties in arms' length transactions, the rights and preferences of securities senior to the Company's common stock at the time and the likelihood of achieving a liquidity event such as an initial public offering or sale. Significant changes to the assumptions used in the valuations could result in different fair values of stock options and restricted stock at each valuation date, as applicable.

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. Because there is no public market for the Company's common stock, there is a lack of Company-specific historical and implied volatility data. Accordingly, 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. 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***

Basic net loss per share is calculated by dividing net loss attributable to common stockholders by the weighted-average number of common shares outstanding during the period. Diluted net loss per share is calculated by dividing the net loss attributable to common stockholders by the weighted-average number of common shares

## [Table of Contents](#)

outstanding for the period, including any dilutive effect from convertible preferred stock, outstanding stock options, outstanding warrants or unvested restricted common stock.

The Company follows the two-class method when computing net loss per share for periods when issued shares that meet the definition of participating securities are outstanding. The two-class method calls for the calculation of net loss per share for each class of common and participating securities according to dividends declared or accumulated and participation rights in undistributed earnings. The two-class method requires income available to common stockholders to be allocated between common and participating securities based upon their respective rights to receive dividends as if all income for the period had been distributed. Net losses are not allocated to the Company's preferred stockholders as they do not have an obligation to share in the Company's net losses.

### ***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 commercial paper and 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 has no significant off-balance sheet risk such as foreign exchange contracts, option contracts or other foreign hedging arrangements.

### ***Recently Adopted Accounting Pronouncements***

In February 2016, the FASB issued Accounting Standards Update ("ASU") 2016-02, *Leases (Topic 842)*, which requires a lessee to recognize assets and liabilities on the balance sheet for operating leases and changes many key definitions, including the definition of a lease. The new standard includes a short-term lease exception for leases with a term of 12 months or less, as part of which a lessee can make an accounting policy election not to recognize lease assets and lease liabilities. Lessees will continue to differentiate between finance leases (previously referred to as capital leases) and operating leases using classification criteria that are substantially similar to the previous guidance. In July 2018, the FASB also issued ASU 2018-11, *Leases (Topic 842): Targeted Improvements*, which permits entities to continue applying legacy guidance in ASC Topic 840, *Leases* ("ASC 840"), including its disclosure requirements, in the comparative periods presented in the year that the entity adopts the new leasing standard. Under this transition method, the cumulative effect of initially applying ASC 842 is recognized as an adjustment to the opening balance of retained earnings or accumulated deficit at the beginning of the annual reporting period that includes the date of initial application. Finally, in June 2020, the FASB issued ASU 2020-05, *Revenue from Contracts with Customers (Topic 606) and Leases (Topic 842): Effective Dates for Certain Entities*, whereby the effective date of this standard was deferred to annual reporting periods beginning after December 15, 2021 and interim periods within annual reporting periods beginning after December 15, 2022, and early adoption was still permitted.

Accordingly, the Company adopted ASC 842, as amended, on January 1, 2022 using the modified retrospective approach, which provides a method for recording existing leases at adoption and does not require restating comparative financial information. For the comparative period presented in these consolidated financial statements, lease-related disclosures continue to be presented in accordance with ASC 840. The Company also elected to utilize certain practical expedients under ASC 842, which among other things, permit the Company to i) maintain the lease classification for any existing leases, ii) maintain the Company's determination as to

## [Table of Contents](#)

whether any expired or existing contracts are or contain leases and iii) not separate nonlease components. Additionally, the Company elected an accounting policy whereby it does not apply the recognition requirements of ASC 842 to short-term leases with a term of 12 months or less.

Upon the adoption of ASC 842, the Company removed its legacy deferred rent balances that were previously recorded under ASC 840 and established an operating lease right-of-use asset of \$2.9 million, an operating lease liability, current of \$1.6 million and an operating lease liability, net of current portion of \$3.3 million, all relating to the Company's existing operating lease for its current corporate headquarters. There was no impact to the opening balance of accumulated deficit as a result of the adoption of ASC 842.

The following table presents a summary of the amount by which each financial statement line item was affected by the adoption of ASC 842 (in thousands):

	January 1, 2022		
	Prior to the Adoption of ASC 842	Effect of Adoption	Subsequent to the Adoption of ASC 842
Operating lease right-of-use asset	\$ —	\$ 2,922	\$ 2,922
Operating lease liabilities, current portion	\$ —	\$ 1,577	\$ 1,577
Deferred rent, current portion	\$ 939	\$ (939)	\$ —
Operating lease liabilities, net of current portion	\$ —	\$ 3,253	\$ 3,253
Deferred rent, net of current portion	\$ 969	\$ (969)	\$ —

The adoption of ASC 842 did not have a material impact on the consolidated statement of operations and comprehensive loss or the consolidated statement of cash flows for the year ended December 31, 2022.

In December 2019, the FASB issued ASU 2019-12, *Income Taxes (Topic 740): Simplifying the Accounting for Income Taxes*, which eliminates certain exceptions to the guidance in ASC 740 related to the approach for intraperiod tax allocation, the methodology for calculating income taxes in an interim period and the recognition of deferred tax liabilities when investment ownership changes. In addition, ASU 2019-12 simplifies the accounting for the interim period effects of changes in tax laws or rates and transactions that result in a step-up in the tax basis of goodwill. This guidance is effective for annual reporting periods beginning after December 15, 2021 and interim periods within annual reporting periods beginning after December 15, 2022, and early adoption is permitted. The Company adopted this new standard effective January 1, 2022, and there was no impact to the consolidated financial statements as a result of the adoption of this guidance.

### ***Recent Accounting Pronouncements-Yet to be Adopted***

In June 2016, the FASB issued ASU 2016-13, *Financial Instruments-Credit Losses (Topic 326): Measurement of Credit Losses on Financial Instruments*. This standard requires that credit losses be reported using an expected losses model rather than the incurred losses model that is currently used, and it establishes additional disclosure requirements related to credit risks. For available-for-sale debt securities with expected credit losses, this standard now requires allowances to be recorded instead of reducing the amortized cost of the investment. This guidance was originally effective for annual reporting periods beginning after December 15, 2020 and interim periods within fiscal years beginning after December 31, 2021, and early adoption was permitted. In November 2019, the FASB subsequently issued ASU 2019-10, *Financial Instruments-Credit Losses (Topic 326), Derivatives and Hedging (Topic 815), and Leases (Topic 842): Effective Dates*, whereby the effective date of this standard was deferred to annual reporting periods beginning after December 15, 2022, including interim periods within those annual reporting periods, and early adoption is still permitted.

## [Table of Contents](#)

Accordingly, the Company will adopt this new standard effective January 1, 2023, and it does not expect that the adoption of ASU 2016-13 will have a material impact on the consolidated financial statements.

### 3. Fair Value Measurements

The Company measures the fair value of money market funds based on quoted prices in active markets for identical securities. Investments also include commercial paper and government 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 measured at fair value on a recurring basis as of December 31, 2022 were as follows (in thousands):

	<u>Total</u>	<u>Quoted Prices in Active Markets for Identical Assets (Level 1)</u>	<u>Significant Other Observable Inputs (Level 2)</u>	<u>Significant Unobservable Inputs (Level 3)</u>
Money market funds, included in cash and cash equivalents	\$14,904	\$ 14,904	\$ —	\$ —
Short-term investments:				
Commercial paper	14,935	—	14,935	—
Government securities	3,980	—	3,980	—
Total	<u>\$33,819</u>	<u>\$ 14,904</u>	<u>\$ 18,915</u>	<u>\$ —</u>

Assets measured at fair value on a recurring basis as of December 31, 2021 were as follows (in thousands):

	<u>Total</u>	<u>Quoted Prices in Active Markets for Identical Assets (Level 1)</u>	<u>Significant Other Observable Inputs (Level 2)</u>	<u>Significant Unobservable Inputs (Level 3)</u>
Money market funds, included in cash and cash equivalents	\$ 71,579	\$ 71,579	\$ —	\$ —
Short-term investments:				
Corporate debt securities	12,078	—	12,078	—
Commercial paper	22,962	—	22,962	—
Total	<u>\$106,619</u>	<u>\$ 71,579</u>	<u>\$ 35,040</u>	<u>\$ —</u>

There were no liabilities measured at fair value on a recurring basis as of December 31, 2022 or 2021. However, as outlined further within Note 10, "Preferred Stock", the Company sold 20,424,108 shares of Series A Preferred Stock in June and July 2020 pursuant to a Series A Preferred Stock Purchase Agreement (the "Series A Agreement"). Included in the terms of the Series A Agreement was a right (the "Series A Tranche Right") that was initially accounted for as a liability under ASC Topic 480, *Distinguishing Liabilities from Equity* ("ASC 480") and measured at fair value at each reporting period.

In July 2021, the holders of the Series A Preferred Stock elected to waive the milestone conditions outlined further within Note 10, "Preferred Stock", and exercise the Series A Tranche Right. Accordingly, the holders purchased 20,424,108 additional shares of Series A Preferred Stock at a price of \$2.24 per share. As a result, the preferred stock tranche liability was measured at fair value contemporaneously with the exercise of the Series A Tranche Right. The Company utilized the market-adjusted equity method and the option-pricing method to determine the fair value of the Series A Preferred Stock being purchased under the Series A Tranche Right. Based upon this valuation, the Company determined that a preferred stock tranche asset existed in the amount of \$2.5 million due to the fair value of the Series A Preferred Stock being \$2.12 per share, an amount less than the

## [Table of Contents](#)

contractual purchase price. As a result of the change in the fair value of the preferred stock tranche asset, the Company recognized a \$13.5 million gain in the consolidated statements of operations and comprehensive loss for the year ended December 31, 2021. The preferred stock tranche asset was then extinguished in conjunction with the issuance of the related Series A Preferred Stock.

The following table provides a reconciliation of the preferred stock tranche liability (in thousands):

	<u>Preferred Stock Tranche Liability</u>
Balance at December 31, 2020	\$ (11,054)
Change in fair value upon exercise of Series A Tranche Right	13,505
Reclassification to Series A Preferred Stock upon extinguishment	(2,451)
Balance at December 31, 2021	<u>\$ —</u>

The estimates outlined above were based, in part, on subjective assumptions. Changes to these assumptions could have had a significant impact on the reported fair values of the preferred stock tranche liability and/or the preferred stock tranche asset.

There were no changes in valuation techniques, nor were there any transfers among the fair value hierarchy levels during the years ended December 31, 2022 or 2021.

## 4. Investments

Cash equivalents and short-term investments as of December 31, 2022 were comprised as follows (in thousands):

	<u>Amortized Cost</u>	<u>Unrealized Gains</u>	<u>Unrealized Losses</u>	<u>Fair Value</u>
Money market funds, included in cash and cash equivalents	\$ 14,904	\$ —	\$ —	\$ 14,904
Short-term investments:				
Commercial paper	14,935	—	—	14,935
Government securities	3,985	—	(5)	3,980
Total	<u>\$ 33,824</u>	<u>\$ —</u>	<u>\$ (5)</u>	<u>\$ 33,819</u>

Cash equivalents and short-term investments as of December 31, 2021 were comprised as follows (in thousands):

	<u>Amortized Cost</u>	<u>Unrealized Gains</u>	<u>Unrealized Losses</u>	<u>Fair Value</u>
Money market funds, included in cash and cash equivalents	\$ 71,579	\$ —	\$ —	\$ 71,579
Short-term investments:				
Corporate debt securities	12,085	—	(7)	12,078
Commercial paper	22,962	—	—	22,962
Total	<u>\$ 106,626</u>	<u>\$ —</u>	<u>\$ (7)</u>	<u>\$ 106,619</u>

As of December 31, 2022 and 2021, the aggregate fair value of securities that were in an unrealized loss position for less than twelve months was \$4.0 million and \$12.1 million, respectively. As of December 31, 2022 and 2021 the Company held no securities that were in an unrealized loss position for more than twelve months. As of December 31, 2022, the Company did not intend to sell, and would not be more likely than not required to sell,

## [Table of Contents](#)

the securities in an unrealized loss position before recovery of their amortized cost bases. Furthermore, the Company determined that there was no material change in the credit risk of these securities. As a result, the Company determined it did not hold any securities with any other-than-temporary impairment as of December 31, 2022.

### 5. Restricted Cash

As of December 31, 2022, the Company maintained current restricted cash of \$0.6 million and non-current restricted cash of \$4.5 million. As of December 31, 2021, the Company maintained non-current restricted cash of \$0.6 million. Such current amounts are included within "Prepaid expenses and other current assets" and such non-current amounts are included within "Other non-current assets" in the consolidated balance sheets. All restricted cash amounts are comprised solely of letters of credit required pursuant to the Company's facility leases.

The following table provides a reconciliation of cash, cash equivalents and restricted cash as of December 31, 2022 and 2021 that sums to the total of the same amounts shown in the consolidated statements of cash flows (in thousands):

	December 31,	
	2022	2021
Cash and cash equivalents	\$ 36,333	\$ 83,492
Restricted cash	5,144	552
Cash, cash equivalents and restricted cash	<u>\$ 41,477</u>	<u>\$ 84,044</u>

### 6. Property and Equipment, Net

Property and equipment, net, as of December 31, 2022 and 2021 was comprised as follows (in thousands):

	Estimated Useful Life (in Years)	December 31,	
		2022	2021
Laboratory equipment	5	\$ 8,441	\$ 4,364
Furniture and office equipment	4	477	262
Computer equipment	3	213	50
Leasehold improvements	Shorter of useful life or remaining lease term	2,941	2,883
Construction in progress		2,049	631
Total property and equipment, gross		14,121	8,190
Less: accumulated depreciation		(4,255)	(1,744)
Total property and equipment, net		<u>\$ 9,866</u>	<u>\$ 6,446</u>

As of December 31, 2022, the Company had construction in progress of \$2.0 million, predominately related to laboratory equipment received but not yet installed and capitalizable costs related to the Company's future corporate headquarters.



## [Table of Contents](#)

Depreciation expense for the years ended December 31, 2022 and 2021 was \$2.5 million and \$1.6 million, respectively.

### 7. Accrued Expenses and Other Current Liabilities

Accrued expenses and other current liabilities as of December 31, 2022 and 2021 were comprised as follows (in thousands):

	December 31,	
	2022	2021
Annual bonus	\$2,198	\$1,883
Other employee compensation and benefits	426	401
External research and development services	274	440
Other operating expenses	277	497
Total accrued expenses and other current liabilities	<u>\$3,175</u>	<u>\$3,221</u>

### 8. SVB Agreement

In January 2021, the Company and Silicon Valley Bank (“SVB”) entered into a Loan and Security Agreement (the “SVB Agreement”). Under the original terms of the SVB Agreement, the Company had the ability to borrow up to \$15.0 million at any time prior to December 31, 2021. The SVB Agreement was subsequently amended in December 2021 to extend this borrowing availability period through December 31, 2022. The Company did not borrow any amounts under the SVB Agreement prior to the expiry of the borrowing availability period.

In conjunction with the execution of the SVB Agreement, the Company issued SVB a warrant to purchase 162,000 shares of common stock at an exercise price of \$0.58 per share. This warrant was exercisable immediately upon issuance and expires on January 21, 2031. The Company determined that this warrant represents a debt issuance cost associated with the overall credit facility. As such, the warrant was recorded as a deferred financing cost and as a component of additional paid-in capital on the consolidated balance sheets. This deferred financing cost, as well as others incurred in conjunction with the execution of the SVB Agreement were amortized from the date of issuance through December 31, 2022, the expiry of the SVB Agreement’s borrowing availability period.

To determine the fair value of the warrant upon issuance, the Company utilized the Black-Scholes option-pricing model with the following assumptions:

	Assumption
Risk-free interest rate	1.1%
Expected dividend yield	— %
Expected term (in years)	10.0
Expected volatility	72.9%

Based upon these assumptions, the fair value of the warrant issued to SVB was determined to be less than \$0.1 million. As of December 31, 2022, the warrant had not been exercised by SVB.

### 9. Common Stock

As of December 31, 2022, the Company was authorized to issue 115,838,000 shares of common stock. 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, 2022, no dividends had been declared.

## [Table of Contents](#)

As of December 31, 2022 and 2021, the Company had reserved for future issuance the following number of shares of common stock (in thousands):

	December 31,	
	2022	2021
Conversion of outstanding Series Seed Preferred Stock	13,781	13,781
Conversion of outstanding Series A Preferred Stock	40,848	40,848
Conversion of outstanding Series B-1 Preferred Stock	22,222	22,222
Conversion of outstanding Series B-2 Preferred Stock	4,496	4,496
Future issuances of Series B-2 Preferred Stock	16,367	16,367
Vesting of restricted common stock	58	488
Exercises of outstanding stock options	9,280	8,322
Exercise of outstanding warrant	162	162
Future issuances under 2019 Stock Incentive Plan	3,218	4,361
Total reserved for future issuance	<u>110,432</u>	<u>111,047</u>

## 10. Preferred Stock

### *Series Seed Preferred Stock*

In May 2019, the Company entered into a Series Seed Stock Purchase Agreement (the “Series Seed 1 and 2 Agreement”). Under this Series Seed 1 and 2 Agreement, the Company sold an aggregate of 4,000,000 shares of Series Seed Preferred Stock at a price of \$1.00 per share. In addition, the Company was previously party to a Simple Agreement for Future Equity (the “SAFE”) with Atlas Venture Fund XI, L.P. (“Atlas”) whereby the Company received \$2.0 million in exchange for granting Atlas the right to participate in a future equity financing. In conjunction with the execution of the Series Seed 1 and 2 Agreement, the SAFE converted into 2,000,000 additional shares of Series Seed Preferred Stock. Subsequently, the Company entered into a Series Seed 3 Preferred Stock Purchase Agreement (the “Series Seed 3 Agreement”) in August 2019 under which it sold 7,780,769 additional shares of Series Seed Preferred Stock at a price of \$1.30 per share.

Under the Series Seed 1 and 2 Agreement and the Series Seed 3 Agreement, the Company received aggregate net cash proceeds of \$13.9 million, after deducting offering expenses paid by the Company.

The Company assessed the terms and features of the Series Seed Preferred Stock and concluded that it should be classified outside of permanent equity in the consolidated balance sheets, as the Series Seed Preferred Stock is contingently redeemable upon the occurrence of a deemed liquidation event that is outside of the Company’s control. Accordingly, the Company has classified the Series Seed Preferred Stock within temporary equity in the consolidated balance sheets. As of December 31, 2022, the Series Seed Preferred Stock is not being accreted to redemption as a deemed liquidation event is not considered to be probable. Further information on the rights, preferences and privileges of the Series Seed Preferred Stock is outlined below.

### *Series A Preferred Stock*

In June 2020, the Company entered into the Series A Agreement. Under the Series A Agreement, the Company sold 18,191,965 shares at an initial closing in June 2020 and 2,232,143 shares at an additional closing in July 2020, both at a price of \$2.24 per share. The Company received aggregate net cash proceeds of \$45.5 million from these sales, after deducting offering expenses paid by the Company.

As outlined within Note 3, “Fair Value Measurements”, the Series A Agreement also included the Series A Tranche Right whereby investors would be obligated to purchase, and the Company obligated to sell, an additional 20,424,108 shares of Series A Preferred Stock at \$2.24 per share upon the achievement of certain research and development milestones prior to December 31, 2021 (the “Series A Milestone Closing”). Investors could also elect to waive the conditions of the Series A Milestone Closing and purchase their allotment of additional shares at any time prior to the Series A Milestone Closing.

## Table of Contents

The Company assessed the terms and features of the Series A Preferred Stock and concluded that it should be classified outside of permanent equity in the consolidated balance sheets, as the Series A Preferred Stock is contingently redeemable upon the occurrence of a deemed liquidation event that is outside of the Company's control. Accordingly, the Company has classified the Series A Preferred Stock within temporary equity in the consolidated balance sheets. As of December 31, 2022, the Series A Preferred Stock is not being accreted to redemption as a deemed liquidation event is not considered to be probable. Further information on the rights, preferences and privileges of the Series A Preferred Stock is outlined below.

The Company also assessed the Series A Tranche Right and concluded that it met the definition of a freestanding financial instrument as it was both legally detachable and separately exercisable from the Series A Preferred Stock. In accordance with ASC 480, the Series A Tranche Right was initially classified as a liability in the consolidated balance sheet because the underlying Series A Preferred Stock is contingently redeemable upon the occurrence of a deemed liquidation event that is outside of the Company's control.

The Company first allocated the Series A Preferred Stock proceeds to the Series A Tranche Right based upon its fair value at the date of issuance, and the remaining proceeds were allocated to the Series A Preferred Stock. The fair value of the Series A Tranche Right on the date of issuance was determined to be \$11.1 million using a probability-weighted present value model that considered the probability of triggering the Series A Tranche Right through the achievement of the certain research and development milestones outlined in the Series A Agreement. The Company converted the future values to their present values using a discount rate it considered to be appropriate for probability-adjusted cash flows. As the Series A Tranche Right was classified as a liability, it was subsequently re-measured at fair value at each reporting period.

In July 2021, the holders of the Series A Preferred Stock elected to waive the conditions of the Series A Milestone Closing and exercise the Series A Tranche Right. Accordingly, the holders purchased 20,424,108 additional shares of Series A Preferred Stock at a price of \$2.24 per share. The Company received aggregate net cash proceeds of \$45.7 million from this sale, after deducting offering expenses paid by the Company.

As detailed further within Note 3, "Fair Value Measurements", the preferred stock tranche liability was measured at fair value contemporaneously with the exercise of the Series A Tranche Right. Based upon this valuation, the Company determined that a preferred stock tranche asset existed due to the fair value of the Series A Preferred Stock being \$2.12, an amount less than the contractual purchase price. As a result of the change in the fair value of the preferred stock tranche asset, the Company recognized a \$13.5 million gain in the consolidated statements of operations and comprehensive loss for the year ended December 31, 2021. The preferred stock tranche asset was then extinguished in conjunction with the issuance of the related Series A Preferred Stock.

### ***Series B Preferred Stock***

In November 2021, the Company entered into the Series B Preferred Stock Purchase Agreement (the "Series B Agreement"). Under the Series B Agreement, the Company initially sold 17,289,273 shares of Series B-1 Preferred Stock at a price of \$2.61 per share. The Series B Agreement also contemplates the issuance of Series B-2 Preferred Stock, as outlined further below. The Series B-1 Preferred Stock and the Series B-2 Preferred Stock are collectively referred to as the "Series B Preferred Stock" unless specifically noted.

The Series B Agreement also includes a right (the "Series B Tranche Right") whereby investors would be obligated to purchase, and the Company obligated to sell, 16,232,013 shares of Series B-2 Preferred Stock at \$2.78 per share upon the achievement of a certain research and development milestone (the "Series B Milestone Closing"). Investors can also elect to waive the conditions of the Series B Milestone Closing and purchase their allotment of Series B-2 Preferred Stock at any time prior to the Series B Milestone Closing.

In December 2021, the Company subsequently amended the Series B Agreement (the "Series B Agreement Amendment") to include two additional investors. Under the Series B Agreement Amendment, the Company

## [Table of Contents](#)

sold an additional 4,932,950 shares of Series B-1 Preferred Stock at a price of \$2.61 per share. Additionally, one investor elected to waive the conditions of the Series B Milestone Closing and purchase 4,496,403 shares of Series B-2 Preferred Stock at a price of \$2.78 per share. The other investor included in the Series B Agreement Amendment maintains the Series B Tranche Right to purchase 134,892 shares of Series B-2 Preferred Stock.

In total, the Company received aggregate net cash proceeds of \$57.7 million from the sale of Series B-1 Preferred Stock and \$12.5 million from the sale of Series B-2 Preferred Stock, after deducting offering expenses paid by the Company.

The Company assessed the terms and features of the Series B Preferred Stock and concluded that it should be classified outside of permanent equity in the consolidated balance sheets, as the Series B Preferred Stock is contingently redeemable upon the occurrence of a deemed liquidation event that is outside of the Company's control. Accordingly, the Company has classified the Series B Preferred Stock within temporary equity in the consolidated balance sheets. As of December 31, 2022, the Series B Preferred Stock is not being accreted to redemption as a deemed liquidation event is not considered to be probable. Further information on the rights, preferences and privileges of the Series B Preferred Stock is outlined below.

The Company also assessed the Series B Tranche Right and concluded that, while separately exercisable, it is not legally detachable from the Series B Preferred Stock. Accordingly, the Company concluded that the Series B Tranche Right does not meet the definition of a freestanding financial instrument and is instead an embedded feature of the Series B Preferred Stock.

### ***Rights, Preferences and Privileges of Preferred Stock***

The rights, preferences and privileges of the Series Seed Preferred Stock, the Series A Preferred Stock, the Series B-1 Preferred Stock and the Series B-2 Preferred Stock are as follows. In the discussion below, the Series Seed Preferred Stock and the Series A Preferred Stock, Series B-1 Preferred Stock and the Series B-2 Preferred Stock are collectively referred to as the "Preferred Stock" unless specifically noted.

#### *Conversion*

Each share of Preferred Stock shall be convertible, at the option of the holder thereof, at any time and from time to time, and without the payment of additional consideration by the holder thereof, into such number of fully paid and non-assessable shares of common stock as is determined by dividing the original issuance price by the conversion price in effect at the time of conversion. The original conversion price of the Series Seed 1 Preferred Stock and Series Seed 2 Preferred Stock is \$1.00, the original conversion price of the Series Seed 3 Preferred Stock is \$1.30, the original conversion price of the Series A Preferred Stock is \$2.24, the original conversion price of the Series B-1 Preferred Stock is \$2.61 and the original conversion price of the Series B-2 Preferred Stock is \$2.78. Shares of preferred stock are subject to adjustments to reflect the issuance of common stock, options, warrants, or other rights to subscribe for or to purchase common stock for a consideration per share, less than the conversion price then in effect and subsequent stock dividends, stock splits, combinations, or recapitalizations.

The Preferred Stock is subject to mandatory conversion upon the closing of a sale of common stock to the public at a price of at least \$5.56 per share (subject to appropriate adjustment in the event of a stock dividend, stock split, combination or other similar recapitalization) in a firm-commitment underwritten public offering resulting in at least \$75.0 million of gross proceeds to the Company. The Preferred Stock is also subject to mandatory conversion upon the vote or written consent of the holders of at least 66% of the then-outstanding shares of Preferred Stock, voting as a single class on an as-converted to common stock basis.

#### *Dividends*

The holders of Preferred Stock, in preference to common stockholders, are entitled to receive, when, as and if declared by the Company's Board of Directors, dividends at a rate of 8% annually. Dividends on Preferred Stock

## Table of Contents

are non-cumulative and are payable only when and if declared by the Company's Board of Directors. The holders of Preferred Stock are entitled to participate in dividends on common stock on an as-converted basis when and if declared by the Company's Board of Directors. Since the Company's inception, no dividends have been declared.

### *Liquidation Preference*

In the event of any voluntary or involuntary liquidation, dissolution, winding up or deemed liquidation event of the Company, the holders of shares of Preferred Stock then outstanding shall be entitled to be paid out of the assets of the Company available for distribution to its stockholders before any payment shall be made to the holders of common stock, an amount equal to the original issue price per share plus any dividends declared but unpaid thereon. For clarity, the original issue price of the Series Seed 1 Preferred Stock and Series Seed 2 Preferred Stock was \$1.00 per share, the original issue price of the Series Seed 3 Preferred Stock was \$1.30 per share, the original issue price of the Series A Preferred Stock was \$2.24 per share, the original issue price of the Series B-1 Preferred Stock was \$2.61 per share and the original issue price of the Series B-2 Preferred Stock was \$2.78 per share.

If upon any voluntary or involuntary liquidation, dissolution, winding up or deemed liquidation event of the Company, the assets of the Company available for distribution are insufficient to pay the holders of Preferred Stock the full amount to which they are entitled, the holders of shares of Preferred Stock shall share ratably in any distribution of the assets available for distribution in proportion to the respective amounts that would otherwise be payable in respect of the shares held by them upon such distribution if all amounts payable on or with respect to such shares were paid in full.

### *Redemption*

The Preferred Stock is contingently redeemable upon the occurrence of a deemed liquidation event, which includes a merger or a sale of substantially all of the assets of the Company. As of December 31, 2022, a deemed liquidation event is not considered to be probable.

### *Voting Rights*

The holders of Preferred Stock are entitled to vote based on the number of common shares that their preferred shares convert into on as-converted basis at the time of such vote. Except in specific circumstances, holders of Preferred Stock shall vote as a single class with the common stockholders.

The holders of record of the shares of the Series Seed Preferred Stock, voting exclusively and as a separate class on an as-converted to common stock basis, are entitled to elect two members to the Company's Board of Directors. The holders of record of the shares of the Series A Preferred Stock, voting exclusively and as a separate class on an as-converted to common stock basis, are entitled to elect two members to the Company's Board of Directors. The holders of record of the shares of the Series B Preferred Stock, voting exclusively and as a separate class on an as-converted to common stock basis, are entitled to elect two members to the Company's Board of Directors.

## **11. Stock-based Compensation**

### ***2019 Stock Incentive Plan***

In January 2019, the Company's Board of Directors adopted the 2019 Stock Incentive Plan (the "2019 Plan"). The 2019 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 2019 Plan initially provided for the issuance of up to 2,219,565 shares of common stock. The 2019 Plan was subsequently amended in May 2019, June 2020, October 2020, April 2021 and November 2021 to modify the number of

## [Table of Contents](#)

shares of common stock issuable under the 2019 Plan. Subsequent to the November 2021 amendment to the 2019 Plan, the Company can now issue up to 13,748,930 shares of common stock under the 2019 Plan. As of December 31, 2022, there were 3,217,888 shares available for future issuance under the 2019 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, 2022 and 2021 was as follows (in thousands):

	Year Ended December 31,	
	2022	2021
Research and development	\$ 243	\$ 137
General and administrative	897	670
Total stock-based compensation expense	<u>\$ 1,140</u>	<u>\$ 807</u>

### **Restricted Common Stock Activity**

Prior to the adoption of the 2019 Plan, the Company issued shares of restricted common stock to its founders as well as to certain employees. The restrictions on the common stock generally lapse over two to four years. In the event that a recipient ceases to provide service to the Company, the Company has the right to repurchase any unvested shares of restricted common stock at their original purchase price. As a result of this repurchase right, the Company recorded the issuance of such restricted common stock as a liability in the consolidated balance sheets. Amounts are reclassified to common stock at par and additional paid-in capital as the restricted common stock vests and restrictions lapse.

The following table summarizes restricted common stock activity during the year ended December 31, 2022 (in thousands, except per share amounts):

	Shares	Weighted-Average Grant Date Fair Value per Share
Unvested as of December 31, 2021	488	\$ 0.02
Granted	—	\$ —
Vested	(430)	\$ 0.01
Repurchased	—	\$ —
Unvested as of December 31, 2022	<u>58</u>	\$ 0.03

The aggregate fair value of restricted common stock that vested during the years ended December 31, 2022 and 2021, based upon the fair value of the underlying restricted common stock on the day of vesting, was \$0.5 million and \$0.3 million, respectively.

### **Stock Option Activity**

The fair value of stock options granted during the years ended December 31, 2022 and 2021 was calculated on the date of grant using the following weighted-average assumptions:

	Year Ended December 31,	
	2022	2021
Risk-free interest rate	2.5%	1.0%
Expected dividend yield	— %	— %
Expected term (in years)	6.0	6.0
Expected volatility	72.9%	71.9%

## [Table of Contents](#)

Using the Black-Scholes option pricing model, the weighted-average grant date fair value of stock options granted during the years ended December 31, 2022 and 2021 was \$0.73 and \$0.41 per share, respectively.

The following table summarizes changes in stock option activity during the year ended December 31, 2022 (in thousands, except per share amounts):

	<u>Options</u>	<u>Weighted-Average Exercise Price</u>	<u>Weighted-Average Remaining Contractual Term (in years)</u>	<u>Aggregate Intrinsic Value</u>
Outstanding at December 31, 2021	8,322	\$ 0.59	8.9	\$ 4,478
Granted	3,156	\$ 1.11		
Exercised	(176)	\$ 0.36		
Cancelled	(2,022)	\$ 0.73		
Outstanding as of December 31, 2022	<u>9,280</u>	\$ 0.74	8.0	\$ 2,953
Exercisable at December 31, 2022	<u>4,203</u>	\$ 0.60	7.1	\$ 1,881

The aggregate intrinsic value of stock options exercised during the years ended December 31, 2022 and 2021 was \$0.1 million and \$0.2 million, respectively.

As of December 31, 2022, there was unrecognized stock-based compensation expense related to unvested stock options of \$2.5 million, which the Company expects to recognize over a weighted-average period of approximately 2.7 years.

## 12. Income Taxes

The provision for income taxes for the years ended December 31, 2022 and 2021 was comprised as follows (in thousands):

	<u>Year Ended December 31,</u>	
	<u>2022</u>	<u>2021</u>
Current taxes:		
Federal	\$ —	\$ —
State	10	2
Total current taxes	10	2
Deferred taxes:		
Federal	—	—
State	—	—
Total deferred taxes	—	—
Total provision for income taxes	<u>\$ 10</u>	<u>\$ 2</u>

## [Table of Contents](#)

A reconciliation of the federal statutory income tax rate to the Company's effective tax rate is as follows:

	December 31,	
	2022	2021
Income tax computed at federal statutory rate	21.0%	21.0%
State taxes, net of federal benefit	6.1%	9.9%
Tax credit carryforwards	6.2%	6.2%
Permanent items	(0.2)%	12.5%
Change in valuation allowance	(32.7%)	(49.4%)
Other	(0.4%)	(0.2)%
Effective tax rate	<u>— %</u>	<u>— %</u>

The principal components of the Company's deferred tax assets and liabilities as of December 31, 2022 and 2021 were comprised as follows (in thousands):

	December 31,	
	2022	2021
Deferred tax assets:		
Net operating loss carryforwards	\$ 19,580	\$ 14,481
Tax credit carryforwards	5,477	1,871
Capitalized research and development	10,279	—
Stock-based compensation	319	148
Deferred rent	—	521
Operating lease liability	855	—
Accrued expenses and other temporary differences	707	650
Total deferred tax assets	<u>37,217</u>	<u>17,671</u>
Less: valuation allowance	<u>(36,094)</u>	<u>(17,091)</u>
Net deferred tax assets	1,123	580
Deferred tax liabilities:		
Operating right-of-use asset	(552)	—
Depreciation	(571)	(580)
Total deferred tax liabilities	<u>(1,123)</u>	<u>(580)</u>
Net deferred taxes	<u>\$ —</u>	<u>\$ —</u>

As of December 31, 2022, the Company had federal and state net operating loss ("NOL") carryforwards of \$72.1 million and \$70.3 million, respectively. Federal NOLs may be carried forward indefinitely. State NOLs expire at various dates from 2038 through 2042. As of December 31, 2022, the Company had federal research and development tax credit carryforwards of \$3.5 million that expire at various dates from 2040 through 2042. In addition, as of December 31, 2022, the Company had state research and development tax credit carryforwards of \$2.6 million that expire at various dates from 2034 through 2037.

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 \$36.1 million has been established at December 31, 2022. The increase in the valuation allowance of \$19.0 million during the year ended December 31, 2022 was primarily due to the additional operating loss generated by the Company.



## [Table of Contents](#)

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 Internal Revenue Code (“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, 2022, 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 had no unrecognized tax benefits as of either December 31, 2022 or 2021. 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 Massachusetts state tax jurisdiction. 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, 2022, the Company has not incurred any material interest or penalty charges.

### **13. Commitments and Contingencies**

#### ***790 Memorial Drive Lease***

In May 2020, the Company entered into an operating lease agreement (“the 790 Memorial Drive Lease”) to occupy 3,407 square feet of laboratory and office space at 790 Memorial Drive in Cambridge, Massachusetts. The 790 Memorial Drive Lease term commenced on June 15, 2020 and subsequently expired on June 30, 2021. Pursuant to ASC 840, the Company recorded total rent expense of \$0.1 million for the year ended December 31, 2021 related to the 790 Memorial Drive Lease.

#### ***OKS Building 600/700 Lease***

In August 2020, the Company entered into an operating lease agreement (the “OKS Building 600/700 Lease”) to occupy 12,165 square feet of laboratory and office space at One Kendall Square in Cambridge, Massachusetts (the “OKS Facility”). The OKS Building 600/700 Lease term commenced on January 21, 2021 and was originally set to expire on January 31, 2024. The Company provided the landlord with a security deposit in the form of a \$0.3 million letter of credit, which was originally recorded as restricted cash and included within “Other non-current assets” as of December 31, 2021.

The OKS Building 600/700 Lease also provided the Company with a tenant improvement allowance of \$2.4 million, the entirety of which was utilized as of December 31, 2021. Leasehold improvements related to the OKS Building 600/700 Lease were originally being amortized over the lease term, commencing with the date that the leasehold improvements were placed into service.

#### ***OKS Sublease***

In October 2021, the Company entered into an operating sublease agreement (the “OKS Sublease”) with an unrelated biotechnology company to occupy an additional 5,094 square feet of laboratory and office space in the

## [Table of Contents](#)

OKS Facility. The OKS Sublease term commenced on October 25, 2021 and was originally set to expire on March 31, 2023, unless the sublessor notified the Company in writing by July 1, 2022 that it wished to extend the sublease term through December 31, 2024. The Company provided the sublessor with a security deposit in the form of a \$0.2 million letter of credit, which was originally recorded as restricted cash and included within “Other non-current assets” as of December 31, 2021.

### ***OKS Sublease Extension and OKS Combined Facility Lease***

In May 2022, the sublessor of the OKS Sublease provided the lease extension notification to the Company. As a result of this election, commencing on June 1, 2022, the Company was required to take control over an additional 5,302 square feet for a total occupancy of 10,396 square feet.

In August 2022, however, the Company entered into an amended lease agreement (the “OKS Combined Facility Lease”) with the landlord of the OKS Facility, the primary effects of which were the following:

- Effective September 1, 2022, the space originally leased from the unrelated biotechnology company would now be leased directly from the OKS Facility landlord.
- The monthly lease payment amounts owed by the Company were not modified from the original One Kendall Square Sublease, however the Company is now obligated to make an additional payment of \$0.3 million at the conclusion of the OKS Combined Facility Lease term.
- The lease term for the entirety of the Company’s leased space at the One Kendall Square Facility was amended to expire on December 31, 2023.
- The Company provided the landlord of the OKS Facility with an additional security deposit in the form of a \$0.3 million letter of credit. The \$0.3 million letter of credit previously issued to the sublessor of the OKS Sublease was subsequently cancelled.

### *Accounting under ASC 840*

As the Company obtained access to the OKS Building 600/700 Lease space in August 2020, it concluded that this represented the lease commencement date for accounting purposes. Prior to the adoption of ASC 842, and pursuant to the legacy guidance within ASC 840, the Company recorded rent expense on a straight-line basis from this date through the end of the lease term and also recorded deferred rent on the consolidated balance sheets. The Company recorded the tenant improvement allowance as a deferred lease incentive and was amortizing the deferred lease incentive as a reduction of rent expense ratably over the lease term.

For the OKS Sublease, the Company similarly recorded rent expense on a straight-line basis through the full potential lease term that would expire on December 31, 2024. The full potential lease term was utilized as the lease extension provision was at the sole discretion of the sublessor. In addition, this straight-line rent expense calculation assumed that, as of April 1, 2023, the Company would occupy the entire 10,396 square feet premises contemplated by the OKS Sublease.

As of December 31, 2021, the future minimum lease payments due under the OKS Building 600/700 Lease and the OKS Sublease were as follows (in thousands):

	<b>Future Minimum Lease Payments</b>
2022	\$ 1,779
2023	2,315
2024	1,067
Total future minimum lease payments	<u>\$ 5,161</u>

## [Table of Contents](#)

Pursuant to ASC 840, the Company recorded total rent expense of \$0.6 million for the year ended December 31, 2021 related to the OKS Building 600/700 Lease and the OKS Sublease.

### *Accounting under ASC 842*

As a result of the adoption of ASC 842 on January 1, 2022, the Company initially recorded right-of-use assets and corresponding lease liabilities for the OKS Building 600/700 Lease and the OKS Sublease. As there was no rate implicit in either lease, the Company estimated its incremental borrowing rate based upon a synthetic credit rating and yield curve analysis. Based upon this analysis, the Company calculated a discount rate of 5.09% for both the OKS Building 600/700 Lease and the OKS Sublease as of January 1, 2022.

The Company then assessed the OKS Combined Facility Lease as a lease modification, concluding that the modification did not result in a separate contract pursuant to ASC 842-10-25-8. Based upon this assessment, and in accordance with ASC 842-10-25-15, the Company has accounted for the modification as a termination of the existing leases and the creation of a new operating lease. As there was no rate implicit in the OKS Combined Facility Lease, the Company again estimated its incremental borrowing rate based upon a synthetic credit rating and yield curve analysis. Based upon this analysis, the Company calculated a discount rate of 7.87% as of August 31, 2022, the effective date of the modification.

As the OKS Combined Facility Lease term ends on December 31, 2023, the Company is now amortizing the leasehold improvements originally related to the OKS Building 600/700 Lease through December 31, 2023. Additionally, the combined \$0.6 million letters of credit issued to the OKS Facility landlord are classified as restricted cash and included within "Prepaid expenses and other current assets" as of December 31, 2022.

As of December 31, 2022, the future minimum lease payments due under the OKS Combined Facility Lease were as follows (in thousands):

	<u>Amount</u>
2023	\$2,621
Less: effect of discounting	(92)
Total lease liability	<u>\$2,529</u>

Pursuant to ASC 842, the Company recorded operating lease expense of \$1.4 million and variable lease expense of \$0.7 million for the year ended December 31, 2022 related to the OKS Building 600/700 Lease, OKS Sublease and OKS Combined Facility Lease. As of December 31, 2022, the remaining lease term of the OKS Combined Facility Lease was 1.0 year.

### *Cummings Park Sublease*

In February 2022, the Company entered into an operating sublease agreement (the "Cummings Park Sublease") to occupy 18,148 square feet of laboratory and office space at Cummings Park in Woburn, Massachusetts. The Cummings Park Sublease term commenced on February 23, 2022 and will expire on July 31, 2024. Contemporaneously with the execution of the Cummings Park Sublease, the Company provided the landlord with a cash security deposit in the amount of \$0.1 million.

Pursuant to the terms of the Cummings Park Sublease, the Company was not obligated to make rental payments until 91 days after the Cummings Park Sublease commencement date (the "Cummings Park Rent Commencement Date"). Rental payments will escalate on each successive anniversary of the Cummings Park Rent Commencement Date.

## [Table of Contents](#)

As of December 31, 2022, the future minimum lease payments due under the Cummings Park Sublease were as follows (in thousands):

	<b>Amount</b>
2023	\$ 411
2024	212
Total remaining minimum lease payments	623
Less: effect of discounting	(22)
Total lease liability	<u>\$ 601</u>

Pursuant to ASC 842, the Company recorded operating lease expense of \$0.3 million and variable lease expense of less than \$0.1 million for the year ended December 31, 2022 related to the Cummings Park Sublease. As of December 31, 2022, the remaining lease term of the Cummings Park Sublease was 1.6 years.

### **60 First Street Lease**

In April 2022, the Company entered into an operating lease agreement (the “60 First Street Lease”) to occupy 50,453 square feet of laboratory and office space in Cambridge, Massachusetts (the “60 First Street Facility”). The 60 First Street Lease term will commence on the later of i) the substantial completion of the landlord’s base building improvements or ii) October 31, 2022 (such date the “60 First Street Lease Commencement Date”). Rental payments will commence 12 months following the 60 First Street Lease Commencement Date (such date the “60 First Street Rent Commencement Date”), and the 60 First Street Lease will expire on the last day of the 120<sup>th</sup> full calendar month following the 60 First Street Rent Commencement Date. Rental payments will escalate on each successive anniversary of the 60 First Street Rent Commencement Date, and the total rental payments over the term of the 60 First Street Lease are expected to be \$76.7 million. In addition, the 60 First Street Lease also provides the Company with a tenant improvement allowance of \$13.1 million.

The Company provided the landlord with a security deposit in the form of a \$4.5 million letter of credit, which has been recorded as restricted cash and included within “Other non-current assets” as of December 31, 2022. This letter of credit will be reduced to \$3.4 million upon substantial completion of the Company’s tenant improvements and then to \$2.3 million upon the third anniversary of the 60 First Street Lease Commencement Date.

As of December 31, 2022, the landlord had not yet delivered the 60 First Street Facility to the Company. Accordingly, the Company concluded that the lease commencement date had not occurred and no right-of-use asset, lease liability or operating lease expense related to the 60 First Street Lease was recorded as of or for the year ended December 31, 2022. Additionally, the Company did not utilize any portion of the \$13.1 million tenant improvement allowance as of December 31, 2022.

### **Litigation**

The Company is not a party to any litigation, nor had it established any reserves for litigation liabilities as of December 31, 2022 or 2021.

### **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. Beginning on April 1, 2022, the Company matches 100% of an employee’s 401(k) contributions up to a maximum of 3% of the participant’s salary, subject to employer match limitations under the IRC. As such, the Company made \$0.2 million of matching contributions to the 401(k) Plan during the year ended December 31, 2022. The Company did not make any matching contributions during the year ended December 31, 2021.

## 15. Related Party Transactions

As a result of Atlas' ownership of the Company's Series Seed Preferred Stock, Series A Preferred Stock and Series B Preferred Stock, Atlas represents an affiliate of the Company. During the years ended December 31, 2022 and 2021, the Company incurred expenses of less than \$0.1 million and \$0.1 million, respectively, related to consulting services provided by an affiliate of Atlas. As of December 31, 2021, the Company had amounts due to this affiliate of \$0.1 million. No such amounts were due to this affiliate as of December 31, 2022.

## 16. 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 (in thousands):

	Year Ended December 31,	
	2022	2021
Series Seed Preferred Stock	13,781	13,781
Series A Preferred Stock	40,848	40,848
Series B-1 Preferred Stock	22,222	22,222
Series B-2 Preferred Stock	4,496	4,496
Unvested restricted common stock	58	488
Outstanding stock options	9,280	8,322
Outstanding warrant	162	162
Total	<u>90,847</u>	<u>90,319</u>

## 17. Subsequent Events

The Company has evaluated subsequent events for recognition and disclosure purposes through July 27, 2023, the date these consolidated financial statements were issued. Except for the matters described below, the Company has concluded that no other events or transactions have occurred that require disclosure in the consolidated financial statements.

### *Genevant Agreement*

In March 2023, the Company entered into a collaboration and license agreement (the "Genevant Agreement") with Genevant Sciences GmbH ("Genevant") to combine the Company's RNA editing technology with Genevant's lipid nanoparticle technology to develop and potentially commercialize an RNA therapeutic for alpha-1 antitrypsin deficiency. 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.
- 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 specified clinical, regulatory and commercial milestones, including potential precommercial milestone payments up to an aggregate total of \$40.5 million per product and potential commercial milestone payments up to an aggregate total of \$57.0 million.
- Genevant is eligible to receive royalties at tiered percentage rates beginning in the mid-single-digits, based on future annual net sales of licensed products within the scope of the Genevant Agreement.

The Company has paid Genevant \$2.8 million through July 27, 2023, the date these consolidated financial statements were issued, and has recorded the \$2.5 million nonrefundable, payment within research and development expense in the condensed consolidated statement of operations for the three months ended March 31, 2023.

***Sale of Series B-2 Preferred Stock***

In March 2023, the holders of the Series B Preferred Stock elected to waive the conditions of the Series B Milestone Closing and exercise the Series B Tranche Right. Accordingly, the holders purchased 16,366,905 shares of Series B-2 Preferred Stock at a price of \$2.78 per share. The Company received aggregate net cash proceeds of \$45.5 million from this sale.

***Merger Agreement & Pre-Closing Financing***

On July 14, 2023, the Company entered into an Agreement and Plan of Merger (the “Merger Agreement”) with Frequency Therapeutics, Inc., a Delaware corporation (“Frequency”) and Frequency Merger Sub, Inc., a Delaware corporation and wholly owned subsidiary of Frequency (“Merger Sub”). Upon the terms and subject to the satisfaction of the conditions described in the Merger Agreement, Merger Sub will be merged with and into Korro Bio, Inc., with Korro Bio, Inc. surviving the Merger as a wholly owned subsidiary of Frequency (the “merger”). In contemplation of the proposed merger, the Company also entered into a subscription agreement with certain parties to purchase shares of the Company’s common stock for an aggregate purchase price of approximately \$117.3 million (the “pre-closing financing”).

Subject to the terms and conditions of the Merger Agreement, immediately prior to the effective time of the merger (“Effective Time”), each then outstanding share of the Company’s common stock (including common stock issued upon the conversion of the Company’s preferred stock but excluding the common stock issued in the pre-closing financing) will be converted into the right to receive a number of shares of Frequency’s common stock calculated in accordance with the Merger Agreement.

The Company’s pre-closing financing is contingent on and will occur prior to the closing of the merger, subject to customary closing conditions. Shares of the Company’s common stock issued pursuant to the pre-closing financing will be converted into the right to receive a number of shares of Frequency common stock calculated in accordance with Merger Agreement at the Effective Time of the merger.

The merger and the pre-closing financing are expected to close in the fourth quarter of 2023. The merger is subject to approval by the stockholders of the Company and Frequency as well as other customary closing conditions, including the effectiveness of a registration statement filed with the SEC in connection with the transaction. If Frequency is unable to satisfy certain closing conditions or if other mutual closing conditions are not satisfied, the Company will not be obligated to complete the merger. The Merger Agreement contains certain termination rights of the Company and Frequency. The merger is expected to be treated as a reverse recapitalization in accordance with U.S. GAAP.



**Up to 1,714,570 Shares of Common Stock**

**PROSPECTUS  
, 2023**

**PART II**  
**INFORMATION NOT REQUIRED IN PROSPECTUS**

**Item 13. Other Expenses of Issuance and Distribution.**

The following is an estimate of the expenses (all of which are to be paid by the registrant) that we may incur in connection with the securities being registered hereby.

	<u>Amount</u>
SEC registration fee	\$ 3,796.82
Legal fees and expenses	100,000
Accounting fees and expenses	47,500
Miscellaneous	13,703.18
Total	<u>\$ 165,000</u>

**Item 14. Indemnification of Directors and Officers.**

Section 145 of the Delaware General Corporation Law, or the DGCL authorizes a corporation to indemnify its directors and officers against liabilities arising out of actions, suits and proceedings to which they are made or threatened to be made a party by reason of the fact that they have served or are currently serving as a director or officer to a corporation. The indemnity may cover expenses (including attorneys' fees) judgments, fines and amounts paid in settlement actually and reasonably incurred by the director or officer in connection with any such action, suit or proceeding. Section 145 permits corporations to pay expenses (including attorneys' fees) incurred by directors and officers in advance of the final disposition of such action, suit or proceeding. In addition, Section 145 provides that a corporation has the power to purchase and maintain insurance on behalf of its directors and officers against any liability asserted against them and incurred by them in their capacity as a director or officer, or arising out of their status as such, whether or not the corporation would have the power to indemnify the director or officer against such liability under Section 145.

Section 102(b)(7) of the DGCL provides that a corporation's certificate of incorporation may contain a provision eliminating or limiting the personal liability of a director or officer to the corporation or its stockholders for monetary damages for breach of fiduciary duty, provided that such provision shall not eliminate or limit the liability (i) for any breach of the duty of loyalty to the corporation or its stockholders, (ii) for acts or omissions not in good faith or that involve intentional misconduct or a knowing violation of law, (iii) under Section 174 of the DGCL, or (iv) for any transaction from which an improper personal benefit was derived.

The Bylaws provide that we will indemnify each person who was or is a party or threatened to be made a party to any threatened, pending or completed action, suit or proceeding (other than an action by or in the right of us) by reason of the fact that he or she is or was, or has agreed to become, a director or officer, or is or was serving, or has agreed to serve, at our request as a director, officer, partner, employee or trustee of, or in a similar capacity with, another corporation, partnership, joint venture, trust or other enterprise (all such persons being referred to as an "Indemnitee"), or by reason of any action alleged to have been taken or omitted in such capacity, against all expenses (including attorneys' fees), judgments, fines and amounts paid in settlement actually and reasonably incurred in connection with such action, suit or proceeding and any appeal therefrom, if such Indemnitee acted in good faith and in a manner he or she reasonably believed to be in, or not opposed to, our best interests, and, with respect to any criminal action or proceeding, he or she had no reasonable cause to believe his or her conduct was unlawful. The Bylaws provide that we will indemnify any Indemnitee who was or is a party to an action or suit by or in the right of us to procure a judgment in our favor by reason of the fact that the Indemnitee is or was, or has agreed to become, a director or officer, or is or was serving, or has agreed to serve, at our request as a director, officer, partner, employee or trustee of, or in a similar capacity with, another corporation, partnership, joint venture, trust or other enterprise, or by reason of any action alleged to have been taken or omitted in such capacity, against all expenses (including attorneys' fees) and, to the extent permitted by



## Table of Contents

law, amounts paid in settlement actually and reasonably incurred in connection with such action, suit or proceeding, and any appeal therefrom, if the Indemnitee acted in good faith and in a manner he or she reasonably believed to be in, or not opposed to, our best interests, except that no indemnification shall be made with respect to any claim, issue or matter as to which such person shall have been adjudged to be liable to us, unless a court determines that, despite such adjudication but in view of all of the circumstances, he or she is entitled to indemnification of such expenses. Notwithstanding the foregoing, to the extent that any Indemnitee has been successful, on the merits or otherwise, he or she will be indemnified by us against all expenses (including attorneys' fees) actually and reasonably incurred in connection therewith. Expenses must be advanced to an Indemnitee under certain circumstances.

We have entered into indemnification agreements with each of our directors and officers. These indemnification agreements may require us, among other things, to indemnify our directors and officers for some expenses, including attorneys' fees, judgments, fines and settlement amounts incurred by a director or officer in any action or proceeding arising out of his or her service as one of our directors or officers, or any of our subsidiaries or any other company or enterprise to which the person provides services at our request.

We also maintain general liability insurance that covers certain liabilities of our directors and officers arising out of claims based on acts or omissions in their capacities as directors or officers, including liabilities under the Securities Act.

Under the Merger Agreement, from the effective time of the Merger through the sixth anniversary of the date of the effective time, we agreed to indemnify and hold harmless each person who was, as of July 14, 2023, the signing date of the Merger Agreement, or had been at any time prior, or who becomes prior to the effective time of the Merger, a director or officer of our company or Legacy Korro, against all claims, losses, liabilities, damages, judgments, fines and reasonable fees, costs and expenses, including attorneys' fees and disbursements, pertaining to claims arising out of the fact that such person was a director or officer of our company or Legacy Korro, at or prior to the effective time of the merger, to the fullest extent permitted under the DGCL.

Under the Merger Agreement, we agreed not to amend, modify or repeal provisions in the Charter and Bylaws that were in effect as of July 14, 2023, the date of the Merger Agreement, with respect to indemnification, advancement of expenses and exculpation of our present and former directors and officers for a period of six years from the effective time of the Merger in a manner that would adversely affect the rights of such individuals who at the effective time of the Merger were our officers or directors.

In connection with the Merger, we purchased an insurance policy in effect for six years from the effective time of the Merger, providing no less favorable coverage as the current directors' and officers' liability insurance policies maintained by us with respect to any actual or alleged error, misstatement, misleading statement, act, omission, neglect, breach of duty or any matter claimed against our current and former officers and directors.

### **Item 15. Recent Sales of Unregistered Securities.**

*Shares of Legacy Korro stock have not been adjusted to reflect the exchange for our common stock in the Merger and reflect actual shares issued by Legacy Korro.*

In July 2021, Legacy Korro sold an aggregate of 20,424,108 shares of Series A Preferred Stock at a purchase price of \$2.24 per share for aggregate gross proceeds of \$45.8 million.

In November 2021, December 2021 and March 2023, Legacy Korro sold an aggregate of 43,085,531 shares of its Series B preferred stock at a purchase price of \$2.61 and \$2.78 per share for aggregate gross proceeds of \$116.0 million.

In connection with the Merger, we entered into a Subscription Agreement in July 2023 with certain investors to consummate the Pre-Closing Financing. Pursuant to the Subscription Agreement, the investors agreed to purchase shares of Legacy Korro common stock, at a price of \$2.78 per share, for aggregate gross proceeds of \$117.3 million.

## Table of Contents

### **Item 16. Exhibits.**

<u>Exhibit</u>	<u>Description</u>
2.1+	<a href="#"><u>Agreement and Plan of Merger and Reorganization, dated as of July 14, 2023, by and among the registrant, Frequency Merger Sub, Inc. and the entity formerly known as Korro Bio, Inc. (incorporated by reference to Exhibit 2.1 to the registrant's Current Report on Form 8-K filed on July 14, 2023).</u></a>
3.1	<a href="#"><u>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).</u></a>
3.2	<a href="#"><u>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).</u></a>
3.3	<a href="#"><u>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).</u></a>
3.4	<a href="#"><u>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).</u></a>
5.1**	<a href="#"><u>Opinion of Goodwin Procter LLP.</u></a>
10.1**	<a href="#"><u>Korro Bio, Inc. 2023 Stock Option and Incentive Plan, and form of award agreements thereunder.</u></a>
10.2*	<a href="#"><u>Korro Bio, Inc. 2023 Employee Stock Purchase Plan.</u></a>
10.3*	<a href="#"><u>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).</u></a>
10.4	<a href="#"><u>Korro Bio, Inc. Non-Employee Director Compensation Policy (incorporated by reference to Exhibit 10.11 to the Form 8-K, filed November 6, 2023).</u></a>
10.5	<a href="#"><u>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).</u></a>
10.6	<a href="#"><u>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).</u></a>
10.7	<a href="#"><u>Frequency Therapeutics, Inc. 2019 Employee Stock Purchase Plan (incorporated by reference to Exhibit 10.13 to the registrant's Registration Statement on Form S-1/A (333-233652) filed on September 23, 2019).</u></a>
10.8	<a href="#"><u>Korro Bio, Inc. Senior Executive Cash Incentive Bonus Plan (incorporated by reference to Exhibit 10.12 to the Form 8-K, filed November 6, 2023).</u></a>
10.9	<a href="#"><u>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 Form 8-K filed November 14, 2023).</u></a>
10.10	<a href="#"><u>Employment Agreement, dated November 8, 2023, by and between Korro Bio, Inc. and Vineet Agarwal (incorporated by reference to Exhibit 10.2 to the Form 8-K filed November 14, 2023).</u></a>
10.11*	<a href="#"><u>Employment Agreement, dated November 8, 2023, by and between Korro Bio, Inc. and Shelby Walker.</u></a>
10.12*	<a href="#"><u>Employment Agreement, dated November 8, 2023, by and between Korro Bio, Inc. and Steve Colletti.</u></a>

## Table of Contents

<u>Exhibit</u>	<u>Description</u>
10.13*	<a href="#"><u>Employment Agreement, dated November 9, 2023, by and between Korro Bio, Inc. and Todd Chappell.</u></a>
10.14	<a href="#"><u>Form of Indemnification Agreement for Officers of Korro Bio, Inc. (incorporated by reference to Exhibit 10.6 to the Form 8-K filed November 6, 2023).</u></a>
10.15	<a href="#"><u>Form of Indemnification Agreement for Directors of Korro Bio, Inc. (incorporated by reference to Exhibit 10.7 to the Form 8-K filed November 6, 2023).</u></a>
10.16	<a href="#"><u>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 filed September 28, 2023).</u></a>
10.17	<a href="#"><u>Form of Lock-Up Agreement (incorporated by reference to Exhibit 10.3 to the Form 8-K filed November 6, 2023).</u></a>
10.18	<a href="#"><u>Contingent Value Rights Agreement dated November 3, 2023 (incorporated by reference to Exhibit 10.4 to the Form 8-K filed November 6, 2023).</u></a>
10.19	<a href="#"><u>Lease Agreement, by and between Korro Bio, Inc. and ARE-MA Region No. 59, LLC, dated August 10, 2020, as amended on March 2, 2021 (incorporated by reference to Exhibit 10.21 to the Form S-4 filed September 28, 2023).</u></a>
10.20	<a href="#"><u>Lease Agreement, by and between Korro Bio Ops, Inc. and ARE-MA Region No. 59, LLC, dated August 10, 2020, as amended on March 2, 2021 (incorporated by reference to Exhibit 10.21 to the Registration Statement on Form S-4/A deemed filed by the Registrant on September 28, 2023).</u></a>
10.21	<a href="#"><u>Indenture of Lease, effective as of January 7, 2020 between HCP/KING 75 Hayden LLC and Frequency Therapeutics (incorporated by reference to Exhibit 10.13 to the registrant's Annual Report on Form 10-K filed on March 26, 2020).</u></a>
10.22	<a href="#"><u>Sublease Agreement, dated July 8, 2022, by and between Frequency Therapeutics, Inc., and SalioGen Therapeutics, Inc. (incorporated by reference to Exhibit 10.1 to the registrant's Current Report on Form 8-K filed on July 12, 2022).</u></a>
10.23	<a href="#"><u>Subscription Agreement, dated as of July 14, 2023 (incorporated by reference to Exhibit 10.1 to the registrant's Current Report on Form 8-K filed on November 6, 2023).</u></a>
10.24	<a href="#"><u>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).</u></a>
10.25	<a href="#"><u>Warrant Agreement dated January 22, 2021 (incorporated by reference to Exhibit 10.13 to the Form 8-K, filed November 6, 2023).</u></a>
16.1	<a href="#"><u>Letter from RSM US LLP dated November 6, 2023 (incorporated by reference to Exhibit 16.1 to the Form 8-K, filed November 6, 2023).</u></a>
21.1*	<a href="#"><u>List of Subsidiaries.</u></a>
23.1**	<a href="#"><u>Consent of Ernst &amp; Young LLP.</u></a>
23.2**	<a href="#"><u>Consent of RSM US LLP.</u></a>
23.3**	<a href="#"><u>Consent of Goodwin Procter LLP (included in Exhibit 5.1 hereto).</u></a>
24.1*	<a href="#"><u>Power of Attorney (included on signature page of initial filing of this registration statement).</u></a>
24.2*	<a href="#"><u>Power of Attorney.</u></a>
101.INS*	Inline XBRL Instance Document.
101.SCH*	Inline XBRL Taxonomy Extension Schema Document.
101.CAL*	Inline XBRL Taxonomy Extension Calculation Linkbase Document.

## Table of Contents

<u>Exhibit</u>	<u>Description</u>
101.DEF*	Inline XBRL Taxonomy Extension Definition Linkbase Document.
101.LAB*	Inline XBRL Taxonomy Extension Label Linkbase Document.
101.PRE*	Inline XBRL Taxonomy Extension Presentation Linkbase Document.
104*	Cover Page Interactive Data File (embedded within the Inline XBRL document).
107**	<a href="#">Filing Fee Table</a>

\* Previously filed  
\*\* Filed herewith.  
+ The schedules and exhibits to this agreement have been omitted pursuant to Item 601(b)(2) of Regulation S-K. A copy of any omitted schedule and/or exhibit will be furnished to the SEC upon request.  
# Portions of this exhibit (indicated by brackets and asterisks) have been omitted because the registrant has determined that the information is both not material and is the type that the registrant treats as private or confidential.

### **Item 17. Undertakings.**

- (a) The undersigned registrant hereby undertakes:
- (1) To file, during any period in which offers or sales are being made, a post-effective amendment to this registration statement:
    - (i) to include any prospectus required by Section 10(a)(3) of the Securities Act;
    - (ii) to reflect in the prospectus any facts or events arising after the effective date of the registration statement (or the most recent post-effective amendment thereof) which, individually or in the aggregate, represent a fundamental change in the information set forth in the registration statement. Notwithstanding the foregoing, any increase or decrease in volume of securities offered (if the total dollar value of securities offered would not exceed that which was registered) and any deviation from the low or high end of the estimated maximum offering range may be reflected in the form of prospectus filed with the Securities and Exchange Commission (the "Commission") pursuant to Rule 424(b) if, in the aggregate, the changes in volume and price represent no more than 20 percent change in the maximum aggregate offering price set forth in the "Calculation of Registration Fee" table in the effective registration statement; and
    - (iii) to include any material information with respect to the plan of distribution not previously disclosed in the registration statement or any material change to such information in the registration statement;  
*provided, however,* that: Paragraphs (a)(1)(i), (a)(1)(ii) and (a)(1)(iii) of this section do not apply if the information required to be included in a post-effective amendment by those paragraphs is contained in reports filed with or furnished to the Commission by the registrant pursuant to Section 13 or Section 15(d) of the Securities and Exchange Act of 1934, as amended (the "Exchange Act"), that are incorporated by reference in the registration statement, or is contained in a form of prospectus filed pursuant to Rule 424(b) that is part of the registration statement.
  - (2) That, for the purpose of determining any liability under the Securities Act, each such post-effective amendment shall be deemed to be a new registration statement relating to the securities offered therein, and the offering of such securities at that time shall be deemed to be the initial bona fide offering thereof.
  - (3) To remove from registration by means of a post-effective amendment any of the securities being registered which remain unsold at the termination of the offering.

- (4) That, for the purpose of determining liability under the Securities Act to any purchaser:
- (i) Each prospectus filed by the registrant pursuant to Rule 424(b)(3) shall be deemed to be part of the registration statement as of the date the filed prospectus was deemed part of and included in the registration statement; and
  - (ii) Each prospectus required to be filed pursuant to Rule 424(b)(2), (b)(5) or (b)(7) as part of a registration statement in reliance on Rule 430B relating to an offering made pursuant to Rule 415(a)(1)(i), (vii) or (x) for the purpose of providing the information required by Section 10(a) of the Securities Act shall be deemed to be part of and included in the registration statement as of the earlier of the date such form of prospectus is first used after effectiveness or the date of the first contract of sale of securities in the offering described in the prospectus. As provided in Rule 430B, for liability purposes of the issuer and any person that is at that date an underwriter, such date shall be deemed to be a new effective date of the registration statement relating to the securities in the registration statement to which that prospectus relates, and the offering of such securities at that time shall be deemed to be the initial bona fide offering thereof. Provided, however, that no statement made in a registration statement or prospectus that is part of the registration statement or made in a document incorporated or deemed incorporated by reference into the registration statement or prospectus that is part of the registration statement will, as to a purchaser with a time of contract of sale prior to such effective date, supersede or modify any statement that was made in the registration statement or prospectus that was part of the registration statement or made in any such document immediately prior to such effective date.
- (5) That, for the purpose of determining liability of the registrant under the Securities Act to any purchaser in the initial distribution of the securities, the undersigned registrant undertakes that in a primary offering of securities of the undersigned registrant pursuant to this registration statement, regardless of the underwriting method used to sell the securities to the purchaser, if the securities are offered or sold to such purchaser by means of any of the following communications, the undersigned registrant will be a seller to the purchaser and will be considered to offer or sell such securities to such purchaser:
- (i) Any preliminary prospectus or prospectus of the undersigned registrant relating to the offering required to be filed pursuant to Rule 424;
  - (ii) Any free writing prospectus relating to the offering prepared by or on behalf of the undersigned registrant or used or referred to by the undersigned registrant;
  - (iii) The portion of any other free writing prospectus relating to the offering containing material information about the undersigned registrant or its securities provided by or on behalf of the undersigned registrant; and
  - (iv) Any other communication that is an offer in the offering made by the undersigned registrant to the purchaser.
- (b) Insofar as indemnification for liabilities arising under the Securities Act may be permitted to directors, officers and controlling persons of the Registrant pursuant to the foregoing provisions, or otherwise, the Registrant has been advised that in the opinion of the SEC such indemnification is against public policy as expressed in the Securities Act and is, therefore, unenforceable. In the event that a claim for indemnification against such liabilities (other than the payment by the Registrant of expenses incurred or paid by a director, officer or controlling person of the Registrant in the successful defense of any action, suit or proceeding) is asserted by such director, officer or controlling person in connection with the securities being registered, the Registrant will, unless in the opinion of its counsel the matter has been settled by controlling precedent, submit to a court of appropriate jurisdiction the question whether such indemnification by it is against public policy as expressed in the Securities Act and will be governed by the final adjudication of such issue.

**SIGNATURES**

Pursuant to the requirements of the Securities Act of 1933, the registrant certifies that it has reasonable grounds to believe that it meets all of the requirements for filing on Form S-1 and has duly caused this registration statement to be signed on its behalf by the undersigned, thereunto duly authorized, in the City of Cambridge, Commonwealth of Massachusetts, on December 20, 2023.

**KORRO BIO, INC.**

/s/ Ram Aiyar

Name: Ram Aiyar

Title: President, Chief Executive Officer and Director

Pursuant to the requirements of the Securities Act of 1933, this registration statement has been signed below by the following persons in the capacities and on the date indicated.

<u>Signature</u>	<u>Title</u>	<u>Date</u>
<u>/s/ Ram Aiyar</u> Ram Aiyar	President, Chief Executive Officer and Director <i>Principal Executive Officer</i>	December 20, 2023
<u>/s/ Vineet Agarwal</u> Vineet Agarwal	Chief Financial Officer <i>Principal Financial Officer and Principal Accounting Officer</i>	December 20, 2023
<u>*</u> Ali Behbahani	Director	December 20, 2023
<u>*</u> Nessan Bermingham	Director	December 20, 2023
<u>*</u> Jean-Francois Formela	Director	December 20, 2023
<u>*</u> David L. Lucchino	Director	December 20, 2023
<u>*</u> Rachel Meyers	Director	December 20, 2023
<u>*</u> Timothy Pearson	Director	December 20, 2023

\* By: /s/ Ram Aiyar  
Attorney-in-Fact

December 20, 2023

Korro Bio, Inc.  
One Kendall Square, Building 600-700  
Suite 6-401  
Cambridge, MA 02139

Re: Securities Registered under Registration Statement on Form S-1

We have acted as counsel to you in connection with your filing of a Registration Statement on Form S-1 (the "Registration Statement") filed on December 20, 2023 with the Securities and Exchange Commission (the "Commission") pursuant to the Securities Act of 1933, as amended (the "Securities Act"), relating to the registration by Korro Bio, Inc., a Delaware corporation (the "Company"), of the offer and resale, from time to time, by the selling stockholders listed in the Registration Statement under "Selling Stockholders" of up to 1,714,570 shares of the Company's common stock, par value \$0.001 per share (the "Shares").

We have reviewed such documents and made such examination of law as we have deemed appropriate to give the opinions set forth below. We have relied, without independent verification, on certificates of public officials and, as to matters of fact material to the opinions set forth below, on certificates of officers of the Company.

The opinion set forth below is limited to the Delaware General Corporation Law.

Based on the foregoing, we are of the opinion that the Shares have been duly authorized and validly issued and are fully paid and nonassessable.

This opinion letter and the opinion it contains shall be interpreted in accordance with the Core Opinion Principles as published in 74 *Business Lawyer* 815 (Summer 2019).

We hereby consent to the inclusion of this opinion as Exhibit 5.1 to the Registration Statement and to the references to our firm under the caption "Legal Matters" in the Registration Statement. In giving our consent, we do not admit that we are in the category of persons whose consent is required under Section 7 of the Securities Act or the rules and regulations thereunder.

Very truly yours,

/s/ Goodwin Procter LLP

GOODWIN PROCTER LLP

**KORRO BIO, INC.**  
**2023 STOCK OPTION AND INCENTIVE PLAN**

SECTION 1. GENERAL PURPOSE OF THE PLAN; DEFINITIONS

The name of the plan is the Korro Bio, Inc. 2023 Stock Option and Incentive Plan (as amended from time to time, the “Plan”). The purpose of the Plan is to encourage and enable the officers, employees, Non-Employee Directors and Consultants of Korro Bio, Inc. (the “Company”) and its Affiliates upon whose judgment, initiative and efforts the Company largely depends for the successful conduct of its business to acquire a proprietary interest in the Company. It is anticipated that providing such persons with a direct stake in the Company’s welfare will assure a closer identification of their interests with those of the Company and its stockholders, thereby stimulating their efforts on the Company’s behalf and strengthening their desire to remain with the Company.

The following terms shall be defined as set forth below:

“*Act*” means the U.S. Securities Act of 1933, as amended, and the rules and regulations thereunder.

“*Administrator*” means either the Board or the compensation committee of the Board or a similar committee performing the functions of the compensation committee and which is comprised of not less than two Non-Employee Directors who are independent.

“*Affiliate*” means, at the time of determination, any “parent” or “subsidiary” of the Company as such terms are defined in Rule 405 of the Act. The Board will have the authority to determine the time or times at which “parent” or “subsidiary” status is determined within the foregoing definition.

“*Award*” or “*Awards*,” except where referring to a particular category of grant under the Plan, shall include Incentive Stock Options, Non-Qualified Stock Options, Stock Appreciation Rights, Restricted Stock Units, Restricted Stock Awards, Unrestricted Stock Awards, Cash-Based Awards, and Dividend Equivalent Rights.

“*Award Agreement*” means a written or electronic document setting forth the terms and provisions applicable to an Award granted under the Plan. Each Award Agreement is subject to the terms and conditions of the Plan.

“*Board*” means the Board of Directors of the Company.

“*Cash-Based Award*” means an Award entitling the recipient to receive a cash-denominated payment.

“*Closing Date*” means the date of the closing of the transactions contemplated by that certain Agreement and Plan of Merger by and among Frequency Therapeutics, Inc., the Company and Frequency Merger Sub Inc., dated as of July 14, 2023.



“Code” means the U.S. Internal Revenue Code of 1986, as amended, and any successor Code, and related rules, regulations and interpretations.

“Consultant” means a consultant or adviser who provides bona fide services to the Company or an Affiliate as an independent contractor and who qualifies as a consultant or advisor under Instruction A.1.(a)(1) of Form S-8 under the Act.

“Dividend Equivalent Right” means an Award entitling the grantee to receive credits based on ordinary cash dividends that would have been paid on the shares of Stock specified in the Dividend Equivalent Right (or other award to which it relates) if such shares had been issued to and held by the grantee.

“Effective Date” means the date on which the Plan becomes effective as set forth in Section 19.

“Exchange Act” means the U.S. Securities Exchange Act of 1934, as amended, and the rules and regulations thereunder.

“Fair Market Value” of the Stock on any given date means the fair market value of the Stock determined in good faith by the Administrator; provided, however, that if the Stock is listed on the National Association of Securities Dealers Automated Quotation System (“NASDAQ”), NASDAQ Global Market, The New York Stock Exchange or another national securities exchange or traded on any established market, the determination shall be made by reference to the closing price. If there is no closing price for such date, the determination shall be made by reference to the last date preceding such date for which there is a closing price.

“Incentive Stock Option” means any Stock Option designated and qualified as an “incentive stock option” as defined in Section 422 of the Code.

“Non-Employee Director” means a member of the Board who is not also an employee of the Company or any Subsidiary.

“Non-Qualified Stock Option” means any Stock Option that is not an Incentive Stock Option.

“Option” or “Stock Option” means any option to purchase shares of Stock granted pursuant to Section 5.

“Restricted Shares” means the shares of Stock underlying a Restricted Stock Award that remain subject to a risk of forfeiture or the Company’s right of repurchase.

“Restricted Stock Award” means an Award of Restricted Shares subject to such restrictions and conditions as the Administrator may determine at the time of grant.

“Restricted Stock Units” means an Award of stock units subject to such restrictions and conditions as the Administrator may determine at the time of grant.

“*Sale Event*” shall mean (i) the sale of all or substantially all of the assets of the Company on a consolidated basis to an unrelated person or entity, (ii) a merger, reorganization, statutory share exchange, consolidation, or similar transaction pursuant to which the holders of the Company’s outstanding voting power and outstanding stock immediately prior to such transaction do not own a majority of the outstanding voting power and outstanding stock or other equity interests of the resulting or successor entity (or its ultimate parent, if applicable) immediately upon completion of such transaction, (iii) the sale of all of the Stock of the Company to an unrelated person, entity or group thereof acting in concert, (iv) any other transaction in which the owners of the Company’s outstanding voting power immediately prior to such transaction do not own at least a majority of the outstanding voting power of the Company or any successor entity immediately upon completion of the transaction other than as a result of the acquisition of securities directly from the Company or (v) the approval by the stockholders of the Company of a complete liquidation or dissolution of the Company. Notwithstanding anything in the foregoing to the contrary, with respect to compensation (A) that is subject to Section 409A of the Code and (B) for which a Sale Event would accelerate the timing of payment thereunder, the term “Sale Event” shall mean an event that is both (I) a Sale Event (as defined above) and (II) a “change in control event” (within the meaning of Section 409A of the Code).

“*Sale Price*” means the value as determined by the Administrator of the consideration payable, or otherwise to be received by stockholders, per share of Stock pursuant to a Sale Event.

“*Section 409A*” means Section 409A of the Code and the regulations and other guidance promulgated thereunder.

“*Service Relationship*” means any relationship as an employee, Non-Employee Director or Consultant of the Company or any Affiliate. Unless as otherwise set forth in the Award Agreement, a Service Relationship shall be deemed to continue without interruption in the event a grantee’s status changes from full-time employee to part-time employee or a grantee’s status changes from employee to Consultant or Non-Employee Director or vice versa, provided that there is no interruption or other termination of Service Relationship in connection with the grantee’s change in capacity.

“*Stock*” means the Common Stock, par value \$0.001 per share, of the Company, subject to adjustments pursuant to Section 3.

“*Stock Appreciation Right*” means an Award entitling the recipient to receive shares of Stock (or cash, to the extent explicitly provided for in the applicable Award Agreement) having a value equal to the excess of the Fair Market Value of the Stock on the date of exercise over the exercise price of the Stock Appreciation Right multiplied by the number of shares of Stock with respect to which the Stock Appreciation Right shall have been exercised.

“*Subsidiary*” means any corporation or other entity (other than the Company) in which the Company has at least a 50 percent interest, either directly or indirectly.

“*Ten Percent Owner*” means an employee who owns or is deemed to own (by reason of the attribution rules of Section 424(d) of the Code) more than 10 percent of the combined voting power of all classes of stock of the Company or any parent or subsidiary corporation.

“*Unrestricted Stock Award*” means an Award of shares of Stock free of any restrictions.

SECTION 2. ADMINISTRATION OF PLAN; ADMINISTRATOR AUTHORITY TO SELECT GRANTEES AND DETERMINE AWARDS

(a) Administration of Plan. The Plan shall be administered by the Administrator.

(b) Powers of Administrator. The Administrator shall have the power and authority to grant Awards consistent with the terms of the Plan, including the power and authority:

(i) to select the individuals to whom Awards may from time to time be granted;

(ii) to determine the time or times of grant, and the extent, if any, of Incentive Stock Options, Non-Qualified Stock Options, Stock Appreciation Rights, Restricted Stock Awards, Restricted Stock Units, Unrestricted Stock Awards, Cash-Based Awards, and Dividend Equivalent Rights, or any combination of the foregoing, granted to any one or more grantees;

(iii) to determine the number of shares of Stock to be covered by any Award;

(iv) to determine and modify from time to time the terms and conditions, including restrictions, not inconsistent with the terms of the Plan, of any Award, which terms and conditions may differ among individual Awards and grantees, and to approve the forms of Award Agreements;

(v) to accelerate at any time the exercisability or vesting of all or any portion of any Award;

(vi) subject to the provisions of Section 5(c) or 6(d), to extend at any time the period in which Stock Options or Stock Appreciation Rights, respectively, may be exercised; and

(vii) at any time to adopt, alter and repeal such rules, guidelines and practices for administration of the Plan and for its own acts and proceedings as it shall deem advisable; to interpret the terms and provisions of the Plan and any Award (including related written instruments); to make all determinations it deems advisable for the administration of the Plan; to decide all disputes arising in connection with the Plan; and to otherwise supervise the administration of the Plan.

All decisions and interpretations of the Administrator shall be binding on all persons, including the Company and Plan grantees.

(c) Delegation of Authority to Grant Awards. Subject to applicable law, the Administrator, in its discretion, may delegate to a committee consisting of one or more officers of the Company, including the Chief Executive Officer of the Company, all or part of the Administrator's authority and duties with respect to the granting of Awards to individuals who are (i) not subject to the reporting and other provisions of Section 16 of the Exchange Act and (ii) not members of the delegated committee. Any such delegation by the Administrator shall include a limitation as to the amount of Stock underlying Awards that may be granted during the period of the delegation and shall contain guidelines as to the determination of the exercise price and the vesting criteria. The Administrator may revoke or amend the terms of a delegation at any time but such action shall not invalidate any prior actions of the Administrator's delegate or delegates that were consistent with the terms of the Plan.

(d) Award Agreement. Awards under the Plan shall be evidenced by Award Agreements that set forth the terms, conditions and limitations for each Award which may include, without limitation, the term of an Award and the provisions applicable in the event the Service Relationship terminates.

(e) Indemnification. Neither the Board nor the Administrator, nor any member of either or any delegate thereof, shall be liable for any act, omission, interpretation, construction or determination made in good faith in connection with the Plan, and the members of the Board and the Administrator (and any delegate thereof) shall be entitled in all cases to indemnification and reimbursement by the Company in respect of any claim, loss, damage or expense (including, without limitation, reasonable attorneys' fees) arising or resulting therefrom to the fullest extent permitted by law and/or under the Company's articles or bylaws or any directors' and officers' liability insurance coverage which may be in effect from time to time and/or any indemnification agreement between such individual and the Company.

(f) Non-U.S. Award Recipients. Notwithstanding any provision of the Plan to the contrary, in order to comply with the laws in other countries in which the Company and its Affiliates operate or have employees or other individuals eligible for Awards, the Administrator, in its sole discretion, shall have the power and authority to: (i) determine which Affiliates shall be covered by the Plan; (ii) determine which individuals outside the United States are eligible to participate in the Plan; (iii) modify the terms and conditions of any Award granted to individuals outside the United States to comply with applicable laws; (iv) establish subplans and modify exercise procedures and other terms and procedures, to the extent the Administrator determines such actions to be necessary or advisable (and such subplans and/or modifications shall be incorporated into and made part of this Plan); provided, however, that no such subplans and/or modifications shall increase the share limitations contained in Section 3(a) hereof; and (v) take any action, before or after an Award is made, that the Administrator determines to be necessary or advisable to obtain approval or comply with any local governmental regulatory exemptions or approvals. Notwithstanding the foregoing, the Administrator may not take any actions hereunder, and no Awards shall be granted, that would violate the Exchange Act or any other applicable United States securities law, the Code, or any other applicable United States governing statute or law.

SECTION 3. STOCK ISSUABLE UNDER THE PLAN; MERGERS; SUBSTITUTION

(a) Stock Issuable. The maximum number of shares of Stock reserved and available for issuance under the Plan shall be 885,028 shares (the “Initial Limit”), plus on January 1, 2024 and on each January 1 thereafter, the number of shares of Stock reserved and available for issuance under the Plan shall be cumulatively increased by five percent (5%) of the number of shares of Common Stock issued and outstanding on the immediately preceding December 31, or such lesser number of shares as approved by the Administrator, in all cases subject to adjustment as provided in this Section 3(c) (the “Annual Increase”). Subject to such overall limitation, the maximum aggregate number of shares of Stock that may be issued in the form of Incentive Stock Options shall not exceed the Initial Limit cumulatively increased on January 1, 2024 and on each January 1 thereafter by the lesser of the Annual Increase for such year or 885,028 shares of Stock, subject in all cases to adjustment as provided in Section 3(c). For purposes of this Plan, the shares of Stock underlying any awards under the Plan and the shares of Common Stock of the Company underlying any awards under the Company’s 2019 Stock Incentive Plan, Frequency Therapeutics, Inc. 2014 Equity Incentive Plan or the Frequency Therapeutics, Inc. 2019 Incentive Award Plan, each as amended from time to time, that are forfeited, canceled, held back upon exercise of an Option or settlement of an Award to cover the exercise price or tax withholding, reacquired by the Company prior to vesting, satisfied without the issuance of Stock or otherwise terminated (other than by exercise) shall be added back to the shares of Stock available for issuance under the Plan and, to the extent permitted under Section 422 of the Code and the regulations promulgated thereunder, the shares of Stock that may be issued as Incentive Stock Options. In the event the Company repurchases shares of Stock on the open market, such shares shall not be added to the shares of Stock available for issuance under the Plan. Subject to such overall limitations, shares of Stock may be issued up to such maximum number pursuant to any type or types of Award. The shares available for issuance under the Plan may be authorized but unissued shares of Stock or shares of Stock reacquired by the Company. Awards that may be settled solely in cash shall not be counted against the share reserve, nor shall they reduce the shares of Stock authorized for grant to a grantee in any calendar year.

(b) Maximum Awards to Non-Employee Directors. Notwithstanding anything to the contrary in this Plan, the value of all Awards awarded under this Plan and all other cash compensation paid by the Company to any Non-Employee Director for services as a Non-Employee Director in any calendar year shall not exceed: (i) \$1,000,000 in the first calendar year an individual becomes a Non-Employee Director and (ii) \$750,000 in any other calendar year. For the purpose of this limitation, the value of any Award shall be its grant date fair value, as determined in accordance with ASC Topic 718 or successor provision but excluding the impact of estimated forfeitures related to service-based vesting provisions.

(c) Changes in Stock. Subject to Section 3(d) hereof, if, as a result of any reorganization, recapitalization, reclassification, stock dividend, extraordinary cash dividend, stock split, reverse stock split or other similar change in the Company's capital stock, the outstanding shares of Stock are increased or decreased or are exchanged for a different number or kind of shares or other securities of the Company, or additional shares or new or different shares or other securities of the Company or other non-cash assets are distributed with respect to such shares of Stock or other securities, or, if, as a result of any merger or consolidation, sale of all or substantially all of the assets of the Company, the outstanding shares of Stock are converted into or exchanged for securities of the Company or any successor entity (or a parent or subsidiary thereof), the Administrator shall make an appropriate or proportionate adjustment in (i) the maximum number of shares reserved for issuance under the Plan, including the maximum number of shares that may be issued in the form of Incentive Stock Options, (ii) the number and kind of shares or other securities subject to any then outstanding Awards under the Plan, (iii) the repurchase price, if any, per share subject to each outstanding Restricted Stock Award, and (iv) the exercise price for each share subject to any then outstanding Stock Options and Stock Appreciation Rights under the Plan, without changing the aggregate exercise price (i.e., the exercise price multiplied by the number of shares subject to Stock Options and Stock Appreciation Rights) as to which such Stock Options and Stock Appreciation Rights remain exercisable. The Administrator shall also make equitable or proportionate adjustments in the number of shares subject to outstanding Awards and the exercise price and the terms of outstanding Awards to take into consideration cash dividends paid other than in the ordinary course or any other extraordinary corporate event. The adjustment by the Administrator shall be final, binding and conclusive. No fractional shares of Stock shall be issued under the Plan resulting from any such adjustment, but the Administrator in its discretion may make a cash payment in lieu of fractional shares.

(d) Mergers and Other Transactions. In the case of and subject to the consummation of a Sale Event, the parties thereto may cause the assumption or continuation of Awards theretofore granted by the successor entity, or the substitution of such Awards with new Awards of the successor entity or parent thereof, with appropriate adjustment as to the number and kind of shares and, if appropriate, the per share exercise prices, as such parties shall agree. To the extent that the parties to such Sale Event do not provide for the assumption, continuation or substitution of Awards, upon the effective time of the Sale Event, the Plan and all outstanding Awards granted hereunder shall terminate. In such case, except as may be otherwise provided in the relevant Award Agreement, all Options and Stock Appreciation Rights with time-based vesting conditions or restrictions that are (i) not vested and/or exercisable immediately prior to the effective time of the Sale Event and (ii) held by grantees who have had a continuous Service Relationship with the Company or any of its Affiliates for at least one year prior to the effective time of the Sale Event shall become fully vested and exercisable as of the effective time of the Sale Event, all other Awards held by grantees (A) who have had a continuous Service Relationship with the Company or any of its Affiliates for at least one year prior to the effective time of the Sale Event and (B) that are subject solely to time-based vesting, conditions or restrictions shall become fully vested and nonforfeitable as of the effective time of the Sale Event, and all Awards with conditions and restrictions relating to the attainment of performance goals may become vested and nonforfeitable in connection with a Sale Event in the Administrator's discretion or to the extent specified in the relevant Award Agreement. In the event of such termination, (i) the Company shall have the option (in its sole discretion) to make or provide for a payment, in cash or in kind, to the grantees holding Options and Stock Appreciation Rights, in exchange for the cancellation thereof, in an amount equal to the difference between (A) the Sale Price multiplied by the number of shares of Stock subject to outstanding Options and Stock Appreciation Rights (to the extent then exercisable at prices not in excess of the Sale Price) and (B) the aggregate exercise price of all such outstanding Options and Stock Appreciation Rights (provided that, in the case of an Option or Stock Appreciation Right with an exercise price equal to or greater than the Sale Price, such Option or Stock Appreciation Right shall be cancelled for no consideration); or (ii) each grantee shall be permitted, within a specified period of time prior to the consummation of the Sale Event as determined by the Administrator, to exercise all outstanding Options and Stock Appreciation Rights (to the extent then exercisable) held by such grantee. The Company shall also have the option (in its sole discretion) to make or provide for a payment, in cash or in kind, to the grantees holding other Awards in an amount equal to the Sale Price multiplied by the number of vested shares of Stock under such Awards.

#### SECTION 4. ELIGIBILITY

Grantees under the Plan will be such employees, Non-Employee Directors or Consultants of the Company and its Affiliates as are selected from time to time by the Administrator in its sole discretion; provided that Awards may not be granted to employees, Non-Employee Directors or Consultants who are providing services only to any “parent” of the Company, as such term is defined in Rule 405 of the Act, unless (i) the stock underlying the Awards is treated as “service recipient stock” under Section 409A or (ii) the Company has determined that such Awards are exempt from or otherwise comply with Section 409A.

#### SECTION 5. STOCK OPTIONS

(a) Award of Stock Options. The Administrator may grant Stock Options under the Plan. Any Stock Option granted under the Plan shall be in such form as the Administrator may from time to time approve.

Stock Options granted under the Plan may be either Incentive Stock Options or Non-Qualified Stock Options. Incentive Stock Options may be granted only to employees of the Company or any Subsidiary that is a “subsidiary corporation” within the meaning of Section 424(f) of the Code. To the extent that any Option does not qualify as an Incentive Stock Option, it shall be deemed a Non-Qualified Stock Option.

Stock Options granted pursuant to this Section 5 shall be subject to the following terms and conditions and shall contain such additional terms and conditions, not inconsistent with the terms of the Plan, as the Administrator shall deem desirable. If the Administrator so determines, Stock Options may be granted in lieu of cash compensation at the optionee’s election, subject to such terms and conditions as the Administrator may establish.

(b) Exercise Price. The exercise price per share for the Stock covered by a Stock Option granted pursuant to this Section 5 shall be determined by the Administrator at the time of grant but shall not be less than 100 percent of the Fair Market Value on the date of grant. In the case of an Incentive Stock Option that is granted to a Ten Percent Owner, the exercise price of such Incentive Stock Option shall be not less than 110 percent of the Fair Market Value on the date of grant. Notwithstanding the foregoing, Stock Options may be granted with an exercise price per share that is less than 100 percent of the Fair Market Value on the date of grant (i) pursuant to a transaction described in, and in a manner consistent with, Section 424(a) of the Code, (ii) to individuals who are not subject to U.S. income tax on the date of grant or (iii) if the Stock Option is otherwise compliant with Section 409A.

(c) Option Term. The term of each Stock Option shall be fixed by the Administrator, but no Stock Option shall be exercisable more than ten years after the date the Stock Option is granted. In the case of an Incentive Stock Option that is granted to a Ten Percent Owner, the term of such Stock Option shall be no more than five years from the date of grant.

(d) Exercisability; Rights of a Stockholder. Stock Options shall become exercisable at such time or times, whether or not in installments, as shall be determined by the Administrator at or after the date of grant. The Administrator may at any time accelerate the exercisability of all or any portion of any Stock Option. An optionee shall have the rights of a stockholder only as to shares acquired upon the exercise of a Stock Option and not as to unexercised Stock Options.

(e) Method of Exercise. Stock Options may be exercised in whole or in part, by giving written or electronic notice of exercise to the Company, specifying the number of shares to be purchased. Payment of the purchase price may be made by one or more of the following methods except to the extent otherwise provided in the Award Agreement:

(i) In cash, by certified or bank check or other instrument acceptable to the Administrator;

(ii) Through the delivery (or attestation to the ownership following such procedures as the Company may prescribe) of shares of Stock that are not then subject to restrictions under any Company plan. Such surrendered shares shall be valued at Fair Market Value on the exercise date;

(iii) By the optionee delivering to the Company a properly executed exercise notice together with irrevocable instructions to a broker to promptly deliver to the Company cash or a check payable and acceptable to the Company for the purchase price; provided that in the event the optionee chooses to pay the purchase price as so provided, the optionee and the broker shall comply with such procedures and enter into such agreements of indemnity and other agreements as the Company shall prescribe as a condition of such payment procedure; or

(iv) With respect to Stock Options that are not Incentive Stock Options, by a “net exercise” arrangement pursuant to which the Company will reduce the number of shares of Stock issuable upon exercise by the largest whole number of shares with a Fair Market Value that does not exceed the aggregate exercise price.

Payment instruments will be received subject to collection. The transfer to the optionee on the records of the Company or of the transfer agent of the shares of Stock to be purchased pursuant to the exercise of a Stock Option will be contingent upon receipt from the optionee (or a purchaser acting in his stead in accordance with the provisions of the Stock Option) by the Company of the full purchase price for such shares and the fulfillment of any other requirements contained in the Award Agreement or applicable provisions of laws (including the satisfaction of any taxes that the Company or an Affiliate is obligated to withhold with respect to the optionee). In the event an optionee chooses to pay the purchase price by previously-owned shares of Stock through the attestation method, the number of shares of Stock transferred to the optionee upon the exercise of the Stock Option shall be net of the number of attested shares. In the event that the Company establishes, for itself or using the services of a third party, an automated system for the exercise of Stock Options, such as a system using an internet website or interactive voice response, then the paperless exercise of Stock Options may be permitted through the use of such an automated system.



(f) Annual Limit on Incentive Stock Options. To the extent required for “incentive stock option” treatment under Section 422 of the Code, the aggregate Fair Market Value (determined as of the time of grant) of the shares of Stock with respect to which Incentive Stock Options granted under this Plan and any other plan of the Company or its parent and subsidiary corporations become exercisable for the first time by an optionee during any calendar year shall not exceed \$100,000. To the extent that any Stock Option exceeds this limit, it shall constitute a Non-Qualified Stock Option. For purposes of this Section 5(f), Incentive Stock Options will be taken into account in the order in which they were granted, the Fair Market Value of the shares of Stock will be determined as of the time the Stock Option with respect to such shares of Stock is granted, and calculation will be performed in accordance with Section 422 of the Code and Treasury Regulations promulgated thereunder.

#### SECTION 6. STOCK APPRECIATION RIGHTS

(a) Award of Stock Appreciation Rights. The Administrator may grant Stock Appreciation Rights under the Plan. A Stock Appreciation Right is an Award entitling the recipient to receive shares of Stock (or cash, to the extent explicitly provided for in the applicable Award Agreement) having a value equal to the excess of the Fair Market Value of a share of Stock on the date of exercise over the exercise price of the Stock Appreciation Right multiplied by the number of shares of Stock with respect to which the Stock Appreciation Right shall have been exercised.

(b) Exercise Price of Stock Appreciation Rights. The exercise price of a Stock Appreciation Right shall not be less than 100 percent of the Fair Market Value of the Stock on the date of grant. Notwithstanding the foregoing, Stock Appreciation Rights may be granted with an exercise price per share that is less than 100 percent of the Fair Market Value on the date of grant (i) pursuant to a transaction described in, and in a manner consistent with, Section 424(a) of the Code, (ii) to individuals who are not subject to U.S. income tax on the date of grant, or (iii) if the Stock Appreciation Right is otherwise compliant with Section 409A.

(c) Grant and Exercise of Stock Appreciation Rights. Stock Appreciation Rights may be granted by the Administrator independently of any Stock Option granted pursuant to Section 5 of the Plan.

(d) Terms and Conditions of Stock Appreciation Rights. Stock Appreciation Rights shall be subject to such terms and conditions as shall be determined on the date of grant by the Administrator. The term of a Stock Appreciation Right may not exceed ten years. The terms and conditions of each such Award shall be determined by the Administrator, and such terms and conditions may differ among individual Awards and grantees.

#### SECTION 7. RESTRICTED STOCK AWARDS

(a) Nature of Restricted Stock Awards. The Administrator may grant Restricted Stock Awards under the Plan. A Restricted Stock Award is any Award of Restricted Shares subject to such restrictions and conditions as the Administrator may determine at the time of grant. Conditions may be based on continuing employment (or other Service Relationship) and/or achievement of pre-established performance goals and objectives.

(b) Rights as a Stockholder. Upon the grant of the Restricted Stock Award and payment of any applicable purchase price, a grantee shall have the rights of a stockholder with respect to the voting of the Restricted Shares and receipt of dividends; provided that if the lapse of restrictions with respect to the Restricted Stock Award is tied to the attainment of vesting conditions, any dividends paid by the Company shall accrue and shall not be paid to the grantee until and to the extent the vesting conditions are met with respect to the Restricted Stock Award. Unless the Administrator shall otherwise determine, (i) uncertificated Restricted Shares shall be accompanied by a notation on the records of the Company or the transfer agent to the effect that they are subject to forfeiture until such Restricted Shares are vested as provided in Section 7(d) below, and (ii) certificated Restricted Shares shall remain in the possession of the Company until such Restricted Shares are vested as provided in Section 7(d) below, and the grantee shall be required, as a condition of the grant, to deliver to the Company such instruments of transfer as the Administrator may prescribe.

(c) Restrictions. Restricted Shares may not be sold, assigned, transferred, pledged or otherwise encumbered or disposed of except as specifically provided herein or in the Restricted Stock Award Agreement. Except as may otherwise be provided by the Administrator either in the Award Agreement or, subject to Section 16 below, in writing after the Award is issued, if a grantee's employment (or other Service Relationship) with the Company and its Affiliates terminates for any reason, any Restricted Shares that have not vested at the time of termination shall automatically and without any requirement of notice to such grantee from or other action by or on behalf of, the Company be deemed to have been reacquired by the Company at its original purchase price (if any) from such grantee or such grantee's legal representative simultaneously with such termination of employment (or other Service Relationship), and thereafter shall cease to represent any ownership of the Company by the grantee or rights of the grantee as a stockholder. Following such deemed reacquisition of Restricted Shares that are represented by physical certificates, a grantee shall surrender such certificates to the Company upon request without consideration.

(d) Vesting of Restricted Shares. The Administrator at the time of grant shall specify the date or dates and/or the attainment of pre-established performance goals, objectives and other conditions on which the non-transferability of the Restricted Shares and the Company's right of repurchase or forfeiture shall lapse. Subsequent to such date or dates and/or the attainment of such pre-established performance goals, objectives and other conditions, the shares on which all restrictions have lapsed shall no longer be Restricted Shares and shall be deemed "vested."

## SECTION 8. RESTRICTED STOCK UNITS

(a) Nature of Restricted Stock Units. The Administrator may grant Restricted Stock Units under the Plan. A Restricted Stock Unit is an Award of stock units that may be settled in shares of Stock (or cash, to the extent explicitly provided for in the Award Agreement) upon the satisfaction of such restrictions and conditions at the time of grant. Conditions may be based on continuing employment (or other Service Relationship) and/or achievement of pre-established performance goals and objectives. The terms and conditions of each such Award shall be determined by the Administrator, and such terms and conditions may differ among individual Awards and grantees. Restricted Stock Units with deferred settlement dates are subject to

Section 409A and shall contain such additional terms and conditions as the Administrator shall determine in its sole discretion in order to comply with the requirements of Section 409A.

(b) Election to Receive Restricted Stock Units in Lieu of Compensation. The Administrator may, in its sole discretion, permit a grantee to elect to receive a portion of future cash compensation otherwise due to such grantee in the form of an award of Restricted Stock Units. Any such election shall be made in writing and shall be delivered to the Company no later than the date specified by the Administrator and in accordance with Section 409A and such other rules and procedures established by the Administrator. Any such future cash compensation that the grantee elects to defer shall be converted to a fixed number of Restricted Stock Units based on the Fair Market Value of Stock on the date the compensation would otherwise have been paid to the grantee if such payment had not been deferred as provided herein. The Administrator shall have the sole right to determine whether and under what circumstances to permit such elections and to impose such limitations and other terms and conditions thereon as the Administrator deems appropriate. Any Restricted Stock Units that are elected to be received in lieu of cash compensation shall be fully vested, unless otherwise provided in the Award Agreement.

(c) Rights as a Stockholder. A grantee shall have the rights as a stockholder only as to shares of Stock acquired by the grantee upon settlement of Restricted Stock Units; provided, however, that the grantee may be credited with Dividend Equivalent Rights with respect to the stock units underlying his or her Restricted Stock Units, subject to the provisions of Section 11 and such terms and conditions as the Administrator may determine.

(d) Termination. Except as may otherwise be provided by the Administrator either in the Award Agreement or, subject to Section 16 below, in writing after the Award is issued, a grantee's right in all Restricted Stock Units that have not vested shall automatically terminate upon the grantee's termination of employment (or cessation of Service Relationship) with the Company and its Affiliates for any reason.

#### SECTION 9. UNRESTRICTED STOCK AWARDS

Grant or Sale of Unrestricted Stock. The Administrator may grant (or sell at par value or such higher purchase price determined by the Administrator) an Unrestricted Stock Award under the Plan. An Unrestricted Stock Award is an Award pursuant to which the grantee may receive shares of Stock free of any restrictions under the Plan. Unrestricted Stock Awards may be granted in respect of past services or other valid consideration, or in lieu of cash compensation due to such grantee.

#### SECTION 10. CASH-BASED AWARDS

Grant of Cash-Based Awards. The Administrator may grant Cash-Based Awards under the Plan. A Cash-Based Award is an Award that entitles the grantee to a payment in cash upon the attainment of specified performance goals, including continued employment (or other Service Relationship). The Administrator shall determine the maximum duration of the Cash-Based Award, the amount of cash to which the Cash-Based Award pertains, the conditions upon which the Cash-Based Award shall become vested or payable, and such other provisions as the Administrator shall determine. Each Cash-Based Award shall specify a cash-denominated payment amount, formula or payment ranges as determined by the Administrator. Payment, if any, with respect to a Cash-Based Award shall be made in accordance with the terms of the Award and may be made in cash.

## SECTION 11. DIVIDEND EQUIVALENT RIGHTS

(a) Dividend Equivalent Rights. The Administrator may grant Dividend Equivalent Rights under the Plan. A Dividend Equivalent Right is an Award entitling the grantee to receive credits based on cash dividends that would have been paid on the shares of Stock specified in the Dividend Equivalent Right (or other Award to which it relates) if such shares had been issued to the grantee. A Dividend Equivalent Right may be granted hereunder to any grantee as a component of an award of Restricted Stock Units or as a freestanding award. The terms and conditions of Dividend Equivalent Rights shall be specified in the Award Agreement. Dividend equivalents credited to the holder of a Dividend Equivalent Right may be paid currently or may be deemed to be reinvested in additional shares of Stock, which may thereafter accrue additional equivalents. Any such reinvestment shall be at Fair Market Value on the date of reinvestment or such other price as may then apply under a dividend reinvestment plan sponsored by the Company, if any. Dividend Equivalent Rights may be settled in cash or shares of Stock or a combination thereof, in a single installment or installments. A Dividend Equivalent Right granted as a component of an Award of Restricted Stock Units shall provide that such Dividend Equivalent Right shall be settled only upon settlement or payment of, or lapse of restrictions on, such other Award, and that such Dividend Equivalent Right shall expire or be forfeited or annulled under the same conditions as such other Award.

(b) Termination. Except as may otherwise be provided by the Administrator either in the Award Agreement or, subject to Section 16 below, in writing after the Award is issued, a grantee's rights in all Dividend Equivalent Rights shall automatically terminate upon the grantee's termination of employment (or cessation of Service Relationship) with the Company and its Affiliates for any reason.

## SECTION 12. TRANSFERABILITY OF AWARDS

(a) Transferability. Except as provided in Section 12(b) below or otherwise determined by the Administrator, during a grantee's lifetime, his or her Awards shall be exercisable only by the grantee, or by the grantee's legal representative or guardian in the event of the grantee's incapacity. No Awards shall be sold, assigned, transferred or otherwise encumbered or disposed of by a grantee other than by will or by the laws of descent and distribution or pursuant to a domestic relations order. No Awards shall be subject, in whole or in part, to attachment, execution, or levy of any kind, and any purported transfer in violation hereof shall be null and void.

(b) Administrator Action. Notwithstanding Section 12(a), the Administrator, in its discretion, may provide either in the Award Agreement regarding a given Award or by subsequent written approval that the grantee (who is an employee or Non-Employee Director) may transfer his or her Non-Qualified Stock Options to his or her immediate family members, to trusts for the benefit of such family members, or to partnerships in which such family members are the only partners, provided that the transferee agrees in writing with the Company to be bound by all of the terms and conditions of this Plan and the applicable Award Agreement. In no event may an Award be transferred by a grantee for value.

(c) Family Member. For purposes of Section 12(b), “family member” shall mean a grantee’s child, stepchild, grandchild, parent, stepparent, grandparent, spouse, former spouse, sibling, niece, nephew, mother-in-law, father-in-law, son-in-law, daughter-in-law, brother-in-law, or sister-in-law, including adoptive relationships, any person sharing the grantee’s household (other than a tenant of the grantee), a trust in which these persons (or the grantee) have more than 50 percent of the beneficial interest, a foundation in which these persons (or the grantee) control the management of assets, and any other entity in which these persons (or the grantee) own more than 50 percent of the voting interests.

(d) Designation of Beneficiary. To the extent permitted by the Company and valid under applicable law, each grantee to whom an Award has been made under the Plan may designate a beneficiary or beneficiaries to exercise any Award or receive any payment under any Award payable on or after the grantee’s death. Any such designation shall be on a form provided for that purpose by the Administrator and shall not be effective until received by the Administrator. If no beneficiary has been designated by a deceased grantee, or if the designated beneficiaries have predeceased the grantee, the beneficiary shall be the grantee’s estate or legal heirs.

### SECTION 13. TAX WITHHOLDING

(a) Payment by Grantee. Each grantee shall, no later than the date as of which the value of an Award or of any Stock or other amounts received thereunder first becomes includable in the gross income of the grantee for tax purposes, pay to the Company or any applicable Affiliate, or make arrangements satisfactory to the Administrator regarding payment of, any U.S. and non-U.S. federal, state, or local taxes of any kind required by law to be withheld by the Company or any applicable Affiliate with respect to such income. The Company and its Affiliates shall, to the extent permitted by law, have the right to deduct any such taxes from any payment of any kind otherwise due to the grantee or to satisfy any applicable withholding obligations by any other method of withholding that the Company and its Affiliates deem appropriate. The Company’s obligation to deliver evidence of book entry (or stock certificates) to any grantee is subject to and conditioned on tax withholding obligations being satisfied by the grantee.

(b) Payment in Stock. The Administrator may cause any tax withholding obligation of the Company or any applicable Affiliate to be satisfied, in whole or in part, by the Company withholding from shares of Stock to be issued pursuant to any Award a number of shares with an aggregate Fair Market Value (as of the date the withholding is effected) that would satisfy the withholding amount due; provided, however, that the amount withheld does not exceed the maximum statutory rate or such lesser amount as is necessary to avoid liability accounting treatment. For purposes of share withholding, the Fair Market Value of withheld shares shall be determined in the same manner as the value of Stock includable in income of the grantees. The Administrator may also require any tax withholding obligation of the Company or any applicable Affiliate to be satisfied, in whole or in part, by an arrangement whereby a certain number of shares of Stock issued pursuant to any Award are immediately sold and proceeds from such sale are remitted to the Company or any applicable Affiliate in an amount that would satisfy the withholding amount due.

**SECTION 14. SECTION 409A AWARDS**

Awards are intended to be exempt from Section 409A to the greatest extent possible and to otherwise comply with Section 409A. The Plan and all Awards shall be interpreted in accordance with such intent. To the extent that any Award is determined to constitute “nonqualified deferred compensation” within the meaning of Section 409A (a “409A Award”), the Award shall be subject to such additional rules and requirements as specified by the Administrator from time to time in order to comply with Section 409A. In this regard, if any amount under a 409A Award is payable upon a “separation from service” (within the meaning of Section 409A) to a grantee who is then considered a “specified employee” (within the meaning of Section 409A), then no such payment shall be made prior to the date that is the earlier of (i) six months and one day after the grantee’s separation from service, or (ii) the grantee’s death, but only to the extent such delay is necessary to prevent such payment from being subject to interest, penalties and/or additional tax imposed pursuant to Section 409A. Further, the settlement of any 409A Award may not be accelerated except to the extent permitted by Section 409A. The Company makes no representation that any or all of the payments or benefits described in the Plan will be exempt from or comply with Section 409A of the Code and makes no undertaking to preclude Section 409A of the Code from applying to any such payment. The grantee shall be solely responsible for the payment of any taxes and penalties incurred under Section 409A.

**SECTION 15. TERMINATION OF SERVICE RELATIONSHIP, TRANSFER, LEAVE OF ABSENCE, ETC.**

(a) Termination of Service Relationship. If the grantee’s Service Relationship is with an Affiliate and such Affiliate ceases to be an Affiliate, the grantee shall be deemed to have terminated his or her Service Relationship for purposes of the Plan.

(b) For purposes of the Plan, the following events shall not be deemed a termination of a Service Relationship:

(i) a transfer to the Service Relationship of the Company from an Affiliate or from the Company to an Affiliate, or from one Affiliate to another; or

(ii) an approved leave of absence, if the employee’s right to re-employment is guaranteed either by a statute or by contract or under the policy pursuant to which the leave of absence was granted or if the Administrator otherwise so provides in writing.

**SECTION 16. AMENDMENTS AND TERMINATION**

The Board may, at any time, amend or discontinue the Plan and the Administrator may, at any time, amend or cancel any outstanding Award for the purpose of satisfying changes in law or for any other lawful purpose, but no such action shall materially and adversely affect rights under any outstanding Award without the holder’s consent. Except as provided in Section 3(c) or 3(d), without prior stockholder approval, in no event may the Administrator exercise its discretion to reduce the exercise price of outstanding Stock Options or Stock Appreciation Rights or effect repricing through cancellation and re-grants or cancellation of Stock Options or Stock Appreciation Rights in exchange for cash or other Awards. To the extent required under the rules of any securities exchange or market system on which the Stock is listed, or to the extent determined by the Administrator to be required by the Code to ensure that Incentive Stock Options granted under the Plan are qualified under Section 422 of the Code, Plan amendments shall be subject to approval by Company stockholders. Nothing in this Section 16 shall limit the Administrator’s authority to take any action permitted pursuant to Section 3(c) or 3(d).

## SECTION 17. STATUS OF PLAN

With respect to the portion of any Award that has not been exercised and any payments in cash, Stock or other consideration not received by a grantee, a grantee shall have no rights greater than those of a general creditor of the Company unless the Administrator shall otherwise expressly determine in connection with any Award or Awards. In its sole discretion, the Administrator may authorize the creation of trusts or other arrangements to meet the Company's obligations to deliver Stock or make payments with respect to Awards hereunder, provided that the existence of such trusts or other arrangements is consistent with the foregoing sentence.

## SECTION 18. GENERAL PROVISIONS

(a) No Distribution. The Administrator may require each person acquiring Stock pursuant to an Award to represent to and agree with the Company in writing that such person is acquiring the shares without a view to distribution thereof.

(b) Issuance of Stock. To the extent certificated, stock certificates to grantees under this Plan shall be deemed delivered for all purposes when the Company or a stock transfer agent of the Company shall have mailed such certificates in the United States mail, addressed to the grantee, at the grantee's last known address on file with the Company. Uncertificated Stock shall be deemed delivered for all purposes when the Company or a Stock transfer agent of the Company shall have given to the grantee by electronic mail (with proof of receipt) or by United States mail, addressed to the grantee, at the grantee's last known address on file with the Company, notice of issuance and recorded the issuance in its records (which may include electronic "book entry" records). Notwithstanding anything herein to the contrary, the Company shall not be required to issue or deliver any evidence of book entry or certificates evidencing shares of Stock pursuant to the exercise or settlement of any Award, unless and until the Administrator has determined, with advice of counsel (to the extent the Administrator deems such advice necessary or advisable), that the issuance and delivery is in compliance with all applicable laws, regulations of governmental authorities and, if applicable, the requirements of any exchange on which the shares of Stock are listed, quoted or traded. Any Stock issued pursuant to the Plan shall be subject to any stop-transfer orders and other restrictions as the Administrator deems necessary or advisable to comply with federal, state or foreign jurisdiction, securities or other laws, rules and quotation system on which the Stock is listed, quoted or traded. The Administrator may place legends on any Stock certificate or notations on any book entry to reference restrictions applicable to the Stock. In addition to the terms and conditions provided herein, the Administrator may require that an individual make such reasonable covenants, agreements, and representations as the Administrator, in its discretion, deems necessary or advisable in order to comply with any such laws, regulations, or requirements. The Administrator shall have the right to require any individual to comply with any timing or other restrictions with respect to the settlement or exercise of any Award, including a window-period limitation, as may be imposed in the discretion of the Administrator.

(c) Stockholder Rights. Until Stock is deemed delivered in accordance with Section 18(b), no right to vote or receive dividends or any other rights of a stockholder will exist with respect to shares of Stock to be issued in connection with an Award, notwithstanding the exercise of a Stock Option or any other action by the grantee with respect to an Award.

(d) Other Incentive Arrangements; No Rights to Continued Service Relationship. Nothing contained in this Plan shall prevent the Board from adopting other or additional incentive arrangements, including trusts, and such arrangements may be either generally applicable or applicable only in specific cases. The adoption of this Plan and the grant of Awards do not confer upon any grantee any right to continued employment or other Service Relationship with the Company or any Affiliate.

(e) Trading Policy Restrictions. Option exercises and other Awards under the Plan shall be subject to the Company's insider trading policies and procedures, as in effect from time to time.

(f) Clawback Policy. Awards under the Plan shall be subject to the Company's clawback policy, as in effect from time to time. In addition, the Administrator may impose such other clawback, recovery, or recoupment provisions in an Award Agreement as the Administrator determines necessary or appropriate, including, but not limited to, a reacquisition right in respect of previously acquired shares of Stock or other cash or property upon the occurrence of a termination for "cause" under any agreement with the Company or an Affiliate thereof. No recovery of compensation under such a clawback policy will be an event giving rise to a right to resign for "good reason" or "constructive termination" (or similar term) under any agreement with the Company or an Affiliate thereof.

(g) Fractional Shares. No fractional Shares shall be issued or delivered pursuant to the Plan or any Award, and the Administrator shall determine whether cash, other securities or other property shall be paid or transferred in lieu of any fractional Shares, or whether such fractional Shares or any rights thereto shall be canceled, terminated or otherwise eliminated.

#### SECTION 19. EFFECTIVE DATE OF PLAN

This Plan shall become effective upon the Closing Date subject to stockholder approval in accordance with applicable state law, the Company's bylaws and articles of incorporation, and applicable stock exchange rules. No grants of Awards may be made hereunder after the tenth anniversary of the Effective Date and no grants of Incentive Stock Options may be made hereunder after the tenth anniversary of the date the Plan is approved by the Board.



SECTION 20. GOVERNING LAW

This Plan and all Awards and actions taken thereunder shall be governed by, and construed in accordance with the General Corporation Law of the State of Delaware as to matters within the scope thereof, and as to all other matters shall be governed by and construed in accordance with the internal laws of the State of Delaware applied without regard to conflict of law principles.

DATE APPROVED BY BOARD OF DIRECTORS: November 3, 2023

DATE APPROVED BY STOCKHOLDERS: November 3, 2023

**STOCK OPTION AGREEMENT  
UNDER THE KORRO BIO, INC.  
2023 STOCK OPTION AND INCENTIVE PLAN**

Name of Optionee: \_\_\_\_\_

No. of Option Shares: \_\_\_\_\_

Option Exercise Price per Share: \$ \_\_\_\_\_

**[FMV on Grant Date (for incentive stock options, 110% of FMV if a 10% owner)]**

Grant Date: \_\_\_\_\_

Expiration Date: \_\_\_\_\_

**[up to 10 years (for incentive stock options, 5 if a 10% owner)]**

Type of Option:  Incentive Stock Option (*To the greatest extent permitted by the Code*)

(Check Only One Box):  Non-qualified Stock Option.

(If neither box is checked, this Option is a Nonqualified Stock Option).

Pursuant to the Korro Bio, Inc. 2023 Stock Option and Incentive Plan as amended through the date hereof (the "Plan"), Korro Bio, Inc. (the "Company") hereby grants to the Optionee named above an option (the "Stock Option") to purchase on or prior to the Expiration Date specified above all or part of the number of shares of Common Stock, par value \$0.001 per share (the "Stock"), of the Company specified above at the Option Exercise Price per Share specified above subject to the terms and conditions set forth herein and in the Plan. This Stock Option is intended to be an "incentive stock option" under Section 422 of the Internal Revenue Code of 1986, as amended, to the greatest extent possible if and only if so indicated above.

1. Exercisability Schedule. No portion of this Stock Option may be exercised until such portion shall have become exercisable. Except as set forth below, and subject to the discretion of the Administrator (as defined in Section 2 of the Plan) to accelerate the exercisability schedule hereunder, this Stock Option shall be exercisable with respect to the following number of Option Shares on the dates indicated below so long as the Optionee continues to have a Service Relationship with the Company or a Subsidiary on such dates:

<u>Incremental Number of Option Shares Exercisable</u>	<u>Exercisability Date</u>
_____ (___%)	_____
_____ (___%)	_____
_____ (___%)	_____
_____ (___%)	_____
_____ (___%)	_____

Once exercisable, this Stock Option shall continue to be exercisable at any time or times prior to the close of business on the Expiration Date, subject to the provisions hereof and of the Plan.

## 2. Manner of Exercise.

(a) The Optionee may exercise this Stock Option only in the following manner: from time to time on or prior to the Expiration Date of this Stock Option, the Optionee may give written notice to the Administrator of his or her election to purchase some or all of the Option Shares purchasable at the time of such notice. This notice shall specify the number of Option Shares to be purchased.

Payment of the purchase price for the Option Shares may be made by one or more of the following methods: (i) in cash, by certified or bank check or other instrument acceptable to the Administrator; (ii) through the delivery (or attestation to the ownership) of shares of Stock that have been purchased by the Optionee on the open market or that are beneficially owned by the Optionee and are not then subject to any restrictions under any Company plan and that otherwise satisfy any holding periods as may be required by the Administrator; (iii) by the Optionee delivering to the Company a properly executed exercise notice together with irrevocable instructions to a broker to promptly deliver to the Company cash or a check payable and acceptable to the Company to pay the option purchase price, provided that in the event the Optionee chooses to pay the option purchase price as so provided, the Optionee and the broker shall comply with such procedures and enter into such agreements of indemnity and other agreements as the Administrator shall prescribe as a condition of such payment procedure; (iv) with respect to a non-qualified stock option, by a "net exercise" arrangement pursuant to which the Company will reduce the number of shares of Stock issuable upon exercise by the largest whole number of shares with a Fair Market Value that does not exceed the aggregate exercise price; (v) with respect to a non-qualified stock option, a combination of (i), (ii), (iii) and (iv) above; or (vi) with respect to an incentive stock option, a combination of (i), (ii) and (iii) above. Payment instruments will be received subject to collection.

The transfer to the Optionee on the records of the Company or of the transfer agent of the Option Shares will be contingent upon (i) the Company's receipt from the Optionee of the full purchase price for the Option Shares, as set forth above, (ii) the fulfillment of any other requirements contained herein or in the Plan or in any other agreement or provision of laws, and (iii) the receipt by the Company of any agreement, statement or other evidence that the Company may require to satisfy itself that the issuance of Stock to be purchased pursuant to the exercise of Stock Options under the Plan and any subsequent resale of the shares of Stock will be in compliance with applicable laws and regulations. In the event the Optionee chooses to pay the purchase price by previously-owned shares of Stock through the attestation method, the number of shares of Stock transferred to the Optionee upon the exercise of the Stock Option shall be net of the Shares attested to.

(b) The shares of Stock purchased upon exercise of this Stock Option shall be transferred to the Optionee on the records of the Company or of the transfer agent upon compliance to the satisfaction of the Administrator with all requirements under applicable laws or regulations in connection with such transfer and with the requirements hereof and of the Plan. The determination of the Administrator as to such compliance shall be final and binding on the Optionee. The Optionee shall not be deemed to be the holder of, or to have any of the rights of a holder with respect to, any shares of Stock subject to this Stock Option unless and until this Stock Option shall have been exercised pursuant to the terms hereof, the Company or the transfer agent shall have transferred the shares to the Optionee, and the Optionee's name shall have been entered as the stockholder of record on the books of the Company. Thereupon, the Optionee shall have full voting, dividend and other ownership rights with respect to such shares of Stock.

(c) Notwithstanding any other provision hereof or of the Plan, no portion of this Stock Option shall be exercisable after the Expiration Date hereof.

3. Termination of Service Relationship. If the Optionee's Service Relationship with the Company or a Subsidiary (as defined in the Plan) is terminated, the period within which to exercise the Stock Option may be subject to earlier termination as set forth below.

(a) Termination Due to Death. If the Optionee's Service Relationship with the Company or a Subsidiary terminates by reason of the Optionee's death, any portion of this Stock Option outstanding on such date, to the extent exercisable on the date of death, may thereafter be exercised by the Optionee's legal representative or legatee for a period of 12 months from the date of death or until the Expiration Date, if earlier. Any portion of this Stock Option that is not exercisable on the date of death shall terminate immediately and be of no further force or effect.

(b) Termination Due to Disability. If the Optionee's Service Relationship with the Company or a Subsidiary terminates by reason of the Optionee's disability (as determined by the Administrator), any portion of this Stock Option outstanding on such date, to the extent exercisable on the date of such termination, may thereafter be exercised by the Optionee for a period of 12 months from the date the Optionee's Service Relationship is terminated by reason of the Optionee's disability or until the Expiration Date, if earlier. Any portion of this Stock Option that is not exercisable on the date of the termination of the Optionee's Service Relationship by reason of the Optionee's disability shall terminate immediately and be of no further force or effect.

(c) Termination for Cause. If the Optionee's Service Relationship with the Company or a Subsidiary terminates for Cause, any portion of this Stock Option outstanding on such date shall terminate immediately and be of no further force and effect. For purposes hereof, "Cause" shall mean, unless otherwise provided in an employment or service agreement between the Company and the Optionee, a determination by the Administrator that the Optionee shall be dismissed as a result of (i) any material breach by the Optionee of any agreement between the Optionee and the Company; (ii) the conviction of, indictment for or plea of nolo contendere by the Optionee to a felony or a crime involving moral turpitude; or (iii) any material misconduct or willful and deliberate non-performance (other than by reason of disability) by the Optionee of the Optionee's duties to the Company.

(d) Other Termination. If the Optionee's Service Relationship with the Company or a Subsidiary terminates for any reason other than the Optionee's death, the Optionee's disability, or Cause, and unless otherwise determined by the Administrator, any portion of this Stock Option outstanding on such date may be exercised, to the extent exercisable on the date of termination, for a period of three months from the date of termination or until the Expiration Date, if earlier. Any portion of this Stock Option that is not exercisable on the date of termination shall terminate immediately and be of no further force or effect.

The Administrator's determination of the reason for termination of the Optionee's Service Relationship with the Company or a Subsidiary shall be conclusive and binding on the Optionee and his or her representatives or legatees.

4. Incorporation of Plan. Notwithstanding anything herein to the contrary, this Stock Option shall be subject to and governed by all the terms and conditions of the Plan, including the powers of the Administrator set forth in Section 2(b) of the Plan. Capitalized terms in this Agreement shall have the meaning specified in the Plan, unless a different meaning is specified herein.

5. Transferability. This Agreement is personal to the Optionee, is non-assignable and is not transferable in any manner, by operation of law or otherwise, other than by will or the laws of descent and distribution. This Stock Option is exercisable, during the Optionee's lifetime, only by the Optionee, and thereafter, only by the Optionee's legal representative or legatee.

6. Status of the Stock Option. This Stock Option is intended to qualify as an "incentive stock option" under Section 422 of the Internal Revenue Code of 1986, as amended (the "Code") to the greatest extent permitted by the Code if so indicated on the first page hereof, but the Company does not represent or warrant that this Stock Option qualifies as such. The Optionee should consult with his or her own tax advisors regarding the tax effects of this Stock Option and the requirements necessary to obtain favorable income tax treatment under Section 422 of the Code, including, but not limited to, holding period requirements and that ***this Stock Option must be exercised within three months after termination of employment as an employee (or 12 months in the case of death or disability) to qualify as an "incentive stock option."*** To the extent any portion of this Stock Option does not so qualify as an "incentive stock option," such portion shall be deemed to be a non-qualified stock option. If the Optionee intends to dispose or does dispose (whether by sale, gift, transfer or otherwise) of any Option Shares within the one-year period beginning on the date after the transfer of such shares to him or her, or within the two-year period beginning on the day after the grant of this Stock Option, he or she will so notify the Company within 30 days after such disposition.

7. Tax Withholding. To the extent applicable, the Optionee shall, not later than the date as of which the exercise of this Stock Option becomes a taxable event for Federal income tax purposes, pay to the Company or make arrangements satisfactory to the Administrator for payment of any Federal, state, and local taxes required by law to be withheld on account of such taxable event. To the extent applicable, the Company shall have the authority to cause the required tax withholding obligation to be satisfied, in whole or in part, by (i) withholding from shares of Stock to be issued to the Optionee a number of shares of Stock with an aggregate Fair

Market Value that would satisfy the withholding amount due; or (ii) causing its transfer agent to sell from the number of shares of Stock to be issued to the Optionee, the number of shares of Stock necessary to satisfy the Federal, state and local taxes required by law to be withheld from the Optionee on account of such transfer.

8. No Obligation to Continue Service Relationship. Neither the Company nor any Subsidiary is obligated by or as a result of the Plan or this Agreement to continue the Optionee in a Service Relationship with the Company or a Subsidiary and neither the Plan nor this Agreement shall interfere in any way with the right of the Company or any Subsidiary to terminate the Optionee's Service Relationship with the Company or a Subsidiary at any time.

9. Integration. This Agreement constitutes the entire agreement between the parties with respect to this Stock Option and supersedes all prior agreements and discussions between the parties concerning such subject matter.

10. Data Privacy Consent. In order to administer the Plan and this Agreement and to implement or structure future equity grants, the Company, its subsidiaries and affiliates and certain agents thereof (together, the "Relevant Companies") may process any and all personal or professional data, including but not limited to Social Security or other identification number, home address and telephone number, date of birth and other information that is necessary or desirable for the administration of the Plan and/or this Agreement (the "Relevant Information"). By entering into this Agreement, the Optionee (i) authorizes the Company to collect, process, register and transfer to the Relevant Companies all Relevant Information; (ii) waives any privacy rights the Optionee may have with respect to the Relevant Information; (iii) authorizes the Relevant Companies to store and transmit such information in electronic form; and (iv) authorizes the transfer of the Relevant Information to any jurisdiction in which the Relevant Companies consider appropriate. The Optionee shall have access to, and the right to change, the Relevant Information. Relevant Information will only be used in accordance with applicable law.

11. Notices. Notices hereunder shall be mailed or delivered to the Company at its principal place of business and shall be mailed or delivered to the Optionee at the address on file with the Company or, in either case, at such other address as one party may subsequently furnish to the other party in writing.

12. Clawback Acknowledgement. The Optionee acknowledges that the Optionee may become subject to the Korro Bio, Inc. Compensation Recovery Policy adopted pursuant to Rule 10D-1 promulgated under the Exchange Act and Nasdaq Rule 5608, or any successor rule (the "Clawback Policy"). The Optionee understands that if the Optionee is or becomes subject to the Clawback Policy, the Company and/or the Board shall be entitled to recover all Erroneously Awarded Compensation (as defined in the Clawback Policy) from the Optionee pursuant to such means as the Company and/or the Board may elect. The Optionee agrees that the Optionee shall take all required action to enable such recovery. The Optionee understands that such recovery may be sought and occur after the Optionee's employment or service with the Company terminates. The Optionee further agrees that the Optionee is not entitled to indemnification for any Erroneously Awarded Compensation or for any claim or losses arising out of or in any way related to Erroneously Awarded Compensation recovered pursuant to the Clawback Policy and,

to the extent any agreement or organizational document purports to provide otherwise, the Optionee hereby irrevocably agrees to forego such indemnification. The Optionee acknowledges and agrees that the Optionee has received and has had an opportunity to review the Clawback Policy. Any action by the Company to recover Erroneously Awarded Compensation under the Clawback Policy from the Optionee shall not, whether alone or in combination with any other action, event or condition, be deemed (i) an event giving rise to a right to resign for a Good Reason Condition (as defined in the Optionee's employment agreement with the Company) or serve as a basis for a claim of constructive termination under any benefits or compensation arrangement applicable to the Optionee, or (ii) to constitute a breach of a contract or other arrangement to which the Optionee is a party. This Section 12 is a material term of this Agreement.]<sup>1</sup>

**Korro Bio, Inc.**

By: \_\_\_\_\_  
Title:

The foregoing Agreement is hereby accepted and the terms and conditions thereof hereby agreed to by the undersigned. Electronic acceptance of this Agreement pursuant to the Company's instructions to the Optionee (including through an online acceptance process) is acceptable.

Dated: \_\_\_\_\_

\_\_\_\_\_  
Optionee's Signature

Optionee's name and address:  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

<sup>1</sup> For Section 16 officers only (which includes the entire executive team after closing of the merger). Provision should be included once the clawback policy is adopted.

**RESTRICTED STOCK AWARD AGREEMENT  
UNDER THE KORRO BIO, INC.  
2023 STOCK OPTION AND INCENTIVE PLAN**

Name of Grantee: \_\_\_\_\_

No. of Shares: \_\_\_\_\_

Grant Date: \_\_\_\_\_

Pursuant to the Korro Bio, Inc. 2023 Stock Option and Incentive Plan as amended through the date hereof (the “Plan”), Korro Bio, Inc. (the “Company”) hereby grants a Restricted Stock Award (an “Award”) to the Grantee named above. Upon acceptance of this Award, the Grantee shall receive the number of shares of Common Stock, par value \$0.001 per share (the “Stock”) of the Company specified above, subject to the restrictions and conditions set forth herein and in the Plan. The Company acknowledges the receipt from the Grantee of consideration with respect to the par value of the Stock in the form of cash, past or future services rendered to the Company by the Grantee or such other form of consideration as is acceptable to the Administrator.

1. Award. The shares of Restricted Stock awarded hereunder shall be issued and held by the Company’s transfer agent in book entry form, and the Grantee’s name shall be entered as the stockholder of record on the books of the Company. Thereupon, the Grantee shall have all the rights of a stockholder with respect to such shares, including voting and dividend rights, subject, however, to the restrictions and conditions specified in Paragraph 2 below. The Grantee shall (i) sign and deliver to the Company a copy of this Award Agreement and (ii) deliver to the Company a stock power endorsed in blank.

2. Restrictions and Conditions.

(a) Any book entries for the shares of Restricted Stock granted herein shall bear an appropriate legend, as determined by the Administrator in its sole discretion, to the effect that such shares are subject to restrictions as set forth herein and in the Plan.

(b) Shares of Restricted Stock granted herein may not be sold, assigned, transferred, pledged or otherwise encumbered or disposed of by the Grantee prior to the applicable Vesting Date indicated in Paragraph 3 below.

(c) If the Grantee’s Service Relationship with the Company or a Subsidiary is terminated for any reason (including due to death or disability) prior to vesting of shares of Restricted Stock granted herein, all shares of Restricted Stock shall immediately and automatically be forfeited and returned to the Company.



3. **Vesting of Restricted Stock.** The restrictions and conditions in Paragraph 2 of this Agreement shall lapse on the Vesting Date or Dates specified in the following schedule so long as the Grantee continues to have a Service Relationship with the Company or a Subsidiary on such Dates. If a series of Vesting Dates is specified, then the restrictions and conditions in Paragraph 2 shall lapse only with respect to the number of shares of Restricted Stock specified as vested on such date.

Incremental Number of Shares Vested	Vesting Date
_____ ( ___ %)	_____
_____ ( ___ %)	_____
_____ ( ___ %)	_____
_____ ( ___ %)	_____
_____ ( ___ %)	_____

Subsequent to such Vesting Date or Dates, the shares of Stock on which all restrictions and conditions have lapsed shall no longer be deemed Restricted Stock. The Administrator may at any time accelerate the vesting schedule specified in this Paragraph 3.

4. **Dividends.** The Grantee shall be entitled to receive all dividends or other distributions paid with respect to the shares of Restricted Stock.

5. **Incorporation of Plan.** Notwithstanding anything herein to the contrary, this Award shall be subject to and governed by all the terms and conditions of the Plan, including the powers of the Administrator set forth in Section 2(b) of the Plan. Capitalized terms in this Agreement shall have the meaning specified in the Plan, unless a different meaning is specified herein.

6. **Transferability.** This Agreement is personal to the Grantee, is non-assignable and is not transferable in any manner, by operation of law or otherwise, other than by will or the laws of descent and distribution.

7. **Tax Withholding.** The Grantee shall, not later than the date as of which the receipt of this Award becomes a taxable event for Federal income tax purposes, pay to the Company or make arrangements satisfactory to the Administrator for payment of any Federal, state, and local taxes required by law to be withheld on account of such taxable event. Except in the case where an election is made pursuant to Paragraph 8 below, the Company shall have the authority to cause the required tax withholding obligation to be satisfied, in whole or in part, by (i) withholding from shares of Stock to be issued or released by the transfer agent a number of shares of Stock with an aggregate Fair Market Value that would satisfy the withholding amount due; or (ii) causing its transfer agent to sell from the number of shares of Stock to be issued or released to the Grantee, the number of shares of Stock necessary to satisfy the Federal, state and local taxes required by law to be withheld from the Grantee on account of such transfer.

8. Election Under Section 83(b). The Grantee and the Company hereby agree that the Grantee may, within 30 days following the Grant Date of this Award, file with the Internal Revenue Service and the Company an election under Section 83(b) of the Internal Revenue Code. In the event the Grantee makes such an election, he or she agrees to provide a copy of the election to the Company. The Grantee acknowledges that he or she is responsible for obtaining the advice of his or her tax advisors with regard to the Section 83(b) election and that he or she is relying solely on such advisors and not on any statements or representations of the Company or any of its agents with regard to such election.

9. No Obligation to Continue Service Relationship. Neither the Company nor any Subsidiary is obligated by or as a result of the Plan or this Agreement to continue the Grantee in a Service Relationship with the Company or a Subsidiary and neither the Plan nor this Agreement shall interfere in any way with the right of the Company or any Subsidiary to terminate the Grantee's Service Relationship with the Company or a Subsidiary at any time.

10. Integration. This Agreement constitutes the entire agreement between the parties with respect to this Award and supersedes all prior agreements and discussions between the parties concerning such subject matter.

11. Data Privacy Consent. In order to administer the Plan and this Agreement and to implement or structure future equity grants, the Company, its subsidiaries and affiliates and certain agents thereof (together, the "Relevant Companies") may process any and all personal or professional data, including but not limited to Social Security or other identification number, home address and telephone number, date of birth and other information that is necessary or desirable for the administration of the Plan and/or this Agreement (the "Relevant Information"). By entering into this Agreement, the Grantee (i) authorizes the Company to collect, process, register and transfer to the Relevant Companies all Relevant Information; (ii) waives any privacy rights the Grantee may have with respect to the Relevant Information; (iii) authorizes the Relevant Companies to store and transmit such information in electronic form; and (iv) authorizes the transfer of the Relevant Information to any jurisdiction in which the Relevant Companies consider appropriate. The Grantee shall have access to, and the right to change, the Relevant Information. Relevant Information will only be used in accordance with applicable law.

12. Notices. Notices hereunder shall be mailed or delivered to the Company at its principal place of business and shall be mailed or delivered to the Grantee at the address on file with the Company or, in either case, at such other address as one party may subsequently furnish to the other party in writing.

13. [Clawback Acknowledgement]. The Grantee acknowledges that the Grantee may become subject to the Korro Bio, Inc. Compensation Recovery Policy adopted pursuant to Rule 10D-1 promulgated under the Exchange Act and Nasdaq Rule 5608, or any successor rule (the "Clawback Policy"). The Grantee understands that if the Grantee is or becomes subject to the Clawback Policy, the Company and/or the Board shall be entitled to recover all Erroneously Awarded Compensation (as defined in the Clawback Policy) from the Grantee pursuant to such means as the Company and/or the Board may elect. The Grantee agrees that the Grantee shall take all required action to enable such recovery. The Grantee understands that such recovery may be sought and occur after the Executive's employment or service with the Company terminates. The Grantee further agrees that the Grantee is not entitled to indemnification for any Erroneously Awarded Compensation or for any claim or losses arising out of or in any way related to Erroneously Awarded Compensation recovered pursuant to the Clawback Policy and, to the extent any agreement or organizational document purports to provide otherwise, the Grantee hereby irrevocably agrees to forego such indemnification. The Grantee acknowledges and agrees that the Grantee has received and has had an opportunity to review the Clawback Policy. Any action by the Company to recover Erroneously Awarded Compensation under the Clawback Policy from the Grantee shall not, whether alone or in combination with any other action, event or condition, be deemed (i) an event giving rise to a right to resign for a Good Reason Condition (as defined in the Grantee's employment agreement with the Company) or serve as a basis for a claim of constructive termination under any benefits or compensation arrangement applicable to the Grantee, or (ii) to constitute a breach of a contract or other arrangement to which the Grantee is a party. This Section 13 is a material term of this Agreement.]<sup>1</sup>

**Korro Bio, Inc.**

By: \_\_\_\_\_  
Title:

The foregoing Agreement is hereby accepted and the terms and conditions thereof hereby agreed to by the undersigned. Electronic acceptance of this Agreement pursuant to the Company's instructions to the Grantee (including through an online acceptance process) is acceptable.

Dated: \_\_\_\_\_

\_\_\_\_\_  
Grantee's Signature

Grantee's name and address:  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

<sup>1</sup> For Section 16 officers only (which includes the entire executive team after closing of the merger). Provision should be included once the clawback policy is adopted.

**RESTRICTED STOCK UNIT AWARD AGREEMENT  
FOR CONSULTANTS  
UNDER THE KORRO BIO, INC.  
2023 STOCK OPTION AND INCENTIVE PLAN**

Name of Grantee: \_\_\_\_\_  
No. of Restricted Stock  
Units: \_\_\_\_\_  
Grant Date: \_\_\_\_\_  
Vesting Commencement  
Date: \_\_\_\_\_

Pursuant to the Korro Bio, Inc. 2023 Stock Option and Incentive Plan as amended through the date hereof (the "Plan"), Korro Bio, Inc. (the "Company") hereby grants an award of the number of Restricted Stock Units listed above (an "Award") to the Grantee named above. Each Restricted Stock Unit shall relate to one share of Common Stock, par value \$0.001 per share (the "Stock") of the Company.

1. Restrictions on Transfer of Award. This Award may not be sold, transferred, pledged, assigned or otherwise encumbered or disposed of by the Grantee, and any shares of Stock issuable with respect to the Award may not be sold, transferred, pledged, assigned or otherwise encumbered or disposed of until (i) the Restricted Stock Units have vested as provided in Paragraph 2 of this Agreement and (ii) shares of Stock have been issued to the Grantee in accordance with the terms of the Plan and this Agreement.

2. Vesting of Restricted Stock Units. The restrictions and conditions of Paragraph 1 of this Agreement shall lapse on the Vesting Date or Dates specified in the following schedule so long as the Grantee continues to have a Service Relationship with the Company or a Subsidiary on such Dates. If a series of Vesting Dates is specified, then the restrictions and conditions in Paragraph 1 shall lapse only with respect to the number of Restricted Stock Units specified as vested on such date.

Incremental Number of Restricted Stock Units Vested	Vesting Date
_____ ( _ %)	_____
_____ ( _ %)	_____
_____ ( _ %)	_____
_____ ( _ %)	_____

The Administrator may at any time accelerate the vesting schedule specified in this Paragraph 2.

3. Termination of Service Relationship. If the Grantee's Service Relationship with the Company or a Subsidiary terminates for any reason (including death or disability) prior to the satisfaction of the vesting conditions set forth in Paragraph 2 above, any Restricted Stock Units that have not vested as of such date shall automatically and without notice terminate and be forfeited, and neither the Grantee nor any of his or her successors, heirs, assigns, or personal representatives will thereafter have any further rights or interests in such unvested Restricted Stock Units.

4. Issuance of Shares of Stock. As soon as practicable following each Vesting Date (but in no event later than two and one-half months after the end of the year in which the Vesting Date occurs), the Company shall issue to the Grantee the number of shares of Stock equal to the aggregate number of Restricted Stock Units that have vested pursuant to Paragraph 2 of this Agreement on such date and the Grantee shall thereafter have all the rights of a stockholder of the Company with respect to such shares.

5. Incorporation of Plan. Notwithstanding anything herein to the contrary, this Agreement shall be subject to and governed by all the terms and conditions of the Plan, including the powers of the Administrator set forth in Section 2(b) of the Plan. Capitalized terms in this Agreement shall have the meaning specified in the Plan, unless a different meaning is specified herein.

6. Section 409A of the Code. This Agreement shall be interpreted in such a manner that all provisions relating to the settlement of the Award are exempt from the requirements of Section 409A of the Code as "short-term deferrals" as described in Section 409A of the Code.

7. No Obligation to Continue Service Relationship. Neither the Company nor any Subsidiary is obligated by or as a result of the Plan or this Agreement to continue the Grantee in a Service Relationship with the Company or a Subsidiary and neither the Plan nor this Agreement shall interfere in any way with the right of the Company or any Subsidiary to terminate the Service Relationship of the Grantee at any time.

8. Integration. This Agreement constitutes the entire agreement between the parties with respect to this Award and supersedes all prior agreements and discussions between the parties concerning such subject matter.

9. Data Privacy Consent. In order to administer the Plan and this Agreement and to implement or structure future equity grants, the Company, its subsidiaries and affiliates and certain agents thereof (together, the "Relevant Companies") may process any and all personal or professional data, including but not limited to Social Security or other identification number, home address and telephone number, date of birth and other information that is necessary or desirable for the administration of the Plan and/or this Agreement (the "Relevant Information"). By entering into this Agreement, the Grantee (i) authorizes the Company to collect, process, register and transfer to the Relevant Companies all Relevant Information; (ii) waives any privacy rights the Grantee may have with respect to the Relevant Information; (iii) authorizes the Relevant Companies to store and transmit such information in electronic form; and (iv) authorizes the transfer of the Relevant Information to any jurisdiction in which the Relevant Companies consider appropriate. The Grantee shall have access to, and the right to change, the Relevant Information. Relevant Information will only be used in accordance with applicable law.

10. Notices. Notices hereunder shall be mailed or delivered to the Company at its principal place of business and shall be mailed or delivered to the Grantee at the address on file with the Company or, in either case, at such other address as one party may subsequently furnish to the other party in writing.

**Korro Bio, Inc.**

By: \_\_\_\_\_  
Title: \_\_\_\_\_

The foregoing Agreement is hereby accepted and the terms and conditions thereof hereby agreed to by the undersigned. Electronic acceptance of this Agreement pursuant to the Company's instructions to the Grantee (including through an online acceptance process) is acceptable.

Dated: \_\_\_\_\_

\_\_\_\_\_  
Grantee's Signature

Grantee's name and address:  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

**RESTRICTED STOCK UNIT AWARD AGREEMENT  
FOR NON-EMPLOYEE DIRECTORS  
UNDER THE KORRO BIO, INC.  
2023 STOCK OPTION AND INCENTIVE PLAN**

Name of Grantee: \_\_\_\_\_  
No. of Restricted Stock Units: \_\_\_\_\_  
Grant Date: \_\_\_\_\_

Pursuant to the Korro Bio, Inc. 2023 Stock Option and Incentive Plan as amended through the date hereof (the "Plan"), Korro Bio, Inc. (the "Company") hereby grants an award of the number of Restricted Stock Units listed above (an "Award") to the Grantee named above. Each Restricted Stock Unit shall relate to one share of Common Stock, par value \$0.001 per share (the "Stock") of the Company.

1. Restrictions on Transfer of Award. This Award may not be sold, transferred, pledged, assigned or otherwise encumbered or disposed of by the Grantee, and any shares of Stock issuable with respect to the Award may not be sold, transferred, pledged, assigned or otherwise encumbered or disposed of until (i) the Restricted Stock Units have vested as provided in Paragraph 2 of this Agreement and (ii) shares of Stock have been issued to the Grantee in accordance with the terms of the Plan and this Agreement.

2. Vesting of Restricted Stock Units. The restrictions and conditions of Paragraph 1 of this Agreement shall lapse on the Vesting Date or Dates specified in the following schedule so long as the Grantee continues to serve as a member of the Company's Board of Directors on such Dates. If a series of Vesting Dates is specified, then the restrictions and conditions in Paragraph 1 shall lapse only with respect to the number of Restricted Stock Units specified as vested on such date.

<u>Incremental Number of Restricted Stock Units Vested</u>	<u>Vesting Date</u>
_____ ( ___ %)	_____
_____ ( ___ %)	_____
_____ ( ___ %)	_____
_____ ( ___ %)	_____

Notwithstanding the foregoing, in the event of a Sale Event, 100% of the then-outstanding and unvested Restricted Stock Units shall immediately be deemed vested on the date of such Sale Event; provided, that the Grantee continues to serve as a member of the Company's Board of Directors until the date of such Sale Event. The Administrator may at any time accelerate the vesting schedule specified in this Paragraph 2.

3. Termination of Service. If the Grantee ceases to serve as a member of the Company's Board of Directors for any reason (including death or disability) prior to the satisfaction of the vesting conditions set forth in Paragraph 2 above, any Restricted Stock Units that have not vested as of such date shall automatically and without notice terminate and be forfeited, and neither the Grantee nor any of his or her successors, heirs, assigns, or personal representatives will thereafter have any further rights or interests in such unvested Restricted Stock Units.

4. Issuance of Shares of Stock. As soon as practicable following each Vesting Date (but in no event later than two and one-half months after the end of the year in which the Vesting Date occurs), the Company shall issue to the Grantee the number of shares of Stock equal to the aggregate number of Restricted Stock Units that have vested pursuant to Paragraph 2 of this Agreement on such date and the Grantee shall thereafter have all the rights of a stockholder of the Company with respect to such shares.

5. Incorporation of Plan. Notwithstanding anything herein to the contrary, this Agreement shall be subject to and governed by all the terms and conditions of the Plan, including the powers of the Administrator set forth in Section 2(b) of the Plan. Capitalized terms in this Agreement shall have the meaning specified in the Plan, unless a different meaning is specified herein.

6. Section 409A of the Code. This Agreement shall be interpreted in such a manner that all provisions relating to the settlement of the Award are exempt from the requirements of Section 409A of the Code as "short-term deferrals" as described in Section 409A of the Code.

7. No Obligation to Continue as a Service Provider. Neither the Plan nor this Award confers upon the Grantee any rights with respect to continuance as a Non-Employee Director or other service provider to the Company or a Subsidiary.

8. Integration. This Agreement constitutes the entire agreement between the parties with respect to this Award and supersedes all prior agreements and discussions between the parties concerning such subject matter.

9. Data Privacy Consent. In order to administer the Plan and this Agreement and to implement or structure future equity grants, the Company, its subsidiaries and affiliates and certain agents thereof (together, the "Relevant Companies") may process any and all personal or professional data, including but not limited to Social Security or other identification number, home address and telephone number, date of birth and other information that is necessary or desirable for the administration of the Plan and/or this Agreement (the "Relevant Information"). By entering into this Agreement, the Grantee (i) authorizes the Company to collect, process, register and transfer to the Relevant Companies all Relevant Information; (ii) waives any privacy rights the Grantee may have with respect to the Relevant Information; (iii) authorizes the Relevant Companies to store and transmit such information in electronic form; and (iv) authorizes the transfer of the Relevant Information to any jurisdiction in which the Relevant Companies consider appropriate. The Grantee shall have access to, and the right to change, the Relevant Information. Relevant Information will only be used in accordance with applicable law.



10. Notices. Notices hereunder shall be mailed or delivered to the Company at its principal place of business and shall be mailed or delivered to the Grantee at the address on file with the Company or, in either case, at such other address as one party may subsequently furnish to the other party in writing.

Korro Bio, Inc.

By: \_\_\_\_\_  
Title:

The foregoing Agreement is hereby accepted and the terms and conditions thereof hereby agreed to by the undersigned. Electronic acceptance of this Agreement pursuant to the Company's instructions to the Grantee (including through an online acceptance process) is acceptable.

Dated: \_\_\_\_\_

\_\_\_\_\_  
Grantee's Signature

Grantee's name and address:

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

**RESTRICTED STOCK UNIT AWARD AGREEMENT  
FOR COMPANY EMPLOYEES  
UNDER THE KORRO BIO, INC.  
2023 STOCK OPTION AND INCENTIVE PLAN**

Name of Grantee: \_\_\_\_\_  
No. of Restricted Stock Units: \_\_\_\_\_  
Grant Date: \_\_\_\_\_

Pursuant to the Korro Bio, Inc. 2023 Stock Option and Incentive Plan as amended through the date hereof (the "Plan"), Korro Bio, Inc. (the "Company") hereby grants an award of the number of Restricted Stock Units listed above (an "Award") to the Grantee named above. Each Restricted Stock Unit shall relate to one share of Common Stock, par value \$0.001 per share (the "Stock") of the Company.

1. Restrictions on Transfer of Award. This Award may not be sold, transferred, pledged, assigned or otherwise encumbered or disposed of by the Grantee, and any shares of Stock issuable with respect to the Award may not be sold, transferred, pledged, assigned or otherwise encumbered or disposed of until (i) the Restricted Stock Units have vested as provided in Paragraph 2 of this Agreement and (ii) shares of Stock have been issued to the Grantee in accordance with the terms of the Plan and this Agreement.

2. Vesting of Restricted Stock Units. The restrictions and conditions of Paragraph 1 of this Agreement shall lapse on the Vesting Date or Dates specified in the following schedule so long as the Grantee continues to have a Service Relationship with the Company or a Subsidiary on such Dates. If a series of Vesting Dates is specified, then the restrictions and conditions in Paragraph 1 shall lapse only with respect to the number of Restricted Stock Units specified as vested on such date.

<u>Incremental Number of Restricted Stock Units Vested</u>	<u>Vesting Date</u>
_____ ( ___ %)	_____
_____ ( ___ %)	_____
_____ ( ___ %)	_____
_____ ( ___ %)	_____

The Administrator may at any time accelerate the vesting schedule specified in this Paragraph 2.

3. Termination of Service Relationship. If the Grantee's Service Relationship with the Company or a Subsidiary terminates for any reason (including death or disability) prior to the satisfaction of the vesting conditions set forth in Paragraph 2 above, any Restricted Stock Units that have not vested as of such date shall automatically and without notice terminate and be forfeited, and neither the Grantee nor any of his or her successors, heirs, assigns, or personal representatives will thereafter have any further rights or interests in such unvested Restricted Stock Units.

4. Issuance of Shares of Stock. As soon as practicable following each Vesting Date (but in no event later than two and one-half months after the end of the year in which the Vesting Date occurs), the Company shall issue to the Grantee the number of shares of Stock equal to the aggregate number of Restricted Stock Units that have vested pursuant to Paragraph 2 of this Agreement on such date and the Grantee shall thereafter have all the rights of a stockholder of the Company with respect to such shares.

5. Incorporation of Plan. Notwithstanding anything herein to the contrary, this Agreement shall be subject to and governed by all the terms and conditions of the Plan, including the powers of the Administrator set forth in Section 2(b) of the Plan. Capitalized terms in this Agreement shall have the meaning specified in the Plan, unless a different meaning is specified herein.

6. Tax Withholding. The Grantee shall, not later than the date as of which the receipt of this Award becomes a taxable event for Federal income tax purposes, pay to the Company or make arrangements satisfactory to the Administrator for payment of any Federal, state, and local taxes required by law to be withheld on account of such taxable event. The Company shall have the authority to cause the required tax withholding obligation to be satisfied, in whole or in part, by (i) withholding from shares of Stock to be issued to the Grantee a number of shares of Stock with an aggregate Fair Market Value that would satisfy the withholding amount due; or (ii) causing its transfer agent to sell from the number of shares of Stock to be issued to the Grantee, the number of shares of Stock necessary to satisfy the Federal, state and local taxes required by law to be withheld from the Grantee on account of such transfer.

7. Section 409A of the Code. This Agreement shall be interpreted in such a manner that all provisions relating to the settlement of the Award are exempt from the requirements of Section 409A of the Code as “short-term deferrals” as described in Section 409A of the Code.

8. No Obligation to Continue Service Relationship. Neither the Company nor any Subsidiary is obligated by or as a result of the Plan or this Agreement to continue the Grantee’s Service Relationship with the Company or a Subsidiary and neither the Plan nor this Agreement shall interfere in any way with the right of the Company or any Subsidiary to terminate the Grantee’s Service Relationship with the Company or a Subsidiary at any time.

9. Integration. This Agreement constitutes the entire agreement between the parties with respect to this Award and supersedes all prior agreements and discussions between the parties concerning such subject matter.

10. Data Privacy Consent. In order to administer the Plan and this Agreement and to implement or structure future equity grants, the Company, its subsidiaries and affiliates and certain agents thereof (together, the “Relevant Companies”) may process any and all personal or professional data, including but not limited to Social Security or other identification number, home address and telephone number, date of birth and other information that is necessary or desirable for the administration of the Plan and/or this Agreement (the “Relevant Information”). By entering into this Agreement, the Grantee (i) authorizes the Company to collect, process, register and transfer to the Relevant Companies all Relevant Information; (ii) waives any privacy rights the Grantee may have with respect to the Relevant Information; (iii) authorizes the Relevant Companies to store and transmit such information in electronic form; and (iv) authorizes the transfer of the Relevant Information to any jurisdiction in which the Relevant Companies consider appropriate. The Grantee shall have access to, and the right to change, the Relevant Information. Relevant Information will only be used in accordance with applicable law.

11. Notices. Notices hereunder shall be mailed or delivered to the Company at its principal place of business and shall be mailed or delivered to the Grantee at the address on file with the Company or, in either case, at such other address as one party may subsequently furnish to the other party in writing.

12. [Clawback Acknowledgement]. The Grantee acknowledges that the Grantee may become subject to the Korro Bio, Inc. Compensation Recovery Policy adopted pursuant to Rule 10D-1 promulgated under the Exchange Act and Nasdaq Rule 5608, or any successor rule (the “Clawback Policy”). The Grantee understands that if the Grantee is or becomes subject to the Clawback Policy, the Company and/or the Board shall be entitled to recover all Erroneously Awarded Compensation (as defined in the Clawback Policy) from the Grantee pursuant to such means as the Company and/or the Board may elect. The Grantee agrees that the Grantee shall take all required action to enable such recovery. The Grantee understands that such recovery may be sought and occur after the Executive’s employment or service with the Company terminates. The Grantee further agrees that the Grantee is not entitled to indemnification for any Erroneously Awarded Compensation or for any claim or losses arising out of or in any way related to Erroneously Awarded Compensation recovered pursuant to the Clawback Policy and, to the extent any agreement or organizational document purports to provide otherwise, the Grantee hereby irrevocably agrees to forego such indemnification. The Grantee acknowledges and agrees that the Grantee has received and has had an opportunity to review the Clawback Policy. Any action by the Company to recover Erroneously Awarded Compensation under the Clawback Policy from the Grantee shall not, whether alone or in combination with any other action, event or condition, be deemed (i) an event giving rise to a right to resign for a Good Reason Condition (as defined in the Grantee’s employment agreement with the Company) or serve as a basis for a claim of constructive termination under any benefits or compensation arrangement applicable to the Grantee, or (ii) to constitute a breach of a contract or other arrangement to which the Grantee is a party. This Section 12 is a material term of this Agreement.]<sup>1</sup>

---

<sup>1</sup> For Section 16 officers only (which includes the entire executive team after closing of the merger). Provision should be included once the clawback policy is adopted.

By: \_\_\_\_\_  
Title:

The foregoing Agreement is hereby accepted and the terms and conditions thereof hereby agreed to by the undersigned. Electronic acceptance of this Agreement pursuant to the Company's instructions to the Grantee (including through an online acceptance process) is acceptable.

Dated: \_\_\_\_\_

\_\_\_\_\_  
Grantee's Signature

Grantee's name and address:  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

**CONSENT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM**

We consent to the reference to our firm under the caption “Experts” and to the use of our report dated July 27, 2023, in Amendment No. 2 to the Registration Statement (Form S-1 No. 333-275353) and related Prospectus of Korro Bio, Inc. for the registration of 1,714,570 shares of its common stock.

/s/ Ernst & Young LLP

Boston, Massachusetts  
December 20, 2023

**Consent of Independent Registered Public Accounting Firm**

We consent to the use in this Amendment No. 2 to the Registration Statement on Form S-3 (No. 333-275353) on Form S-1 of Korro Bio, Inc. of our report dated March 10, 2023, except for the effect of the reverse stock split discussed in Note 19b, as to which the date is December 1, 2023, relating to the consolidated financial statements of Frequency Therapeutics, Inc., appearing in the Prospectus, which is part of this Registration Statement.

We also consent to the reference to our firm under the heading “Experts” in such Prospectus.

/s/ RSM US LLP

Boston, Massachusetts  
December 20, 2023

**Calculation of Filing Fee Tables**

**Form S-1**  
(Form Type)

**Korro Bio, Inc.**

(Exact Name of Registrant as Specified in its Charter)

Table 1: Newly Registered and Carry Forward Securities

Security Type	Security Class Title	Fee Calculation or Carry Forward Rule	Amount Registered (1)	Proposed Maximum Offering Price Per Share (2)	Maximum Aggregate Offering Price	Fee Rate	Amount of Registration Fee (3)	Carry Forward Form Type	Carry Forward File Number	Carry Forward Initial Effective Date	Filing Fee Previously Paid In Connection with Unsold Securities to be Carried Forward
Equity	Common Stock, \$0.001 par value per share	Other	1,714,570 shares	\$15.003	\$25,723,693.71	\$0.0001476	\$3,796.82				
Total Offering Amounts					\$25,723,693.71		—				
Total Fees Previously Paid							\$4,601.31				
Total Fee Offsets							—				
Net Fee Due							\$0				

- (1) Pursuant to Rule 416(a) of the Securities Act of 1933, as amended, this registration statement also covers such additional shares as may hereafter be offered or issued to prevent dilution resulting from stock splits, stock dividends, recapitalizations or certain other capital adjustments.
- (2) Estimated solely for the purpose of calculating the registration fee in accordance with Rule 457(c) under the Securities Act of 1933, as amended. The price per share and aggregate offering price are based on the average of the high and low prices of the registrant's common stock on November 3, 2023 (a date within five business days prior to the initial filing of the registration statement), as reported on Nasdaq.
- (3) The registrant previously paid \$4,601.31 in connection with the initial filing of this registration statement on Form S-1 (333-275353) originally filed on Form S-3 with the Securities and Exchange Commission on November 6, 2023.