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# DELTA REPORT

## 10-K

NKTX - NKARTA, INC.

10-K - DECEMBER 31, 2023 COMPARED TO 10-K - DECEMBER 31, 2022

The following comparison report has been automatically generated

| | |
|---|---|
| TOTAL DELTAS | 3462 |
| CHANGES | 242 |
| DELETIONS | 1662 |
| ADDITIONS | 1558 |





REFINITIV

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

# FORM 10-K

**(Mark One)**

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

**For the fiscal year ended December 31, 2022 2023**

**OR**

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

**Commission File Number 001-39370**

# Nkarta, Inc.

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

| **Delaware** | **47-4515206** |
|---|---|
| **(State or other jurisdiction of incorporation or organization)** | **(I.R.S. Employer Identification No.)** |
| **6000 Shoreline Court, Suite 102 1150 Veterans Boulevard South San Francisco, CA** | **94080** |
| **(Address of principal executive offices)** | **(Zip Code)** |

**(925) 407-1049**

**(Registrant's telephone number, including area code)**

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

| Title of each class | Trading Symbol(s) | Name of each exchange on which registered |
|---|---|---|
| Common Stock, $0.0001 par value per share | NKTX | The Nasdaq Stock Market LLC (Nasdaq Global Select Market) Market |

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

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

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

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

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

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

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

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

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

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

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

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

The aggregate market value of the voting and non-voting equity held by non-affiliates of the registrant, based on the closing price of a share of common stock on June 30, 2022 June 30, 2023 as reported by The Nasdaq Stock Market on such date was approximately $345.9 38.4 million. This calculation does not reflect a determination that certain persons are affiliates of the registrant for any other purpose.

As of March 13, 2023 March 18, 2024, the number of outstanding shares of the registrant's common stock, par value $0.0001 per share, was 48,928,670 49,416,186.

**DOCUMENTS INCORPORATED BY REFERENCE**

Portions of the registrant's Definitive Proxy Statement for the 2023 Annual Meeting of Stockholders to be filed with the U.S. Securities and Exchange Commission pursuant to Regulation 14A within 120 days after the end of the fiscal year covered by this Annual Report on Form 10-K are incorporated by reference in Part III, Items 10-14 of this Annual Report on Form 10-K.

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## Table of Contents

## CAUTIONARY NOTE REGARDING FORWARD-LOOKING STATEMENTS

This Annual Report on Form 10-K, and the information incorporated herein by reference, particularly in the sections captioned “Business” under Part I, Item 1, “Risk Factors” under Part I, Item 1A, and “Management’s Discussion and Analysis of Financial Condition and Results of Operations” under Part II, Item 7, contains forward-looking statements within the meaning of Section 27A of the Securities Act of 1933, as amended (the "Securities Act"), and Section 21E of the Securities Exchange Act of 1934, as amended. amended (the "Exchange Act"). In some cases, you can identify forward-

looking statements by the words “anticipate,” “believe,” “continue,” “could,” “estimate,” “expect,” “intend,” “may,” “might,” “objective,” “ongoing,” “plan,” “predict,” “project,” “potential,” “should,” “will,” or “would,” or the negative of these terms, or other comparable terminology intended to identify statements about the future. These statements involve known and unknown risks, uncertainties and other factors that may cause our actual results, levels of activity, performance or achievements to be materially different from the information expressed or implied by these forward-looking statements. In addition, these statements are based on our management’s beliefs and assumptions and on information currently available to our management as of the date of this Annual Report on Form 10-K. While we believe such information forms a reasonable basis for such statements, such information may be limited or incomplete, and our statements should not be read to indicate that we have conducted an exhaustive inquiry into, or review of, all potentially available relevant information. Forward-looking statements are inherently subject to risks and uncertainties, some of which cannot be predicted or quantified. You should read the sections titled “Risk Factor Summary” below and “Risk Factors” set forth in Part I, Item 1A of this Annual Report on Form 10-K for a discussion of important factors that may cause our actual results to differ materially from those expressed or implied by our forward-looking statements, which such factors may be updated or supplemented from time to time by subsequent reports we file with the Securities and Exchange Commission. Commission (the "SEC"). As a result of these factors, we cannot assure you that the forward-looking statements in this Annual Report on Form 10-K will prove to be accurate.

Moreover, we operate in an evolving environment. New risk factors and uncertainties may emerge from time to time, and it is not possible for management to predict all risk factors and uncertainties. As a result All of these factors, we cannot assure you that the our forward-looking statements in this report are made only as of the date of this Annual Report on Form 10-K will prove to be accurate. 10-K. Except as required by applicable law, we do not plan to publicly update or revise any forward-looking statements contained herein, whether as a result of any new information, future events, changed circumstances or otherwise.

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



## RISK FACTOR SUMMARY

Below is a summary of material factors that make an investment in our common stock speculative or risky. Importantly, this summary does not address all the risks and uncertainties that we face. Additional discussion of the risks and uncertainties summarized in this risk factor summary, as well as other risks and uncertainties that we face, can be found under “Cautionary Note Regarding Forward-Looking Statements” and Part I, Item 1A, “Risk Factors” in this Annual Report on Form 10-K. The below summary is qualified in its entirety by those more complete discussions of such risks and uncertainties. You should consider carefully the risks and uncertainties described under Part I, Item 1A, “Risk Factors” in this Annual Report on Form 10-K as part of your evaluation of an investment in our common stock.

- *We have a limited operating history and do not have any products approved for sale*.
- *We have incurred significant losses since our inception and we expect to continue to incur significant losses for th foreseeable future.*
- *We have never generated revenue from product sales and may never achieve or maintain profitability.*
- *We will require additional capital, which, if available, may cause dilution to our stockholders, restrict our operations require us to relinquish rights to our product candidates.*
- *Our business and the business or operations of our research partners and other third parties with whom we condu business have been and could continue to be adversely affected by the effects of health epidemics, including the COVID-19 pandemic, in regions where we or third parties on which we rely have business operations.*
- *Our business depends upon the success of our CAR NK cell technology platform.*
- *Utilizing CAR NK cells represents a novel therapeutic approach, to the treatment of cancer, and we must overcom significant challenges in order to develop, commercialize and manufacture our product candidates.*
- *Clinical development involves a lengthy and expensive process with an uncertain outcome, and we may encounte substantial delays due to a variety of reasons outside our control.*
- *Our business is highly dependent on the clinical success of our product candidates, and on the clinical success of NKX101 and NKX019, in particular, and we may fail to develop NKX101, NKX019 and/or our other product candid successfully or be unable to obtain regulatory approval for them.*
- *Clinical data supporting the effectiveness of CD19-targeted cell therapies against autoimmune disease are limited, and CD19-targeted CAR NK cell therapies, such as NKX019, may not provide the same, or any, therapeutic benef against lupus nephritis or other autoimmune diseases, or be competitive with respect to other CD19-targeted therapies for the treatment of autoimmune disease.*
- *Enrollment and retention of patients in clinical trials is an expensive and time-consuming process and could be delayed, made more difficult or rendered impossible by multiple factors outside our control.*
- *Our preclinical pipeline programs may experience delays or may never advance to clinical trials, which would adversely affect our ability to obtain regulatory approvals or commercialize these programs on a timely basis or at*
- *The results of preclinical studies and early-stage clinical trials may not be predictive of future results. Interim, “topli and preliminary data from our clinical trials may differ materially from the final data. Initial success in any clinical tri may not be indicative of results obtained when these trials are completed or in later stage trials.*
- *If any of our product candidates, or any competing product candidates, demonstrate relevant, serious adverse eve we may be required to halt or delay further clinical development.*
- *We have entered into a research collaboration with CRISPR Therapeutics regarding certain product candidates, a we may enter into additional collaborations with third parties to develop or commercialize other product candidates*

*Our prospects with respect to those product candidates will depend in significant part on the success of those collaborations, and we may not realize the benefits of such collaborations.*

- *If we fail to compete effectively with academic institutions and other biopharmaceutical companies that develop sir or alternatives to cellular immunotherapy product candidates, our business will be materially adversely affected.*

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- *Our manufacturing process is novel and complex, and we may encounter difficulties in production, or difficulties wi internal manufacturing, which would delay or prevent our ability to provide a sufficient supply of our product candidates for clinical trials or our products for patients, if approved.*

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- *We rely on third parties to manufacture certain materials for use in the production of our product candidates, or ma rely on third parties to manufacture certain of our product candidates or certain materials for use in the production our product candidates, future, which increases the risk that we will not have sufficient quantities of such materials product candidates, or materials, or such quantities at an acceptable cost, which could delay, prevent or impair ou development or commercialization efforts.*
- *We are reliant on a sole supplier for certain steps of our manufacturing process.*
- *Delays in commissioning and receiving regulatory approvals for our manufacturing facilities could delay our development plans and thereby limit our ability to develop our product candidates and generate revenues.*
- *If our license agreement with National University of Singapore and St. Jude Children's Research Hospital, Inc. is terminated, we could lose our rights to key components enabling our NK cell engineering platform.*
- *If any patent protection we obtain is not sufficiently robust, our competitors could develop and commercialize prod and technology similar or identical to ours.*
- *If any of our product candidates are approved for marketing and commercialization and we have not developed or secured marketing, sales and distribution capabilities, either internally or from third parties, we will be unable to successfully commercialize such products and may not be able to generate product revenue.*
- *Our product candidates, including NKX101 and NKX019, could be subject to regulatory limitations following appro if and when such approval is granted.*
- *The market price for our common stock may be volatile, which could contribute to the loss of all or part of your investment.*
- *Concentration of ownership of our shares of common stock among our existing executive officers, directors and principal stockholders may prevent new investors from influencing significant corporate decisions.*

- *Computer system interruptions or security breaches of our information systems could significantly disrupt our prod development programs and our ability to operate our business.*

WEBSITE REFERENCES

In this Annual Report on Form 10-K, we make references to our website at www.nkartatx.com. References to our website through this Annual Report on Form 10-K are provided for convenience only and the content on our website does not constitute a part of, and shall not be deemed incorporated by reference into, this Annual Report on Form 10-K.



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**PART I**

**Item 1. Business.**

**Overview**

We are a clinical-stage biopharmaceutical company focused on advancing the discovery, development and commercialization of allogeneic, off-the-shelf engineered natural killer ("NK") cell therapies to treat cancer. for the treatment of patients with autoimmune diseases or hematologic malignancies. Our company was founded on the belief that engineered NK cell therapies can transform the lives of patients by offering therapies that are clinically meaningful, broadly accessible and unencumbered by the safety concerns often associated with other cell therapy approaches. We are currently have two lead product candidates, NKX101, developing NKX019, a chimeric antigen receptor-natural killer ("CAR NK") product candidate targeting cells that display NKG2D ligands, the CD19 antigen and NKX019, NKX101, a CAR NK product candidate targeting the CD19 antigen, in ongoing Phase 1 clinical trials. cells that display NKG2D ligands. Both product candidates enable an on-demand, off-the-shelf approach involving scaled manufacturing to broaden patient access. NKX019 and NKX101 incorporate proprietary technologies that enable us to generate an abundant supply of NK cells, improve the persistence of these cells for sustained activity in the body, engineer enhanced increase NK cell recognition of tumor targets, target antigens, enhance NK cell fitness, and tumor microenvironment evasion, and freeze, store and thaw our engineered NK cells for the treatment of cancer. off-the-shelf administration. Our product candidates are allogeneic, which means they are produced using cells from a different person than the patient(s) being treated, and they are produced in quantity, then frozen and therefore available off-the-shelf for treating patients without delay, unlike autologous cell therapies, which are derived from a patient's own cells and must be manufactured as needed for each

patient. We believe that engineered NK cells have the potential to be an effective and accessible therapies for autoimmune diseases and cancer, therapy, be well tolerated, and avoid some of the toxicities observed with other cell therapies. NKX019 is currently being studied in an ongoing Phase 1 clinical trial for certain B-cell malignancies, and preparations for a planned Phase 1 clinical trial of NKX019 for lupus nephritis ("LN") are underway.NKX101 has been studied in a Phase 1 clinical trial for certain hematologic malignancies, although we have closed patient enrollment and deprioritized the program as part of a pipeline realignment to direct primary resources to our lead pipeline program, NKX019, for the treatment of autoimmune disease.

Our modular NK cell engineering platform allows us to generate new product candidates builds on the distinctive biology of NK cells and their role in a rapid eradicating aberrant and cost-efficient manner. pathologically transformed cells. Our process starts with differentiated, mature NK cells derived from healthy donors. We build on the intrinsic ability of these immune cells to identify and kill transformed cells with cell engineering to further enhance their activity. This engineering involves a chimeric antigen receptors receptor ("CARs" CAR") on the surface of an NK cell to enable the cell to recognize specific proteins or antigens that are present on the surface of tumor cells. Our engineered CAR NK cells generally consist of an NK cell engineered with a targeting receptor, OX40 costimulatory domain, CD3ζ(zeta) signaling moiety, and a membrane-bound form of the cytokine IL(interleukin)15 -15 ("mbIL-15"). We believe that the modular nature of our platform and the proprietary technologies we use for the multiplex engineering of NK cells, which include genome editing, are advantages that can support the rapid generation of new product candidates with enhanced properties and/or new targeting receptors for additional disease indications.

***Our Product Candidates and Discovery Programs***

NKX101 Our NKX019 autoimmune program is designed based on the potential to enhance eliminate the power pathologic B cells that produce autoantibodies believed to underpin multiple autoimmune diseases via CD19 targeting. These autoantibodies, the immunologic hallmark of innate NK many autoimmune diseases, inappropriately recognize antigens expressed in healthy cells, causing various clinical syndromes from the resultant damage to normal tissues. Abnormal B cells are also the cause of multiple hematologic malignancies, including B-cell lymphoma. Approved CD19-directed cell biology therapies can eliminate these cancerous B cells, resulting in the possibility of durable complete responses in patients that are refractory to detect other therapies. Targeted depletion of cells from the B-cell lineage as a therapeutic mechanism is common to both autoimmune disease and kill cancerous cells. The primary activating receptor B-cell malignancies. This observation, in addition to recent reported studies of patients with autoimmune diseases who had considerable clinical benefit following treatment with CD19-directed cell therapies, support our belief that NKX019 has the potential to be a disease-modifying therapy for NK cells is known as NKG2D, which works through autoimmune disease. In October 2023, we announced the detection clearance of stress ligands displayed an investigational new drug (“IND”) application by cancerous cells. We have engineered NKX101 to increase the inherent cancer killing ability of our donor-derived NK cells by raising levels of NKG2D at least ten-fold as compared to non-engineered NK cells and by adding a costimulatory domain, which is an additional signaling element for white blood cells.

NKX101 is currently being studied in a multi-center Phase 1 clinical trial in the United States Food and Drug Administration (“FDA”) to evaluate NKX019 for the treatment of relapsed or refractory acute myeloid leukemia ("r/r AML") or

higher risk myelodysplastic syndromes ("MDS"). This ongoing first-in-human study evaluates LN. The multi-center dose escalation clinical trial will assess the safety, pharmacology, and preliminary anti-tumor clinical activity of NKX101. NKX019 in patients with refractory LN.

The therapeutic benefit of targeting CD19-positive B cells in patients with systemic lupus erythematosus ("SLE") has been reported in a recent academic study published in *Nature Medicine* in September 2022 (Mackensen et al. (2022) Nat. Med. 28:2124-2132). Five patients with severe refractory SLE with LN received an autologous CD19 CAR T-cell therapy following lymphodepleting conditioning ("LD") with fludarabine ("Flu") and



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cyclophosphamide ("Cy"). All patients showed significant clinical trial consists of dose-finding improvement in symptoms, including drug-free remissions after approximately three months. The CAR T cells expanded in all patients, with peak levels occurring around day 9, followed by dose-expansion a rapid decline. There was no high-grade cytokine release syndrome ("CRS"), no neurotoxicity, and is designed no substantial elevation of serum IL-6 levels. Depletion of circulating B cells was rapid yet transient, with B cell numbers returning to identify normal within two to four months. This contrasts sharply with the recommended Phase 2 dose.CD19 CAR T-cell experience in B-cell malignancies, where B-cell suppression typically exceeds 18 months. Despite the limited persistence of CAR T cells and short-term B-cell suppression, all patients had seroconversion of anti-double-stranded DNA antibodies and ongoing disease control, even after B-cell recovery. A subsequent publication expanded this dataset to eight patients with SLE, all of whom had seroconversion and disease remission (Müller et al. (2024) N Engl J Med 390: 687-700). Median follow up in the group was 15 months with some patients having up to 29 months of remission.

Our NKX019 oncology program is based on the potential to treat a variety of B-cell malignancies by targeting the CD19 antigen that is found reliably expressed on these types of cancerous cells, where cells. Further, CD19-targeted engineered NK cells, T cells, and monoclonal antibodies have all demonstrated clinical activity. NKX019 is currently being studied in a Phase 1 clinical trial for the treatment of certain B-cell malignancies. This ongoing, first-in-human study evaluates the safety, pharmacology, and preliminary anti-tumor activity of NKX019, at multiple centers in the United States and Australia. The clinical trial consists of dose-finding followed by dose-expansion and is designed to identify the recommended Phase 2 dose.



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In addition Our NKX101 program is designed to our two lead product candidates, we enhance the power of innate NK cell biology to detect and kill cancerous cells. Many cancers lack a biologically dispensable antigen like CD19, making development of targeted cellular therapies or immunotherapies challenging. However, the primary activating receptor for NK cells, which is known as NKG2D, detects a group of stress ligands that are engaged expressed on a variety of cancer subtypes. NKX101 has been in extensive discovery and preclinical stage activities directed to expansion of our pipeline of product candidates over time. As part of our collaboration with CRISPR Therapeutics AG ("CRISPR"), we are developing an allogeneic, off-the-shelf CAR NK product candidate targeting a multi-center Phase 1 clinical trial in the CD70 tumor antigen ("NKX070") United States for the treatment of solid relapsed or refractory acute myeloid leukemia ("r/r AML") or higher risk myelodysplastic syndromes ("MDS"). This first-in-human study evaluated the safety, pharmacology, and liquid tumors, preliminary anti-tumor activity of NKX101. The clinical trial consists of dose-finding followed by dose-expansion and conducting discovery efforts for an allogeneic, off-the-shelf product candidate that comprises both engineered NK cells and engineered T cells ("NK+T") to take advantage of both the innate and adaptive immune systems. This NK+T program is designed to harness multiple aspects identify the recommended Phase 2 dose. We have deprioritized the development of human immunology to treat a variety of cancers.NKX101 while we explore options for implementing certain changes in that program.

We have an intensive focus on As we pursue our goal of developing innovative and broadly accessible cell therapies, manufacturing capabilities and technology. technology are a significant focus of our efforts. We are currently manufacturing NKX019 clinical supply at one of our 2,700-square foot clinical current good manufacturing practice ("cGMP") facility facilities located in South San Francisco, California. We are also currently constructing recently completed construction of a new facility in South San Francisco to support pivotal clinical trials and potential commercial supply of our product candidates.

**Our Strategy**

We are developing novel engineered, allogeneic, off-the-shelf cell therapies to improve the lives of autoimmune and cancer patients and their overall survival by leveraging our NK cell engineering platform. patients. Key elements of our strategy to achieve this include:

***Next generation platform enlists natural, healthy human donor NK cells for optimal product candidates.***

Our cell engineering platform utilizes healthy adult donors as our source for NK cells. By enlisting this natural source of NK cells, we start with bona fide NK cells already endowed with inherent cytotoxic and tumor-recognizing capabilities, as compared to capabilities. This contrasts with other more complex cell sources where these basic therapeutic features must be painstakingly designed and synthetically added to the cells. Healthy donor-derived Donor-derived NK cells are also available in abundance, providing a large quantity of cells with which to begin each manufacturing run. Finally, healthy donor-derived adult cells consist of a diverse repertoire of NK cells. By utilizing a cell source that contains the full range of naturally occurring NK cells, we believe we can capitalize on the inherent diversity of the innate immune system and potentially select for different NK cell sub-populations with desired characteristics.

***Prioritize development of NKX019 for r/r AML lupus nephritis and evaluate other autoimmune indications.***

NKX019 is designed to target CD19, which is expressed through certain stages of B-cell development. When aberrantly activated, B cells can produce autoantibodies that inappropriately recognize cell surface antigens on normal cells. These antibodies and resultant immune complexes can damage normal tissues and lead to autoimmune diseases, such as LN. Due to the broad expression of CD19 on B cells, the targeting and depletion of CD19-positive B cells has been proposed as a mechanism by which long-term drug-free remissions may be achieved in LN and other cancers. autoimmune diseases.

Autologous CAR T cell therapies have transformed the treatment landscape for certain blood cancers by targeting cancerous B cells via CD19. This approach also kills normal B cells in large numbers via an on-target, off-tumor effect. In those patients who respond to CD19-directed CAR T cell therapy, normal B cells are also depleted beyond detection in the blood. Recent academic studies have applied this approach of B-cell depletion to the treatment of patients with LN and other autoimmune diseases. In one published report, five patients with highly refractory LN had remarkable improvements in clinical symptoms and normalization of autoantibodies following a course of treatment with CD19 CAR T cells. Because the targeting of CD19 has demonstrated clinical activity with CAR T and CAR NK cell therapies, we believe that NKX019 presents an opportunity to treat a variety of autoimmune diseases while addressing the limitations of CAR T cell therapies.

We have engineered NKX101 to overexpress the NKG2D receptor. Because NKG2D is the primary activating receptor responsible received FDA clearance for innate immune surveillance for cancerous cells by NK cells, we believe that NKX101 presents an opportunity to potentially treat a variety of blood cancers and solid tumors, which represent approximately 90% of all cancer incidences in the United States. Therefore, upon clinical proof-of-concept from our ongoing NKX101 dose-escalation Phase 1 clinical trial to study NKX019 for r/r AML, we may pursue a broad the treatment of refractory LN. We expect to dose the first patient in the clinical development plan trial in the first half of 2024. We have shown that NKX019 is highly active in vitro against B cells from patients with different autoimmune diseases and are evaluating multiple potential autoimmune indications in addition to LN for multiple tumor types including solid tumors. potential clinical investigation.

***Develop NKX019 for B-cell malignancies.***

NKX019 is designed to treat a variety of B-cell malignancies by targeting target the clinically and commercially validated CD19 antigen that is found in different B-cell malignancies. Because the targeting of CD19 has demonstrated

clinical activity with both CAR T and CAR NK cell therapies as well as monoclonal antibodies, we believe that NKX019 presents an a potential opportunity to treat a variety of B-cell malignancies while addressing the limitations of existing autologous CAR T cell therapies. NKX019 is currently being investigated in the a dose-expansion portion cohort of the ongoing Phase 1 clinical trial as both a monotherapy and in combination with rituximab, an anti-CD20 antibody, in patients with large B-cell lymphoma ("LBCL") following administration of LD. These expansion cohorts are being investigated in patients who have not previously been treated This cohort is proceeding with an approved autologous CD19 CAR T therapy a compressed dosing schedule and also in enrolls patients who have failed autologous CD19 CAR T therapy.



***Apply our NK cell engineering platform to build a broad pipeline of product candidates incorporating engineered NK cells.***

Our proprietary NK cell engineering platform is based on a modular and generalizable approach that we believe enables us to generate new product candidates in a rapid and cost-efficient manner. Our engineered CAR NK cells generally consist of an NK cell engineered with a targeting receptor, OX40 costimulatory domain, CD3ζ(zeta) signaling moiety, and mbIL-15. We believe that the modular nature of our platform and the proprietary technologies we use for the multiplex engineering of NK cells are advantages that can support the rapid generation of new INDs for product candidates with enhanced properties and/or new targeting receptors for additional disease indications. With these attributes, we plan to continue to build out a pipeline with product candidates focused on novel targets as well as clinically and commercially validated targets. With our partner, CRISPR, we are also engaged in preclinical research for NKX070 and NK+T, which may provide advantages of both the innate and adaptive immune responses.

***Continue to build proprietary manufacturing capabilities to enable speed, control, flexibility, scalability, and cost efficiency.***

We believe that internal cGMP manufacturing capabilities will facilitate clinical product supply, lower the risk of manufacturing disruptions, and enable more cost-effective manufacturing for clinical and commercial supply of our product candidates. We are currently manufacturing NKX019 product for the Phase 1 manufacture our clinical trial drug supply at one of our 2,700-square foot clinical cGMP facility on-site at our primary corporate location facilities in South San Francisco, California. We intend to California and recently completed construction on a new manufacturing facility designed for manufacture NKX101 at of our cGMP facility in 2023, product candidates for pivotal clinical trials and in potential commercial supply. In the future, we also intend to manufacture our proprietary, engineered K562 stimulatory cells ("NKSTIM") in house. We believe this clinical cGMP facility our current facilities will supply our anticipated non-pivotal and pivotal clinical trial needs.

We are also currently constructing a separate, larger commercial cGMP facility for manufacturing. In July 2021, we entered a lease agreement for an 88,000 square foot facility in South San Francisco to support research and development and future manufacturing of Nkarta’s cell therapy products and product candidates, including engineered NK cells for

pivotal clinical trials and needs, as well as our potential commercial supply. This new facility will also serve as our future headquarters with office space and research facilities.launch needs.



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***Continue to opportunistically evaluate enabling, adjacent or potential competing technologies, and where advantageous, seek licenses or collaborations regarding those technologies, to advance our platform.***

We have been engaged in discovery and preclinical stage activities directed at expanding our pipeline of product candidates. As part of our collaboration with CRISPR Therapeutics AG ("CRISPR"), we are developing an allogeneic, off-the-shelf CAR NK product candidate targeting the CD70 tumor antigen ("NKX070") for the treatment of solid and liquid tumors, and conducting discovery efforts for an allogeneic, off-the-shelf product candidate that comprises both engineered NK cells and engineered T cells ("NK+T") to take advantage of both the innate and adaptive immune systems. This NK+T program is designed to harness multiple aspects of human immunology to treat a variety of cancers. Additionally, our agreement with CRISPR includes licenses for additional gene editing targets and an additional co-development product.

We will continue to evaluate technologies that may enable or enhance our various product candidates, and we will maintain awareness of those that may provide a broader cell therapy engineering or manufacturing platform for us. To facilitate the advancement of our engineering and manufacturing platforms, we routinely engage in partnering and licensing discussions with a range of biotechnology or pharmaceutical companies and academic institutions.

**Update on COVID-19, Macroeconomic Conditions, and Supply Disruptions**

The COVID-19 pandemic, as well as global and national economic and market conditions, have affected and may in the future affect our business and operations and those of third parties on which we rely, including by causing disruptions in the supply of our product candidates or other materials necessary to construct our new facility, conduct our preclinical or clinical studies, and conduct and enroll our current and future clinical trials. For a discussion regarding the impact of the COVID-19 pandemic, macroeconomic conditions, and supply disruptions on our business, see Part II, Item 7, “Management’s Discussion and Analysis of Financial Condition and Results of Operations – Overview” in this Form 10-K.

**The Immune System, Cancer and Cancer Autoimmune Diseases**

In recent decades there has been a significant level of innovation and improvement in the treatment of different cancers with the introduction of new therapeutic approaches and the approval of new therapies. Despite these advances,

many of the most common cancers remain burdened with substantial unmet medical need. Immuno-oncology therapies seek to stimulate or supplement a person's own immune system to attack cancer cells selectively without affecting normal cells, or deliver certain immune system components in order to inhibit the spread of cancer.

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Immuno-oncology therapy has emerged as an important mode of cancer treatment, alongside more established options such as surgery, chemotherapy, targeted therapy and radiation therapy.

The ability of the immune system to recognize and destroy tumors has been known for decades. More recently, a growing understanding of molecular mechanisms underlying recognition of cancer cells by the immune system and their evasion of detection has allowed scientists to develop new classes of immuno-oncology therapies. These therapies either undermine the tumor's ability to resist immune attack or enhance immune targeting and killing of cancer cells.

The enhancement and engineering of immune effector cells to selectively target and kill pathologic cells has had a profound impact on the treatment of hematologic malignancies. This approach is now being investigated for its potential to "reset" the immune system in the context of autoimmune diseases. Several autoimmune diseases are associated with the production of autoantibodies that act against healthy cells and tissue. The use of immune effector cells to target the source of these autoantibodies is being explored as a potential disease modifying therapy for autoimmune disease.

***Cellular Immunotherapies***

Cellular immunotherapy is a type of immuno-oncology therapy whereby involves engineering human cells are engineered to recognize and destroy cancer diseased cells in a more targeted manner. Most cellular immunotherapies are focused on modulating or enhancing the activity of different lymphocytes, a subtype of white blood cell that are responsible for defending the body against pathogens and other foreign material, as well as killing cancerous cells within the body. There are different classes of lymphocytes which differ in function. T cells are a type of lymphocyte that primarily serves to protect from infections such as bacteria, viruses, fungi, and parasites. Every T cell recognizes a specific antigen, or substances found on of pathogens or other foreign material. This type of lymphocyte is activated and divides rapidly when it detects its specific antigen. Accordingly, T cells are the foundation of the adaptive immune system, selectively responding to different threats.

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NK cells are the foundation of the innate immune system. While T cells are activated by unique antigens specific to each T cell, the activity of NK cells is tightly regulated by a common set of activating receptors on these cells that serve to improve recognition and killing of cancerous or virally infected cells, as well as a set of inhibitory receptors that help identify healthy cells. This balance of inhibition and activation spares healthy cells from the surveillance and killing effects of the innate immune system. The primary activating receptor for NK cells is known as NKG2D and functions by detecting eight known stress ligands, or signals that cancerous or virally infected cells typically produce in higher numbers. The detection of these stress ligands by NKG2D on the surface of the NK cells is the primary basis for tumor surveillance by NK cells and is the basis of the mechanism of action for our product candidate NKX101.

A frequently used approach for cellular immunotherapy involves engineering CARs on the surface of a lymphocyte that enable the cell to recognize specific proteins or antigens that are present on the surface of tumor diseased cells. The concept of a CAR builds upon and enhances the normal biology of T cells and NK cells, whereby naturally occurring receptors serve to activate these cells when a foreign pathogen or cancerous transformed cell is detected. The key components of CARs used today often include the following elements:

- **Target binding domain.** At one end of the CAR is a binding domain that is specific to a target antigen or protein. This domain extends out from the surface of the engineered lymphocyte, where it can recognize the target antigen or antigens. The target binding domain may be based upon a naturally occurring receptor, such as the NKG2D receptor for NKX101, or a binder derived from a monoclonal antibody against a target antigen, such as the CD19 binder for NKX019. NKX019, or a naturally occurring receptor, such as the NKG2D receptor for NKX101.
- **Transmembrane domain and hinge.** This middle portion of the CAR links the target binding domain to the activating elements inside the cell. This transmembrane domain anchors the CAR in the cell's membrane. In addition, the transmembrane domain may also interact with other transmembrane proteins that enhance CAR function. The hinge domain, which extends to the exterior of the cell, connects the



transmembrane domain to the binder receptor and provides structural flexibility to facilitate binding to the target antigen on the surface of the cancer cell.

- **Activating domains.** The other end of the CAR, inside the lymphocyte, includes domains responsible for activating the lymphocyte when the CAR binds to its target antigen. The first, found in almost all CAR constructs, is called CD3ζ(zeta) and is the natural basis for lymphocyte activation. The second, is called a costimulatory domain, is found in the most recent generation of CARs under development today and provides an additional activating signal. Together, these signals trigger lymphocyte activation, resulting in proliferation of the CAR cells and killing of the cancer cell. diseased cells. In addition, activated CAR cells stimulate the secretion of cytokines and other molecules that can thereby recruit and activate additional immune cells to increase killing of the cancer diseased cells.

The United States Food and Drug Administration ("FDA") FDA has approved six CAR-based T cell T-cell therapies for the treatment of certain types of cancer affecting B-cells since 2017. B cells. Each of these therapies is an autologous

therapy, or derived from a patient's own cells, which necessitates a complex, individualized manufacturing process for every patient treated. The approvals of these patient-specific cell therapies were a landmark event for many reasons, including the ability to treat and provide long-term remission for otherwise deadly disease; achieving the run-to-run product consistency required by the FDA despite the complex manufacturing required; and achieving successful reimbursement in the United States and other countries of several hundred thousand dollars per treatment.

***Limitations of Current CAR T Therapies***

Despite the ability of the approved autologous CAR T therapies to achieve anti-tumor responses and extend the survival of patients with advanced B-cell malignancies, the accessibility of these autologous cell therapies remains limited. Only a minority of eligible patients who might benefit from currently approved cell therapies are able to receive them. These therapies have certain features that are believed to limit their accessibility and broader adoption. These features include:

- **Adverse events.** According to the product labels for the three CAR T therapies approved for non-Hodgkin lymphoma ("NHL"), cytokine release syndrome ("CRS") CRS was observed in 46% to 94% of patients treated in the respective pivotal clinical trials. In addition, neurotoxicity was seen in 35% to 87% of patients treated in such trials. Because of the frequency and severity of these adverse events, patients treated with the approved



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CAR T therapies can require a lengthy stay in an intensive care unit hospitalization and costly ancillary care. In 202 the FDA required that a boxed warning be added on all approved CAR T therapies for B-cell malignances to reflec the risk of secondary T-cell malignancies occurring after CAR T treatment.

- **Availability restricted to select centers.** As a condition of FDA approval, treatment with approved CAR T therapies is currently limited to select centers due to safety, logistical and regulatory reasons under a Risk Evaluation and Mitigation Strategy ("REMS") Program.
- **Accessibility further compromised by lengthy manufacturing time.** Due to the individualized manufacturing process, patients must wait approximately two to four weeks to be treated with their engineered cells. In the registrational trials for the first four approved CAR T therapies, 7% to 34% of enrolled patients did not receive CAR T cells, for reasons including manufacturing failure as well as patient progression or death while waiting for manufacturing.
- **Variable potency.** In many cases, patients have T cells that have been damaged or weakened due to prior chemotherapy or hematopoietic stem-cell transplant ("HSCT"). Compromised T cells may not proliferate well during manufacturing or may produce engineered T cells with insufficient potency that cannot be used for

patient treatment. This can result in outright manufacturing failures as well as cells with poor expansion and activity in a patient. The individualized nature of autologous manufacturing, together with the inconsistency in patients' T cells, can cause variable and unpredictable treatment outcomes.

- **High manufacturing complexity and cost.** The manufacture of autologous T cell therapy is individualized and labor-intensive. The collection of T cells through leukapheresis from each individual patient is a time-consuming and costly step in the autologous manufacturing process. In contrast to traditional pharmaceutical manufacturing where a single manufacturing run generates product for hundreds or thousands of patients, a full manufacturing run of autologous T cell therapy generates product for a single patient. In addition, autologous T cell therapy requires specialized infrastructure to



maintain a strict chain of custody and identity of patient cells throughout collection, manufacturing and delivery, ad significant cost to the process and limiting the ability to scale.

These limitations are difficult to address as many are inherent to fundamental aspects of T cell biology. CRS, which accounts for many of the adverse events which in part limit availability, is believed to be a consequence of the exponential expansion of T cells upon detection of a target antigen. Manufacturing time, product variability, and cost are due in great part to the autologous nature of approved CAR T CAR-T therapies. These limitations might be mitigated by using donor-derived allogeneic T cells, but application of allogeneic T cells without additional gene edits, human leukocyte antigen ("HLA"), matching or modifications carries a high risk that donor T cells might recognize the recipient as "non-self" and cause Graft-versus-host disease ("GvHD"), a serious or life-threatening condition where the donor's T cells attack the recipient's body.

***Allogeneic NK Cell Therapies***

The development of allogeneic, off-the-shelf cell therapies addresses certain limitations of autologous CAR T cells by offering these potential advantages:

- **Tolerability.** In initial clinical data reported by us and others, patients who received allogeneic NK cell therapies did not experience the more severe adverse events that are commonly associated with approved autologous CAR T cell therapies. This emerging safety profile of allogeneic NK cell therapies may enable their use in outpatient settings and broader access to treatment.
- **Availability.** Because an allogeneic NK cell therapy is produced in quantity then frozen in advance of patient need, it would be available for on-demand administration to patients in an outpatient setting.
- **Consistency.** By using true NK cells from a healthy donor as starting material, and producing large numbers of doses per manufacturing run, an allogeneic NK cell therapy provides the opportunity for more rigorous quality control and release of consistent engineered cells.
- **Cost of manufacturing.** An allogeneic NK cell therapy provides an opportunity to spread manufacturing costs across a large number of doses, thereby significantly lowering the cost per dose produced.

**The Opportunity for Engineered NK Cells in Treating Autoimmune Disease**

Early studies using CD19-directed CAR T-cell therapies provide important proof of concept for disease modification in autoimmune diseases. In addition, some features of NK cells are potentially advantageous, as compared to T cells.

- **Well-defined target.** Targeting CD19 cells can lead to a deep suppression of the B cells that produce pathogenic autoantibodies. Despite this transient suppression afforded by cell therapy thus far, some patients have shown sustained drug-free remissions that persist after recovery. This has potential applicability to multiple autoimmune diseases that are similarly driven by autoantibodies.



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- **Supportive data.** NKX019 has been extensively evaluated in clinical and pre-clinical settings. In our NKX019 clinical trial in oncology, NKX019 drove responses in patients with various refractory B-cell malignancies. Further, *in vitro* assays reveal consistent sensitivity to B cells collected from patients with various autoimmune diseases.
- **B cell susceptibility.** Pathogenic B cells that secret autoantibody may be more susceptible to NK-mediated killing than cancer cells. Malignant B cells have multiple pathways for evading killing, including antigen escape via downregulation or loss of CD19 expression and growth in a tumor cluster which offers a relatively immunosuppressive and inaccessible tumor microenvironment, none of which is expected in non-malignant B cells,althoughNKX019 can target cells expressing low levels of CD19. Further, the cell burden of target cells is generally much lower at the time of treatment in autoimmune disease than in B-cell malignancies, thereby increasing the expected effector to target ratio of NKX019 in contrast to the antigen-dependent activationand expansion required by CD19-directed CAR T therapies.
- **Tissue trafficking and penetration.** NK cells traffic to nearly every tissue in the body, including immune-privileged sites that are known to be isolated from the rest of the body's immune system. In addition, malignant B cells provide a proxy for trafficking of B cells, and NKX019 has driven complete responses in patients with NHL despite widespread malignant B cell (blood, bone marrow, lymph nodes, secondary lymphoid tissue, extra-nodal sites).
- **Immediate activity.** NK cells do not require expansion for maximal activity and peak exposure occurs near the time of infusion. The explosive growth of T cells is believed to be the basis of both their activity and the risk of CRS and immune effector cell-associated neurotoxicity syndrome ("ICANS") associated with CAR T cell therapy.
- **Disease tailored LD**. Adoptive cell therapy typically requires LD, which is preparative chemotherapy often with Cy and Flu, to provide an optimal cytokine milieu and suppress the host immune response.However, the

pharmacokinetics of NK cells and T cells differ, enabling alternative LD approaches to address these differences. Specifically, the early peak exposure and mbIL-15 engineering of NKX019 allow evaluation of single agent LD with Cy. A Flu-sparing LD regimen would eliminate potential toxicities of this agent, including cytopenias and MDS. Further, Cy is already used by specialist providers for various autoimmune conditions and may provide an opportunity for expanding this potentially disease-modifying to multiple other areas of high unmet need beyond SLE.

- **On-demand availability.** Because an allogeneic NK cell therapy is produced in quantity then frozen in advance of patient need, it would be available for on-demand administration to patients, potentially in an outpatient setting, where patients with autoimmune diseases are typically treated. This approach also eliminates the need for infrastructure to support apheresis and other facets of bespoke manufacturing, lowering the burden for providers and facilities to deliver therapy.

**The Opportunity for Engineered NK Cells in Treating Cancer**

The development of CAR NK therapies can capitalize on the knowledge and experience gained from decades of CAR T research. Furthermore, the biology of NK cells offers potential advantages as the starting cell type for allogeneic, off-the-shelf engineered cell therapy. These advantages include:

- **Inherent anticancer activity.** We conducted a systematic literature review of published clinical trial results of allogeneic NK cells in cancer, which identified a 34% composite response rate ("Aggregate CR Rate") among 103 patients with r/r AML who were treated with non-engineered NK cells across six academic clinical studies. The Aggregate CR Rate includes complete remission with hematologic recovery ("CR"), complete remission with incomplete count (hematologic) recovery (“CRi”), and morphologic leukemia free state. These data demonstrate the anticancer activity of endogenous NK cells and support the opportunity for increasing the activity of NK cells through engineering. In 2022, we reported initial data from our two lead programs demonstrating preliminary favorable safety and efficacy profiles.



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- **Allogeneic and off-the-shelf without genome editing or other modifications.** Because NK cells are not generally activated by “non-self” cells, further modification of NK cells is not necessary to avoid the risk of GvHD Graft-versus-host disease ("GvHD") and thereby produce an allogeneic, off-the-shelf engineered NK cell therapy.
- **Modest clonal expansion and therefore potential for reduced CRS risk.** While T cells experience exponential growth when activated by a target antigen, NK cells expand only modestly upon activation. The

explosive growth of T cells is believed to be the basis of the risk of CRS when CAR T cells are administered to patients. However, a significant incidence of CRS has not been reported in medical literature for NK cell therapy or by us in initial clinical data reported in 2022.



- **Balance of activation and inhibition.** The activity of NK cells is tightly regulated by a common set of activating receptors that serve to recognize and kill cancerous or virally infected cells, as well as a set of inhibitory receptors that identify healthy cells from the same individual. This balance of inhibition and activation spares healthy cells from the surveillance and killing effects of the innate immune system. Therefore, the fundamental biology of CAR NK cells drives their ability to discriminate between healthy and tumor cells.
- **Ability to overcome tumor evasion of the immune system.** Many solid tumors are able to evade the immune system by creating an immunosuppressive environment around the cancerous cells, which can dramatically reduce the normal tumor-killing ability of the immune system. This tumor microenvironment involves down-regulators of immune response, including regulatory T cells and myeloid-derived suppressor cells. However, these cell types also display NKG2D ligands, and preclinical models demonstrate show that clearance of these cells can reduce immune suppression from the tumor microenvironment. Therefore, by acting through NKG2D, CAR NK cells may be able to reduce the immune suppression of the tumor microenvironment, and therefore uncover a broader opportunity for immuno-oncology cell therapy development for the treatment of solid tumors.
- **Ability to re-dose to deepen or consolidate patient responses.** NK cells provide a unique opportunity to optimize responses and manage potential toxicities through re-dosing and retreatment. The favorable safety profile of NK cells observed to date combined with their off-the-shelf availability allows patients who achieve a partial response to be treated again to potentially deepen their response, and for those patients who achieve a complete response, additional doses of cells can be administered to consolidate their response. Retreatment is also possible in patients who progress after clinical benefit.

***Challenges with Developing NK Cell Therapies***

We believe that the emerging data from our clinical trials of NK cell products along with the prior academic experience with NK cells validate the opportunity for NK cells for the treatment of different cancers. To achieve a commercially viable engineered NK cell therapy, we believe that a number of challenges inherent with NK cells must be addressed. These include the following:

- **Expansion.** One of the historical challenges in treating patients with NK cells has been the lack of robust techniques to grow these cells in large numbers without causing exhaustion, or the inability of the expanded NK cells to kill tumor target cells with the same potency as native NK cells.
- **Engineering.** Primary NK cells have been reported to be difficult to engineer efficiently. Poor efficiency of engineering could limit the potency and consistency of engineered NK cell therapies.
- **Persistence.** Non-engineered human NK cells turn over rapidly, with a half-life of seven to 10 days in the body. This short lifetime could limit the cancer-killing ability cytotoxicity of these NK cells.
- **Cryopreservation.** Without cryopreservation, a truly off-the-shelf engineered NK cell therapy would be

challenging to commercialize. However, freezing then thawing NK cells while maintaining cancer cell killing potency cytotoxicity is difficult to achieve using standard techniques for T cell cryopreservation.

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**Our NK Cell Engineering Platform**

Our cell engineering platform is designed to operationalize the full therapeutic potential of NK cells and address the limitations and challenges of current technologies for engineering T cells and NK cells. The platform is a result of our internal expertise and deep understanding of NK cell biology. It includes proprietary technologies for NK cell expansion, persistence, targeting, genome editing, and cryopreservation. This enables us to generate an abundant supply of NK cells, engineer enhanced NK cell recognition of tumor targets, improve the persistence of these cells for sustained activity in the body, and to freeze, transport and store our engineered NK cells for off-the-shelf use for the treatment of cancer.

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We have chosen to use healthy adult donors as our source for NK cells. We believe this offers a number of advantages including:

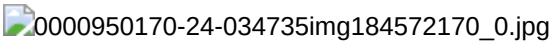
- Starting with differentiated, natural, and mature NK cells with inherent cytotoxic cell-targeting and tumor-recognizing cytotoxic capabilities, as compared to other cell sources such as stem cells, which must be artificially manipulated in an in vitro setting to reproduce these fundamental features;
- A large number of NK cells as starting material for each manufacturing run, as compared to other potential source NK cells;
- The ability to select donors with consistent and favorable NK cell characteristics, thereby avoiding challenges with patient-derived or other cell sources; and
- A diverse repertoire of NK cells. Different NK cell sub-populations have different characteristics, and by utilizing th entire natural gamut of NK cells as our cell source, we can capitalize on the inherent diversity of the innate immun system.

Below are the five core technologies that comprise our proprietary platform. Each of these technologies is part of an integrated approach to develop potent, scalable, and consistent NK cell products:

**Expansion.** The first pillar of our technology platform enables NK cell expansion without causing cell exhaustion. Our NKSTIM has been engineered with mbIL-15 as well as a protein named 4-1BB ligand ("4-1BBL"). IL-15 is a naturally occurring growth protein that induces cell proliferation in NK cells. 4-1BBL binds to 4-1BB, a receptor normally found on NK cells that stimulates NK cell division and expansion. Therefore, NKSTIM is selectively able to stimulate the expansion of NK cells as compared to other leukocytes, and thereby provide large numbers of NK cells. Based on our current process and early cGMP manufacturing experience, we believe that we can produce many hundreds of doses from a single manufacturing run. At the 2022 Annual Meeting of the Society for Immunotherapy of Cancer ("SITC"), we presented data demonstrating further optimization of our core process could allow the production of several thousand doses from a single manufacturing run.

**Persistence.** Pharmacokinetics of allogeneic NK cells will be limited by both immune suppression of allogeneic cells following lymphodepleting conditioning ("LD"), LD, and by the intrinsic half-life of the administered cells. In addition to immune suppression, LD enhances the bioavailability of host cytokines, especially IL-15, which is associated with improved persistence of CAR T cell therapies. The second component of our technology platform is engineering NK cells with mbIL-15 to enhance their persistence relative without dependence on LD-mediated cytokines, facilitating a disease-tailored approach to non-engineered NK cells. We believe increased persistence could result in improved clinical activity. LD. Because IL-15 is a selective driver of NK activation and expansion, tethering IL-15 to the surface of our engineered NK cells serves to stimulate the naturally occurring IL-15 receptor on these NKs, and thereby provide weeks of persistence in immune-deficient animal models. Because mbIL-15 selectively stimulates NK cells without elevating soluble IL-15 concentration, we believe that mbIL-15 provides meaningful advantages as compared to secreted IL-15 or the systemic administration of other cytokines such as IL-2 or IL-21. The first graph below shows data from a cell culture experiment which demonstrates the increase of the number and persistence of NK cells engineered with mbIL-15, as compared to unmodified NK cells or NK cells expressing soluble IL-15. The second graph below shows the increased number and persistence in mice of NK cells engineered with mbIL-15, as compared to unmodified NK cells, as a percentage of total peripheral blood mononuclear cells ("PBMCs").






Source: Imamura et al., Blood. 2014 Aug 14;124(7):1081-8

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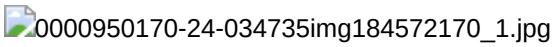


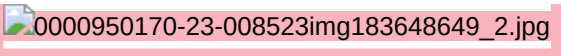


**Targeting and Signaling.** The third element of our technology platform is CARs optimized for NK cells, based on extensive preclinical evaluation of different possible constructs. We have performed extensive optimization of the CARs that serve to target direct our engineered NK cells to cancer cells target-cells as well as provide signals that engage the cancer cell killing activity found naturally in inherent ability of NK cells to target and kill transformed cells. For both NKX101 NKX019 and NKX019, NKX101, we have found that using the OX40 costimulatory domain enhances the ability of the engineered NK cells to kill cancerous cells repeatedly in several *in vitro* models, as compared to CAR NK cells that include other costimulatory domains commonly used for CAR T cells. We confirmed these findings in animal models for both product candidates.

**Genome Editing.** The fourth component of our platform is the ability to edit our NK cells using CRISPR-Cas9 technology. Through our collaboration with CRISPR, we have identified a number of genomic modifications that serve to further enhance the cytotoxicity and resistance to tumor-mediated immune suppression. We have shown that knocking out certain genes can prolong the persistence and activity of CAR NK cells, and improve their resistance to suppression by the tumor microenvironment.

**Immune Clocking.** Through a combination of ectopic expression and genome editing, we have identified a number of strategies that could enable NK cells to resist allogeneic suppression.

**Cryopreservation.** The fifth constituent of our technology platform is cryopreservation of our engineered NK cells, the ability to freeze and store these cells for an extended time. The development of robust cryopreservation techniques is a result of our insight into the biology of engineered NK cells as well as extensive experimental optimization. Based on our preclinical data, we are able to freeze and subsequently thaw individual doses of engineered NK cells without significant loss of cancer cell killing potency of our engineered NK cells as shown in the graph below. Cryopreservation of our allogeneic CAR NK cells will enable their off-the-shelf use in medical centers around the world, for administration to a patient at any time. Therefore, we believe that our cryopreservation of CAR NK cells will enable us to achieve the attractive commercial profile of an off-the-shelf, allogeneic cell therapy.



We believe that these key elements of our technology platform have the potential to grant us a key competitive advantage if our product candidates are approved. As illustrated in the image below, our engineered CAR NK cells generally consist of an NK cell engineered with a swappable targeting receptor, OX40 costimulatory domain, CD3ζ(zeta) signaling moiety, and mbIL-15.



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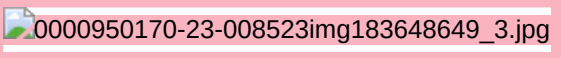



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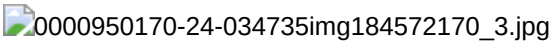
**Our Pipeline of Product Candidates and Discovery Programs**

All of our product candidates and discovery programs incorporate each of the four components of our technology platform, which we believe provides the best opportunity for achieving clinically meaningful results in our development program. Our current pipeline of product candidates and discovery programs is shown below.

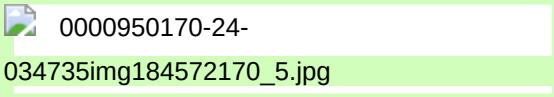
***NKX019***

*NKX019 for Lupus Nephritis*

Our product candidate NKX019 consists of allogeneic, donor-derived and expanded NK cells that have been genetically engineered to express mbIL-15 along with a CAR containing a CD19 binder, an OX40 costimulatory domain and a CD3ζ(zeta) signaling moiety. CD19 is expressed on B cells through various stages of development, including on plasmablasts, which are associated with autoantibody production in SLE. NKX019 is active against B cells, supported by our clinical data from patients in our clinical protocols, as well as in vitro studies using cell collected from patients with various autoimmune disease, including SLE.



In October 2023, we announced the clearance of an IND application by the FDA to evaluate NKX019 for the treatment of LN. The multi-center, open-label, Phase 1 clinical trial will assess the safety and clinical activity of NKX019 in patients with refractory LN. The clinical trial consists of dose-finding followed by dose-expansion and is designed to identify the recommended Phase 2 dose. Patients will receive a three-dose cycle of NKX019 at 1 billion or 1.5 billion cells per dose on Days 0, 7 and 14 following LD with single agent cyclophosphamide, an agent with an established safety profile in SLE and LN. The study is designed to enroll up to 12 patients, with the first patient expected to be enrolled in the first half of 2024. The dosing schema for the clinical trial is shown in the graphic below.




*NKX019 for Blood Cancers*

NKX019 is also being investigated for the treatment of various B-cell malignancies, including LBCL, ALL, and several other subtypes of NHL. We chose to target CD19 based on the clinical validation provided by Kymriah®, Yescarta®, Tecartus® and Breyanzi® which have all shown to improve remission rates and overall survival in patients with various B-cell malignancies, as well as the significant unmet medical need that remains for treating B-cell malignancies despite these recent approvals.

Our ongoing NKX019 Phase 1 oncology clinical trial evaluates the safety, pharmacology, and preliminary anti-tumor activity of NKX019, administered in a cycle of three weekly infusions following LD in multiple centers in the United States and Australia. Based on tumor response and tolerability, multiple treatment cycles can be administered. The clinical trial consists of dose-finding followed by dose-expansion and is designed to identify the recommended Phase 2 dose.

In April 2022, we announced preliminary data from the NKX019 oncology clinical trial in relapse/refractory B cell malignancies, in which three of six patients treated at the higher dose level in a three-dose regimen had a complete response (50% CR), including one patient with aggressive LBCL and one patient with mantle cell lymphoma ("MCL"). No dose limiting toxicity was observed and there were no CAR T-like adverse events of any grade.

We presented updated data from the ongoing NKX019 oncology clinical trial in December 2022. In this update, seven of ten patients treated at the higher dose levels in a three-dose regimen had a complete response (70% CR), including two patients with aggressive LBCL, one patient with MCL, and one patient with marginal zone lymphoma. No dose limiting toxicity, neurotoxicity / ICANS, GvHD, or >Gr3 CRS were observed in the study.

In October 2023, we announced the opening of a new cohort in the NKX019 oncology trial, introducing a compressed dosing schedule, where patients receive NKX019 doses on Days 0, 3 and 7 following LD. This schedule is designed to intensify NKX019 exposure in the first week after LD, when pharmacokinetic data suggested NKX019 exposure is highest. NKX019 is given after either standard LD with Flu and Cy, although LD with cy alone may be used in patients with protocol-defined cytopenias. There is no requirement for inpatient admission in this cohort, including NKX019 administration and monitoring. The cohort targets patients (n=6) with LBCL who have received prior CD19-directed CAR-T cell therapy. We also announced that data from this cohort may inform future dosing strategies across our platform.

All patients in the NKX019 oncology clinical trial have been treated with off-the-shelf material that has been manufactured at our in-house clinical cGMP facility.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* Efficacy based on: Lugano criteria for NHL; 2018 iwCLL guidelines for CLL; NCCN v1.2020 for B-ALL

CAR: chimeric antigen receptor; CR: complete response; ECOG PS: Eastern Cooperative Oncology Group performance status; EOT: end of therapy; r/r: relapsed/refractory; iwCLL: International Workshop on Chronic Lymphocytic Leukemia; NCCN: National Comprehensive Cancer Network.

***NKX101***

Our product candidate NKX101 consists of allogeneic, donor-derived and expanded NK cells that have been genetically engineered to express mbIL-15 along with a CAR containing an NKG2D activating receptor, an OX40 costimulatory domain and a CD3ζ(zeta) signaling moiety. We have designed NKX101 to increase longevity, potency and activity as compared to non-engineered NK cells. NKG2D is a primary activating receptor for NK cells, triggered through binding to any of eight known stress ligands frequently expressed on cancerous or virally infected cells. The detection of these ligands by NKG2D is a primary basis for tumor surveillance by NK cells and contributes to the mechanism of action for NKX101. We believe that the activity of non-engineered NK cells in treating cancer, previously described by others, validates targeting NKG2D ligands through the NKG2D receptor as the mechanism of action for NKX101. NKX101 is currently being studied in a Phase 1 monotherapy clinical trial investigating NKX101 for the treatment of r/r AML and higher-risk MDS. This multi-center, first-in-human study evaluates the safety, pharmacology, and preliminary anti-tumor activity of NKX101 administered in a cycle of either three weekly infusions (Regimen A) or two weekly infusions (Regimen B) following LD. Based on tumor response and tolerability, multiple treatment cycles can be administered. The clinical trial consists of dose-finding followed by dose-expansion and is designed to identify the recommended Phase 2 dose.

In December 2021, FDA granted orphan drug designation to NKX101 for treatment of r/r AML. In February 2022, we filed a protocol amendment with the FDA for the ongoing Phase 1 clinical trial of NKX101 to optimize the study design for

maximum benefit and flexibility. The amended protocol allows for a higher dose of cyclophosphamide for LD, enrollment of patients who have received as few as 1 to 2 prior lines of therapy, and increased dosing of NKX101.



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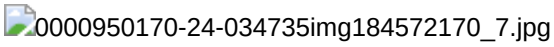


We engineered NKX101 based on our understanding of NK cell biology, including extensive comparison and optimization of different ways to enhance natural NKG2D signaling and targeting of cells which display NKG2D ligands. Based on our preclinical studies, we believe that levels of NKG2D are increased significantly in NKX101 as compared to non-engineered NK cells. Because NKG2D is the primary activating receptor for NK cells, through its detection of stress ligands displayed by cancerous cells, NKX101 is thereby designed to increase the natural cancer cell killing ability of NK cells. Although some cancer cells are able to evade detection and killing by NK cells through shedding of NKG2D ligands, thereby reducing ligand display on the cell surface, NKX101 can recognize tumor cells expressing even low levels of NKG2D ligands, and maintains the ability of NK cells to recognize tumor cells through an array of other activating receptors that are broadly expressed in NK cells. Furthermore, we found in preclinical studies that the addition of mbIL-15 and the OX40 costimulatory domain each increase the activity of engineered NK cells. Because NKG2D is the primary activating receptor responsible for innate immune surveillance of cancerous cells, we believe that NKX101 presents a broad opportunity to treat a variety of blood cancers, as well as, potentially, solid tumors, which collectively represent approximately 90% of all cancer incidences in the United States.

*NKX101 for Blood Cancers*

We were evaluating NKX101 is currently being evaluated in a multi-center Phase 1 clinical trial for the treatment of r/r AML. AML, but we have deprioritized development of NKX101 and closed patient enrollment in the Phase 1 study. In a review of updated preliminary safety and response data from patients with r/r AML that received NKX101 after LD comprising of fludarabine and cytarabine ("flu/Ara-C"), the aggregate CR/CRi rate (5 of 20 patients) was lower than what had been observed in the first 6 patients in the cohort. The safety profile of NKX101 was consistent with previously reported data. We plan no further spending on clinical development of NKX101.

This multi-center clinical trial is of NKX101 was designed to evaluate safety, pharmacology, and preliminary anti-tumor activity of NKX101. According to the federal Surveillance, Epidemiology, and End Results Program database ("SEER"), the incidence of AML in the United States is approximately 20,000 cases per year, and newly-diagnosed patients have a five-year survival rate of approximately 30%. We believe there is a substantial unmet medical need for patients r/r AML and that this disease represents a significant market opportunity.



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Our ongoing Phase 1 The NKX101 clinical trial comprises comprised standard dose-finding and dose-expansion phases. Patients are expected to receive received LD prior to administration of NKX101 in order to allow our engineered NK cells the opportunity to kill cancerous cells without first being cleared by the patient's immune system. The LD regimen being used in the NKX101 clinical trial is current dose-expansion cohort was based upon doses clinical experience with Flu, cytarabine and anthracycline, a frequently used by Rezvani Liu et al, New England Journal of Medicine 2020, similar to that used salvage regimen for the currently approved CAR T therapies, and generally lower than the most commonly used regiment found in our systematic literature review of allogeneic cells and is also similar to that used for the currently approved CAR T therapies. The trial also evaluated two separate dosing regimens. The three-dose regimen was designed to deliver three infusions of NKX101 at weekly intervals following LD. The two-dose regimen delivered the same number of CAR NK cells in two weekly infusions following LD. patients with r/r AML.

The dosing schema of the flu/Ara-C dose-expansion cohort is shown in the graphic below. Our starting dose of 100 million cells is based upon the established tolerability of non-engineered NK cells from academic literature.


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While we expect that the initial subjects treated with NKX101 in clinical studies will be hospitalized for a minimum of 24 hours observation after infusion, a favorable tolerability profile may potentially allow for administration of NKX101 and observation in a fully outpatient setting. This could represent a significant competitive advantage for NKX101 and our engineered NK product candidates more generally, as compared to the approved CAR T therapies.

In April 2022, June 2023, we announced preliminary reported updated data from our Phase 1 clinical trial evaluating NKX101. As of data cut-off on April 21, 2022 June 10, 2023, 21 patients had been enrolled and dosed in this study. Three the cohort of five patients with r/r relapsed or refractory (r/r) AML treated at the higher dose levels in that received treatment cycles with a three-dose regimen of NKX101 at 1.5 billion cells per dose after LD with flu/Ara-C, four of six patients achieved complete response (CR/CRi); three responses were measurable residual disease ("MRD") negative. In patients that received the highest doses of NKX101 (3 weekly doses at 1 billion or 1.5 billion cells per dose) after LD with Flu and Cy, 4 of 18 achieved CR/CRi and 3 of 18 achieved a complete response (60% CR) with hematologic recovery with two CR. There were no CRS at the lower doses of the three responses measurable residual disease negative. NKX101. NKX101 was well tolerated across dose-levels and LD regimens. There were no dose-limiting toxicities were observed. observed across all cohorts. No CRS, GvHD, or immune effector cell-associated neurotoxicity syndrome ("ICANS") ICANS was observed. The most common higher-grade adverse events were myelosuppression and infection, which are common in this patient population following LD.

In 2023, the NKX101 clinical protocol was amended to enable patients that respond to NKX101 to receive retreatment or consolidation with an additional cycle of treatment with NKX101. As part of ongoing scale-up and optimization of manufacturing across its platform, Nkarta also filed a manufacturing process change amendment with the FDA. The focus of the process change was to enhance product yield to meet anticipated clinical demand and prepare for potential commercial scale manufacturing. In October 2023, we announced that patient enrollment was paused for inventory buildup and resumed with material generated with the amended manufacturing process. Subsequently, as noted above, following a recent review of the updated preliminary response data for the cohort, we closed further enrollment in the trial.

*NKX101 for Solid Tumors*

Following clinical As part of a realignment of our pipeline, we have suspended further development of NKX101, including plans for future investigation of NKX101 in solid tumors. Should we later reprioritize development of NKX101 and achieve proof of concept with NKX101 in r/r AML, hematologic malignancies, we may also evaluate NKX101 in patients with solid tumors. Our initial solid tumor clinical trial may include patients with liver cancer, a bile duct cancer known as



intrahepatic cholangiocarcinoma, as well as patients with surgically removed colon cancer where only liver metastases remain. These tumors represent an attractive opportunity for the initial solid tumor indication for NKX101 for several reasons, including the overexpression of NKG2D ligands in many liver cancers and the substantial unmet medical need for the treatment of these cancers. According opt to the federal SEER database, the incidence of liver and intrahepatic

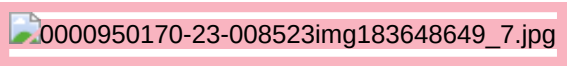
cholangiocarcinoma in the United States is approximately 42,000 cases per year, and the five-year survival rate is approximately 20%.

We may file an Investigational New Drug application ("IND") IND amendment for this clinical program after achieving clinical proof of concept with NKX101 in r/r AML. An NKX101 Phase 1 trial in solid tumors may also incorporate a dose-finding and dose-expansion component and potential combinations.

If this program is successful, we believe that it would establish proof of concept for treating solid tumors with engineered NK cells and enable us to evaluate a broader solid tumor clinical development program.

***NKX019***

Our product candidate NKX019 is for the treatment of various B-cell malignancies, including LBCL, ALL, and several other subtypes of NHL. NKX019 consists of allogeneic, donor-derived and expanded NK cells that have been genetically engineered to express mbIL-15 along with a CAR containing a CD19 binder, an OX40 costimulatory domain and a CD3ζ(zeta) signaling moiety. We chose to target CD19 based on the clinical validation provided by Kymriah®, Yescarta®, Tecartus® and Breyanzi® which have all shown to improve remission rates and overall survival in patients with various B-cell malignancies, as well as the significant unmet medical need that remains for treating B-cell malignancies despite these recent approvals.



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Our ongoing NKX019 clinical trial is a Phase 1 clinical trial that evaluates the safety, pharmacology, and preliminary anti-tumor activity of NKX019, administered in a cycle of three weekly infusions following LD in multiple centers in the United States and Australia. Based on tumor response and tolerability, multiple treatment cycles can be administered. The clinical trial consists of dose-finding followed by dose-expansion and is designed to identify the recommended Phase 2 dose.

In April 2022, we announced preliminary data from the NKX019 Phase 1 clinical trial in relapse/refractory B cell malignancies, in which three of six patients treated at the higher dose level in a three-dose regimen had a complete response (50% CR), including one patient with aggressive large B cell lymphoma ("LBCL") and one patient with mantle cell lymphoma ("MCL"). No dose limiting toxicity was observed and there were no CAR T like adverse events of any grade.

We presented updated data from the ongoing NKX019 clinical trial in December 2022. In this update, seven of ten patients treated at the higher dose levels in a three-dose regimen had a complete response (70% CR), including two patients with aggressive LBCL, one patient with MCL, and one patient with marginal zone lymphoma. No dose limiting toxicity, neurotoxicity / ICANS, GvHD, or >Gr3 CRS were observed in the study.

All patients in the NKX019 clinical trial have been treated with off-the-shelf material that has been manufactured at our in-house clinical cGMP facility.


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* Efficacy based on: Lugano criteria for NHL; 2018 iwCLL guidelines for CLL; NCCN v1.2020 for B-ALL

CAR: chimeric antigen receptor; CR: complete response; ECOG PS: Eastern Cooperative Oncology Group performance status; EOT: end of therapy; r/r: relapsed/refractory; iwCLL: International Workshop on Chronic Lymphocytic Leukemia; NCCN: National Comprehensive Cancer Network.

***Partnership with CRISPR Therapeutics***

On May 5, 2021, we entered into a Research Collaboration Agreement with CRISPR (the "CRISPR Agreement"). Pursuant to the CRISPR Agreement, CRISPR and Nkarta will establish research plans for the purpose of collaboratively designing and advancing up to two (2) allogeneic, gene-edited NK cell therapies, including NKX070, and one (1) allogeneic, gene-edited NK+T cell therapy for use in the treatment of oncology, autoimmune disease, or infectious disease up to the filing of an application to a regulatory authority to request the ability to start a clinical trial. The first allogeneic, gene-edited NK cell therapy being developed in partnership with CRISPR is targeting cancers expressing the CD70 antigen. Together NKX070, and together with CRISPR, we may advance this product candidate NKX070 for the treatment of solid tumors and blood cancers. The NK+T program combines CAR NK cells and CAR T cells, bringing together the advantages of the innate and adaptive immune systems. We expect the NK+T product will incorporate all of the



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core elements of our NK cell engineering platform and CRISPR's experience developing gene-edited, allogeneic CAR T cells with reduced risk of GvHD and enhanced resistance to immunosuppression. We are also evaluating potential antigens and targets for this product candidate. The NK+T product candidate could incorporate two different targets into the CAR NK and CAR T cells, based on the differing pharmacokinetic and pharmacodynamic profile of these two cell types. Additionally, under the CRISPR Agreement, we have received licenses from CRISPR for four CRISPR-Cas9 gene editing targets and will also grant non-exclusive licenses to us on receive a license from CRISPR for up to five gene-editing targets to enable us to independently research, develop and commercialize one more CRISPR-Cas9 gene editing target that can be engineered into an unlimited number of its own NK cell therapies that have been gene-edited using CRISPR's gene-editing technology. products. CRISPR also has an option to co-develop and co-commercialize a future Nkarta CAR NK cell program. On May 4, 2022, we amended the CRISPR Agreement to revise the transfer of materials and nomination provisions. On March 8, 2023, the CRISPR Agreement was further amended to permit our advancement of CRISPR-licensed product candidates targeting a specified tumor antigen and incorporate associated development and regulatory approval milestones and sales-based royalties.

**Manufacturing**

Our process for the generation of an allogeneic, off-the-shelf NK cell therapy requires multiple steps. To achieve a commercially viable product, we believe that each of these steps must be scalable, reproducible and cost-effective and

must provide consistent cancer cell killing potency of our CAR NK cells once these cells are frozen and then thawed. Therefore, we have focused on developing a manufacturing process that incorporates the following elements:



- starting material consisting of differentiated, mature NK cells with inherent cytotoxic and tumor-recognizing capabilities, as compared to other cell sources such as stem cells, where these fundamental features must be engineered into the cells which must be artificially manipulated in an in vitro setting to reproduce these fundamenta features;
- a cell source which provides high numbers of easily characterized NK cells;
- expansion technology which increases the number of NK cells by orders of magnitude, without inducing exhaustio
- techniques for genetic engineering of NK cells which are cost-effective and which introduce a controlled and speci range of the number of copies of the gene into each cell;
- techniques for genome editing of NK cells to selectively knock-out or knock-in genetic targets in each cell;
- cryopreservation techniques that permit bulk CAR NK cells to be frozen in individual doses; and
- techniques for thawing the frozen NK cell product that are easy to adopt in different clinical settings, and that provi consistent CAR NK cell recovery, viability and potency.

Our overall manufacturing scheme is shown in the diagram below.


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The source material for production of our off-the-shelf NK cell therapy product candidates is NK cells collected from healthy donors by leukapheresis, the selective collection of white blood cells from plasma. We then isolate the NK cells from the other cells in the leukapheresis product. Next, we selectively activate the NK cells by co-culture with NKSTIM. After initial expansion, we engineer the expanded NK cells using a gamma-retrovirus to express mbIL-15 and the CAR. We further expand the NK cells, followed by harvesting and cryopreservation to form the final cell product. For off-the-shelf administration, clinical sites will thaw the CAR NK product candidate for administration to patients at the clinical site.

We believe that establishing our own internal cGMP manufacturing capabilities will facilitate clinical product supply, lower the risk of manufacturing disruptions, and enable more cost-effective manufacturing for clinical and commercial supply of our product candidates. In 2020, we completed the construction of We have a 2,700-square foot clinical cGMP facility within at our primary original corporate location in South San Francisco, California. This California, which we have used to produce clinical supply. We recently completed construction and validation of a new facility is currently producing in South San Francisco to support research and development and future manufacturing of Nkarta's cell therapy products and product candidates, including potential needs for pivotal clinical supply of NKX019 for trials and commercial launch. In addition to housing the Phase 1 clinical trial. new manufacturing facilities, the new site also serves as our headquarters with office space and research facilities. We currently manufacture clinical supply of NKX101, NKSTIM and the gamma-retrovirus at third-party contract manufacturing sites. We intend to manufacture NKX101 at our cGMP facility NKSTIM in 2023. We believe that this clinical cGMP facility will be capable of supplying our anticipated non-pivotal clinical trial needs. Also, house in the future, we intend to manufacture NKSTIM in house.

We are also constructing a separate, larger commercial cGMP facility for manufacturing engineered NK cells for pivotal clinical trials as well as for eventual commercial supply. In July 2021, we announced that we leased the property in South San Francisco, CA where we are building the facility for the commercial-scale manufacture of our product candidates. future.

Based on our current process and early cGMP manufacturing experience, we believe that we can will be able to produce many hundreds of doses from a single manufacturing run. At the 2022 Annual Meeting of the SITC, we presented



data demonstrating that further optimization of our core process could allow the production of several thousand doses from a single manufacturing run.

Compliance with government regulations related to the manufacture of our product candidates may require significant effort and financial resources. The design, construction, qualification and regulatory approvals for our cGMP manufacturing facilities require substantial capital and technical expertise. The facilities will be subject to inspection by the FDA and other regulatory agencies to ensure compliance with cGMP. Any delays in receiving regulatory approvals for our manufacturing facilities or any failure by us to comply with applicable regulations at our manufacturing facilities could delay our development and commercialization activities. In addition, if our product candidates fail to meet the required specifications

after manufacture or if we change the manufacturing process, we may need to obtain additional regulatory approvals. If we are not able to obtain the necessary additional regulatory approvals, we may need to perform additional clinical trials or manufacturing runs or further refine our manufacturing processes, which could delay development and commercialization of our product candidates and cost substantial additional capital. Any delays in our development and commercialization activities could have a material effect on our business, financial position, results of operations and competitive position.

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**Patents, Trademarks and Proprietary Technology**

We protect our intellectual property rights and proprietary technology with a combination of patent rights that we own or license in certain fields of use, trademark rights, confidentiality procedures and contractual provisions. We seek not only to protect our intellectual property rights and proprietary technology in select key global markets, but also to supplement our intellectual property portfolio with new filings and applications to enhance such protection and support commercialization of current and future product candidates. To that end, we continue to seek protection for our technological innovations and branding efforts by filing new patent and trademark applications when and where appropriate. Our patent portfolio consists of a combination of issued patents and pending patent applications licensed from third parties, jointly owned by us with third parties, and owned solely by us. The patents and patent applications in our portfolio can be categorized as related to our NK cell engineering platform (e.g., NK cell expansion and/or persistence), NKX019, NKX101, NKX019, NKX070, or future pipeline product candidates and alternative technologies. Some of our issued patents and patent applications are exclusively licensed to us in therapeutic fields of use from the National University of Singapore ("NUS"), St. Jude Children's Research Hospital, Inc., or both (collectively, "Licensors"). As of December 31, 2022 December 31, 2023, our patent portfolio includes at least 20 30 issued utility patents and at least 130 170 pending utility patent applications, which are solely owned by us, jointly owned with others, or licensed to us.

At least 15 20 of the issued utility patents and at least 60 55 of the pending utility patent applications in our portfolio are related to our NKX019 product candidate, and include composition-of-matter, manufacturing process, and method-of-use claims (e.g., targeting CD19-expressing cells, including monotherapies and combination therapies). These issued utility patents include patents in the United States, Europe, Japan, and other jurisdictions outside the United States and are solely owned by us or licensed from Licensors. These pending utility patent applications include applications in the United States, Europe, Japan, the Patent Cooperation Treaty ("PCT"), and other jurisdictions outside the United States. Of these pending

patent applications, at least 45 are solely owned by us, with the remaining licensed from Licensors. The estimated expiration dates of the issued utility patents are between approximately 2024 and 2040 (with certain commercially relevant patents extending through approximately 2040), and the estimated expiration dates of these pending utility patent applications are between approximately 2024 and 2044 (with certain commercially relevant patent applications extending through approximately 2044).

At least 20 of the issued utility patents and at least 70 of the pending utility patent applications in our portfolio are related to our NKX101 product candidate, and include composition of matter, composition-of-matter, manufacturing process, and method of use method-of-use claims (e.g., targeting NKG2D ligand-expressing tumors, cells, including monotherapies and combination therapies). These issued utility patents include patents in the United States, Europe, Japan, and other jurisdictions outside the United States that are licensed from Licensors, including one patent in the United States that is co-owned by us with NUS. These pending utility patent applications include applications in the United States, Europe, Japan, the Patent Cooperation Treaty ("PCT"), and other jurisdictions outside the United States. Of these pending patent applications, at least 25 60 are solely owned or co-owned by us, with the remaining patent applications (and the co-owned applications) licensed from Licensors. The estimated expiration dates of the issued utility patents are between approximately 2024 and 2038 (with certain commercially relevant patents extending through approximately 2038), and the estimated expiration dates of these pending utility patent applications are between approximately 2024 and 2043 2044 (with certain commercially relevant patent applications extending through approximately 2043) 2044).

At least 13 15 of the issued utility patents and at least 50 of the pending utility patent applications in our portfolio are related to our NKX019 product candidate, and include composition of matter, manufacturing process, and method of use claims (e.g., targeting CD-19-expressing tumors, including monotherapies and combination therapies). These issued utility patents include patents in the United States, Europe, Japan, and other jurisdictions outside the United States and are solely owned by us or licensed from Licensors. These pending utility patent applications include applications in the United States, Europe, Japan, and other jurisdictions outside the United States. Of these pending patent applications, at least 17 are solely owned by us, with the remaining licensed from Licensors. The estimated expiration dates of the issued utility patents are between approximately 2024 and 2040 (with certain commercially relevant patents extending through approximately 2040), and the estimated expiration dates of these pending utility patent applications are between approximately 2024 and 2043 (with certain commercially relevant patent applications extending through approximately 2043).



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At least 10 of the issued utility patents and at least 50 60 of the pending utility patent applications in our portfolio are related to our NKX070 product candidate, and include composition of matter, composition-of-matter, manufacturing process, and method of use claims(e.g. method-of-use claims (e.g., targeting CD70-expressing tumors, including monotherapies and combination therapies). These issued utility patents include patents in the United States, Europe, Japan, and other jurisdictions outside the United States and are licensed from Licensors. These pending utility patent applications include applications in the United States, Europe, Japan, the PCT, and other jurisdictions outside the United States. Of these pending patent applications, at least 17 50 are solely owned by us or, in the case of one two patent application, applications, co-owned by us with our collaboration partner on the NKX070 program, CRISPR, with the remaining licensed from

Licensors. The estimated expiration dates of the issued utility patents are between approximately 2024 and 2035 (with certain commercially relevant patents extending through approximately 2035), and the estimated expiration dates of these pending utility patent applications are between approximately 2024 and 2043 2044 (with certain commercially relevant patent applications extending through approximately 2043) 2044).



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At least 10 15 of the issued utility patents and at least 30 of the pending utility patent applications in our portfolio are related to our NK cell engineering platform, and include manufacturing process, method of use method-of-use and composition of matter composition-of-matter claims relating to NK cell expansion and/or NK cell persistence. These issued utility patents include patents in the United States, Europe, Japan, and other jurisdictions outside the United States and are licensed from Licensors. These pending utility patent applications include applications in the United States, Europe, Japan, and other jurisdictions outside the United States. Of these pending patent applications, at least 10 20 are solely owned by us, with the remaining licensed from Licensors. The estimated expiration dates of the issued utility patents are between approximately 2024 and 2035 (with certain commercially relevant patents extending through approximately 2035), and the estimated expiration dates of these pending utility patent applications are between approximately 2024 and 2040 2044 (with certain commercially relevant patent applications extending through approximately 2040) 2041). Composition of matter Composition-of-matter claims relating to our NKSTIM cell line are estimated to expire in Q4 2024.

In August 2016, we entered into a license agreement with the Licensors. Pursuant to this license, the Licensors granted to us an exclusive, worldwide, royalty-bearing, sublicensable license under specified patents and patent applications related to NK cell technology in the field of therapeutics. Payments to the Licensors pursuant to the license agreement include single-digit royalty payments on commercial sales, a portion of any sublicensing revenue, patent expenses, license maintenance fees and milestone payments upon completion of certain regulatory and commercial milestones related to the clinical development and commercialization of our product candidates, in an aggregate amount of up to 5 million Singapore Dollars ("SGD"). The License Agreement also includes certain performance objectives which obligate us to meet various milestones related to the clinical development and commercialization of our product candidates over time for up to 120 months after the effective date of the License Agreement. The term of the license agreement extends until expiration of the last of the patent rights licensed to us by the Licensors, which is currently expected to occur in approximately 2039. We may terminate the license agreement at will upon 90 days' prior written notice to the Licensors. The Licensors may terminate the license agreement for certain conditions such as uncured material breach by us, the

cession of our business, or our insolvency, liquidation, or receivership.

The U.S. government has certain rights in some of our licensed patents (including U.S. Patent Nos. 7,435,596, 8,026,097, and 11,673,937 and certain related U.S. patent applications, which relate to our NK cell engineering platform) in accordance with the Bayh-Dole Act of 1980. These rights in certain technology developed under government-funded research include, for example, a license to use those inventions for governmental purposes and the right to require us to grant exclusive licenses to such inventions to a third party under certain circumstances. In addition, the U.S. government requires that any products embodying any of these inventions or produced through the use of any of these inventions be manufactured substantially in the United States. States unless domestic manufacture is not feasible or the requirement is waived. For further details about risks related to the government's rights in such inventions, see "*—The U.S. government could choose to exercise certain rights in technology developed under government-funded research, which could eliminate our exclusive use of such technology or require us to commercialize our product candidates in a way we consider sub-optimal. sub-optimal*" in the section titled "Risk Factors" in Part I, Item 1A in this Annual Report on Form 10-K.



Our continuing research and development activities, technical expertise and contractual arrangements supplement our existing intellectual property protection and help us maintain our competitive position, and we rely on trade secrets to protect our proprietary information and technologies, especially where we do not believe patent protection is appropriate or obtainable, or where such patents would be difficult to enforce. In order to maintain such trade secrets and other proprietary information, we rely in part on confidentiality agreements with our employees, consultants, contractors, outside scientific collaborators and other advisors.

We also protect our brand through trademark rights. As of December 31, 2022 December 31, 2023, we are the listed owner of the U.S. registered trademark, NKARTA, and 15 related foreign registered trademarks. In addition, we have a pending U.S. trademark application for NKSTIM. In order to supplement the protection of our brand, we also have a registered internet domain name.

**Government Regulation**

Government authorities in the United States, at the federal, state and local level, and in other countries and jurisdictions, extensively regulate, among other things, the research, development, testing, manufacture, quality control, approval, packaging, storage, recordkeeping, labeling, advertising, promotion, distribution, marketing, post-approval monitoring and reporting, and import and export of pharmaceutical products. The processes for obtaining regulatory approvals in the United States and in foreign countries and jurisdictions, along with subsequent compliance with applicable statutes and regulations and other regulatory authorities, require the expenditure of substantial time and financial resources.

***FDA Approval Process***

In the United States, the FDA regulates investigational drugs, including biological products, under the Federal Food, Drug, and Cosmetic Act ("FDCA") and its implementing regulations. Marketing authorization of a biological product via a biologics license application ("BLA") occurs under section 351 of the Public Health Service Act ("PHSA"). The process of obtaining regulatory approvals and the subsequent compliance with appropriate federal, state, local and foreign statutes and regulations requires the expenditure of substantial time and financial resources. Failure to comply with the applicable U.S. requirements at any time during the product development process, approval process or after approval may subject an applicant and/or sponsor to a variety of administrative or judicial sanctions, including imposition of a clinical hold, refusal by the FDA to approve applications, withdrawal of an approval, import/export delays, issuance of warning letters and other types of enforcement letters, product recalls, product seizures, total or partial suspension of production or distribution, injunctions, fines, refusals of government contracts, restitution, disgorgement of profits or civil or criminal investigations and penalties brought by the FDA and the Department of Justice ("DOJ") or other governmental entities. The clinical testing, manufacturing, labeling, storage, distribution, record keeping, advertising, promotion, import, export and marketing, among other things, of our product candidates are governed by extensive regulation by governmental authorities in the United States and other countries. The FDA, under the FDCA and PHSA, regulates biopharmaceutical products in the United States. The steps required before a product candidate may be approved for marketing in the United States generally include:

- preclinical laboratory tests and animal tests conducted under Good Laboratory Practices ("GLP");
- the submission to the FDA of an IND for human clinical testing, which must become effective before human clinica trials commence;
- approval by an independent institutional review board ("IRB") representing each clinical site before each clinical tri may be initiated;
- adequate and well-controlled human clinical trials to establish the safety and efficacy of the product for each indica and conducted in accordance with Good Clinical Practices ("GCP");
- the preparation and submission to the FDA of a BLA;
- FDA acceptance, review and approval of the BLA, which might include an advisory committee review; and

- satisfactory completion of an FDA inspection of the manufacturing facilities at which the product, or components thereof, are made to assess compliance with cGMPs and in the case of cell-based advanced therapy, additionally, current Good Tissue Practices.

The testing and approval process typically requires many years and substantial effort and financial resources, and the receipt and timing of any approval is uncertain. The actual time required may vary substantially based upon the type, complexity, and novelty of the product or disease. For example, the FDA has, at times, taken longer than its usual 30-day window to complete its review of certain first-of kind INDs. In addition, the FDA may suspend clinical trials at any time on various grounds, including a finding that the subjects or patients are being exposed to an unreasonable and significant health risk.



*Preclinical and Human Clinical Trials in Support of a BLA*

Preclinical studies generally include laboratory evaluations of product chemistry, formulation, and toxicity, as well as animal studies to assess the potential safety and bioactivity of the product candidate. The conduct of preclinical trials is subject to federal regulations and requirements including GLP regulations. The results of the preclinical studies, together with manufacturing information and analytical data, among other things, are submitted to the FDA as part of the IND, which must become effective before clinical trials may be commenced. The IND will become effective automatically 30 days after receipt by the FDA, unless the FDA raises concerns or questions about the conduct of the trials as outlined in the IND prior to that time. In this case, the IND sponsor and the FDA must resolve any outstanding concerns before clinical trials can proceed. If outstanding concerns cannot be resolved, the FDA will place the clinical trial, or a portion of it, on clinical hold. A partial clinical hold stops could stop new patients from enrolling in a clinical trial. trial, or a certain aspect of the study from progressing. A complete clinical hold further requires all patients currently enrolled to discontinue treatment with the product candidate being evaluated. The FDA may also initiate a full or partial clinical hold after the 30 days if, for example, significant public health risks arise during the trial, if FDA believes the study is not being conducted in accordance with FDA regulations, or if results from additional preclinical studies are required by the FDA to evaluate the potential risk and benefit to patients for such a trial. Clinical holds may be temporary or permanent.

Clinical trials involve the administration of the product candidate to human subjects under the supervision of qualified investigators in accordance with federal regulations, in compliance with GCP requirements, and in accordance with a protocol submitted to FDA as part of the IND detailing the objectives of the trial, the parameters used to monitor safety, and

the effectiveness criteria, if any, to be evaluated. Each clinical trial and informed consent information must also be reviewed and approved by an independent IRB at each of the sites at which the trial will be conducted. The IRB will consider, among other things, ethical factors, the safety of human subjects and the possible liability of the institution. An IRB may also require the clinical trial at the site to be halted, either temporarily or permanently, for failure to comply with the IRB's requirements, or may impose other conditions if it believes that the patients are subject to unacceptable risk.

Clinical trials to support BLAs for marketing approval are typically conducted in three sequential phases prior to approval, but the phases may overlap or be combined. These phases generally include the following:

**Phase 1.** Phase 1 clinical trials represent the initial introduction of a product candidate into human subjects. In Phase 1 trials of cellular therapies, the product candidate is tested for safety, including adverse effects.

**Phase 2.** Phase 2 clinical trials usually involve studies in a limited patient population to (i) evaluate the efficacy of the product candidate for specific indications, (ii) determine dosage tolerance and optimal dosage and (iii) identify possible adverse effects and safety risks.

**Phase 3.** If a product candidate is found to be potentially effective and to have an acceptable safety profile in Phase 2 clinical trials, the clinical trial program will be expanded to Phase 3 clinical trials to further demonstrate clinical efficacy, optimal dosage and safety within a larger number of patients, typically at geographically dispersed clinical trial sites.

**Phase 4.** Phase 4 clinical trials may be conducted after approval to gain additional experience from the treatment of patients in the intended therapeutic indication and to document a clinical benefit in the case of



drugs approved under accelerated approval regulations, or when otherwise requested by the FDA (post-approval commitments) or required by the FDA (post-approval requirements). Failure to promptly conduct any required Phase 4 clinical trials could result in enforcement action or withdrawal of approval.

A Phase 2/3 trial design is often used in the development of pharmaceutical and biological products. The trial includes Phase 2 elements, such as an early interim analysis of safety or activity, and Phase 3 elements, such as larger patient populations with less restrictive enrollment criteria. With appropriate statistical restrictions, an early interim analysis of clinical or physiologic activity and/or safety may provide for the trial to be stopped, changed or continued before a large number of patients have been enrolled, while still allowing all data from enrolled patients to count in the analysis used to support approval.

A pivotal trial is a clinical trial that is designed to meet regulatory requirements to demonstrate a product candidate's safety and efficacy to support the approval of the drug or biologic. Generally, pivotal trials are Phase 3 trials, but the FDA may accept results from any phase clinical trial if the design provides a well-controlled and reliable assessment of clinical benefit, particularly in situations in which there is an unmet medical need and the results are sufficiently robust.

The FDA, the IRB or the clinical trial sponsor may suspend or terminate a clinical trial at any time on various grounds, including a finding that the research subjects are being exposed to an unacceptable health risk. Additionally, an independent group of qualified experts organized by the clinical trial sponsor, often known as a Data Safety Monitoring Board ("DSMB") or committee, may oversee some clinical studies. Depending on the trial design, this group may provide authorization for whether or not a trial may move forward at designated check points based on access to certain data from the trial. We may also suspend or terminate a clinical trial based on evolving business objectives and the competitive climate.

Clinical trials require substantial time, effort and financial resources. The costs associated with running clinical trials typically increase as a product candidate advances to later stage clinical trials, since the later stage clinical trials typically involve a larger number of patients than the early-stage clinical trials. If a clinical trial for one of our product candidates is put on clinical hold by the FDA (or another regulatory authority in a foreign country), further development and any eventual commercialization of that product candidate would be delayed or may not be possible at all. Any delays in our clinical trials or termination of a program due to a clinical hold could materially adversely affect our business, financial conditions, results of operations, growth prospects and competitive position.

*Submission and Review of a BLA*

The results of preclinical studies and clinical trials, together with detailed information on the product's manufacture, composition, quality, controls and proposed labeling, among other things, are submitted to the FDA in the form of a BLA, requesting approval to market the product. The cost of preparing and submitting a BLA is substantial. The application must also be accompanied by a significant user fee payment, which typically increases annually, although waivers may be granted in limited cases. Under an approved BLA, the applicant is also subject to an annual program fee. The FDA has 60 days from its receipt of a BLA to determine whether the application will be accepted for filing based on the Agency's determination that it is adequately organized and sufficiently complete to permit substantive review. Once the submission is accepted for filing, the FDA begins an in-depth review. The FDA has substantial discretion in the approval process and may refuse to accept an application or decide that the data are insufficient for approval and require additional preclinical, clinical or other studies.

Once a BLA has been accepted for filing, the FDA sets a user fee goal date that informs the applicant of the specific date by which the FDA intends to complete its review. The FDA has agreed to certain performance goals to complete the review of BLAs. This is typically ten months from the date that the FDA accepts the BLA for filing for standard review BLAs. Applications classified as Priority Review are reviewed within six months of the date the FDA accepts the BLA for filing. A BLA can be classified for Priority Review when the FDA determines the biologic product has the potential to treat a serious or life-threatening condition and, if approved, would be a significant improvement in safety or effectiveness compared to available therapies. The review process can be extended by FDA requests for additional information or clarification. The FDA reviews BLAs to determine, among other things, whether the proposed product is safe and effective for its intended use, and whether the product is being manufactured in accordance with cGMP to assure and preserve the product's identity, strength, quality and



purity. The FDA may also refer applications for novel biologic products, or biologic products that present difficult questions of safety or efficacy, to be reviewed by an advisory committee—typically a panel that includes clinicians, statisticians and other experts—for review, evaluation, and a recommendation as to whether the BLA should be approved. The FDA is not bound by the recommendation of an advisory committee, but generally follows such recommendations.

Before approving a BLA, the FDA typically will inspect the facilities at which the product is manufactured and will not approve the product unless the manufacturing facilities comply with cGMP. Additionally, the FDA will typically inspect the sponsor and one or more clinical trial sites for compliance with GCP and integrity of the data supporting safety and efficacy.



The FDA will provide a preliminary determination as to whether a REMS is necessary to assure the safe use of the product prior to the BLA, but a final decision will be made during the approval process. If the FDA concludes a REMS is needed, the sponsor of the application must submit a proposed REMS, and the FDA will not approve the application without an approved REMS, if required. A REMS can include medication guides, communication plans for healthcare professionals, and elements to assure a product's safe use ("ETASU"). An ETASU can include, but is not limited to, special training or certification for prescribing or dispensing the product, dispensing the product only under certain circumstances, special monitoring, and the use of patient-specific registries. A REMS can substantially increase the costs of obtaining approval. The FDA could also require a special warning, known as a boxed warning, to be included in the product labeling

in order to highlight a particular safety risk. The FDA may delay approval of a BLA if applicable regulatory criteria are not satisfied and/or the FDA requires additional testing or information. The FDA may require substantial post-marketing testing and surveillance to monitor safety or efficacy of a product.

On the basis of the FDA's evaluation of the BLA and accompanying information, including the results of the inspection of the manufacturing facilities, the FDA will issue either an approval of the BLA or a Complete Response Letter, detailing the deficiencies in the submission and the additional testing or information required for reconsideration of the application. If, or when, those deficiencies have been addressed to the FDA's satisfaction in a resubmission of the BLA, the FDA will issue an approval letter. The FDA has committed to reviewing such resubmissions in two or six months depending on the type of information included. An approval letter authorizes commercial marketing and distribution of the biologic with specific prescribing information for specific indications. Even with submission of this additional information, the FDA may ultimately decide that the application does not satisfy the regulatory criteria for approval.

Once granted, product approvals may need be withdrawn if compliance with regulatory standards is not maintained or problems are identified following initial marketing. Changes to some of the conditions established in an approved BLA, including changes in indications, product labeling, manufacturing processes or facilities, require submission and FDA approval of a new BLA or BLA supplement before the change can be implemented. A BLA supplement for a new indication typically requires clinical data similar to that in the original application, and the FDA uses the same procedures and actions in reviewing BLA supplements as it does in reviewing BLAs. BLA supplement review timelines are typically ten months from the date of submission to the FDA for standard review and six months from the date of submission to the FDA for Priority Review.

If we are unable to obtain a BLA for a product candidate accepted or approved, commercialization of that product candidate will be delayed or we may not be able to commercialize that product candidate at all. This would have a material effect on our business, financial conditions, results of operations, growth prospects and competitive position.

*Expedited Programs, Accelerated Approval Programs, Breakthrough Therapy Designation, and Regenerative Medicine Advanced Therapies and Priority Medicine Designation*

A sponsor may seek approval of its drug candidate under programs designed to accelerate FDA's review of INDs and BLA. For example, the FDA may grant Fast Track Designation to a drug intended for treatment of a serious or life-threatening disease or condition that has potential to address unmet medical needs for the disease or condition. The key benefits of fast track designation are the eligibility for priority review, rolling review (submission of portions of an application before the complete marketing application is submitted) and accelerated approval, if the



application meets relevant criteria. Under the accelerated approval program, the FDA may approve a BLA on the basis of either a surrogate endpoint that is reasonably likely to predict clinical benefit, or on a clinical endpoint that can be measured earlier than irreversible morbidity or mortality, that 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. The FDA generally requires post-marketing studies or completion of ongoing studies after marketing authorization to verify the drug's clinical benefit in relationship to the surrogate endpoint or ultimate outcome in relationship to the clinical benefit to convert the accelerated approved to a full approval.



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Based on results of the Phase 3 clinical trials or trials submitted in a BLA, upon the request of an applicant, the FDA may grant the BLA a priority review designation, which sets the target date for FDA action on the application at six months after the FDA accepts the application for filing. The FDA grants priority review where there is evidence that the proposed drug would be a significant improvement in the safety or effectiveness of the treatment, diagnosis or prevention of a serious condition. If the criteria for priority review are not met, the application is subject to the standard FDA review period of ten months after FDA accepts the application for filing. Priority review designation does not change the scientific/medical standard for approval or the quality of evidence necessary to support approval.

In addition, a sponsor may seek a FDA IND designation of its drug candidate as a breakthrough therapy if the drug can, alone or in combination with one or more other drugs, treat a serious or life-threatening disease or condition and preliminary clinical evidence indicates that the drug may demonstrate substantial improvement over existing therapies on one or more clinically significant endpoints, such as substantial treatment effects observed early in clinical development. A breakthrough therapy designation ("BTD") allows companies to work earlier, more closely, and frequently with the FDA, and they may be eligible for priority review and accelerated approval. The sponsor of a new biologic product candidate may request that the FDA designate the candidate for a specific indication as a Breakthrough Therapy concurrent with, or after, the submission of the IND for the biologic product candidate. The FDA must determine if the biological product qualifies for BTD within 60 days of receipt of the sponsor's request.

Cell-based advanced therapies intended to treat, modify, reverse or cure a serious medical condition can receive Regenerative Medicine Advanced Therapy ("RMAT") designation from the FDA once preliminary clinical evidence has been obtained demonstrating the therapy has the potential to address unmet medical needs for the condition. Similar to BTD, the RMAT allows companies developing regenerative medicine therapies to work earlier, more closely, and frequently with the FDA, and RMAT designated products may be eligible for priority review and accelerated approval. Interaction and communication between the FDA and the sponsor of the trial can help to identify the most efficient path for clinical development while minimizing the number of patients placed in ineffective control regimens. The timing of a sponsor's

request for designation and FDA response are the same as for the breakthrough therapy designation program. Like the other expedited development programs previously mentioned, RMAT designation does not change the scientific or medical standard for approval or the quality of evidence necessary to support approval. In Europe, the European Medicines Agency ("EMA") can grant PRIority MEdicine ("PRIME"), designation to support development of product candidates that may address unmet needs and improve quality of life, based on the potential to benefit patients from early clinical data.

*Special Protocol Assessment*

A company may reach an agreement with the FDA under the Special Protocol Assessment ("SPA") process as to the required design and size of clinical trials intended to form the primary basis of an efficacy claim. Under the FDCA and FDA guidance implementing the statutory requirement, an SPA is generally binding upon the FDA except in limited circumstances, such as if the FDA identifies a substantial scientific issue essential to determining safety or efficacy after the clinical trial begins, public health concerns emerge that were unrecognized at the time of the protocol assessment, the sponsor and the FDA agree to the change in writing, or if the clinical trial sponsor fails to follow the protocol that was agreed upon with the FDA.



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*Disclosure of Clinical Trial Information*

Sponsors of clinical trials of FDA-regulated products, including biological products, are required to register and disclose certain clinical trial information on the website www.clintrials.gov. Information related to the product, patient population, phase of investigation, trial sites and investigators, and other aspects of a clinical trial are then made public as part of the registration. Sponsors are also obligated to disclose the results of their clinical trials after completion. Disclosure of the results of clinical trials can be delayed in certain circumstances for up to two years after the date of completion of the trial. Competitors may use this publicly available information to gain knowledge regarding the progress of clinical development programs as well as clinical trial design. Failure to timely register a covered clinical study or to submit study results as provided for in the law can give rise to civil monetary penalties and also prevent the non-compliant party from receiving future grant funds from the federal government. The U.S. National Institutes of Health's ("NIH") Final Rule on ClinicalTrials.gov registration and reporting requirements became effective in 2017, and both NIH and FDA have signaled the government's willingness to begin enforcing those requirements against non-compliant clinical trial sponsors.

*Orphan Drugs*

Under the Orphan Drug Act, the FDA may grant orphan designation to a drug intended to treat a rare disease or condition affecting fewer than 200,000 individuals in the United States, or in other limited cases. Orphan drug designation must be requested before submitting a BLA. If the FDA grants orphan drug designation, the identity of the biological product and its potential orphan disease 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 drugs may be eligible for certain incentives, including tax credits for qualified clinical testing. In addition, a BLA for a product that has received orphan drug designation is not subject to a prescription drug user fee unless the application includes an indication other than the rare disease or condition for which the drug was designated. In December 2021, we announced that the FDA granted orphan drug designation to our product candidate NKX101 for treatment of AML.

Generally, if a product that has orphan drug designation subsequently receives the first FDA approval for the disease or condition for which it has such designation, the product is entitled to orphan drug exclusivity, which means that the FDA may not approve any other applications to market the same active moiety for the same indication for seven years, except in limited circumstances, such as another drug's showing of clinical superiority over the drug with orphan exclusivity. A product can be considered clinically superior if it is safer, more effective or makes a major contribution to patient care. Competitors, however, may receive approval of different active moieties for the same indication or obtain approval for the same active moiety for a different indication. In some cases, orphan drug status is contingent on a product with an orphan drug designation demonstrating that it is clinically superior to a previously approved product or products.

*Pediatric Information*

Under the Pediatric Research Equity Act ("PREA"), new drug applications ("NDAs") or BLAs or supplements to NDAs or BLAs must contain data to assess the safety and effectiveness of the biological product for the claimed indications in all relevant pediatric subpopulations and to support dosing and administration for each pediatric subpopulation for which the biological product is safe and effective. The FDA may grant full or partial waivers, or deferrals, for submission of data. Unless otherwise required by regulation, PREA does not apply to any biological product with orphan product designation except a product with a new active ingredient that is a molecularly targeted cancer product intended for the treatment of an adult cancer and directed at a molecular target determined by the FDA to be substantially relevant to the growth or progression of a pediatric cancer that is subject to an NDA or BLA submitted on or before August 18, 2020. If a BLA is submitted after August 18, 2020, the sponsor is subject to the requirements of Sections 504(a) and (b) of the FDA Reauthorization Act of 2017 ("FDARA") which will require pediatric studies regardless of orphan designation.

*Additional Controls for Biologics*

To help reduce the increased risk of the introduction of adventitious agents, the PHSA emphasizes the importance of manufacturing controls for products whose attributes cannot be precisely defined. The PHSA also provides authority to the FDA to immediately suspend biologics licenses in situations where there exists a danger to public health, to prepare or procure products in the event of shortages and critical public health needs, and to authorize the creation and enforcement of regulations to prevent the introduction or spread of communicable diseases within the United States.

After a BLA is approved, the product may also be subject to official lot release as a condition of approval. As part of the manufacturing process, the manufacturer is required to perform certain tests on each lot of the product before it is released for distribution. If the product is subject to official release by the FDA, the manufacturer submits samples of each lot of product to the FDA together with a release protocol showing a summary of the lot manufacturing history and the results of all of the manufacturer's tests performed on the lot. The FDA may also perform certain confirmatory tests on lots of some products, such as viral vaccines, before allowing the manufacturer to release the lots for distribution. In addition, the FDA conducts laboratory research related to the regulatory standards on the safety, purity, potency, and effectiveness of biological products. As with drugs, after approval of a BLA, biologics manufacturers must address any safety issues that arise, are subject to recalls or a halt in manufacturing, and are subject to periodic inspection after approval.

*Biosimilars*

The Biologics Price Competition and Innovation Act of 2009 ("BPCIA") creates an abbreviated approval pathway for biological products shown to be highly similar to or interchangeable with an FDA licensed reference biological product. Biosimilarity sufficient to reference a prior FDA-approved product requires that there be no differences in conditions of use, route of administration, dosage form, and strength, and no clinically meaningful differences between the biological product and the reference product in terms of safety, purity, and potency. Biosimilarity must be shown through analytical trials, animal trials, and a clinical trial or trials, unless the Secretary of Health and Human Services waives a required element. A biosimilar product may be deemed interchangeable with a previously approved product if it meets the higher hurdle of demonstrating that it can be expected to produce the same clinical results as the reference product and, for products administered multiple times, the biologic and the reference biologic may be switched after one has been previously administered without increasing safety risks or risks of diminished efficacy relative to exclusive use of the reference biologic. To date, a small number of biosimilar products and no interchangeable products have been approved under the BPCIA. Complexities associated with the larger, and often more complex, structures of biological products, as well as the process by which such products are manufactured, pose significant hurdles to biosimilar product implementation, which is still being evaluated by the FDA.

A reference biologic is granted 12 years of exclusivity from the time of first licensure, or BLA approval, of the reference product, and no application for a biosimilar can be submitted for four years from the date of licensure of the reference product. The first biologic product submitted under the biosimilar abbreviated approval pathway that is determined to be interchangeable with the reference product has exclusivity against a finding of interchangeability for other biologics for the same condition of use for the lesser of (i) one year after first commercial marketing of the first interchangeable biosimilar, (ii) 18 months after the first interchangeable biosimilar is approved if there is no patent challenge, (iii) 18 months after resolution of a lawsuit over the patents of the reference biologic in favor of the first interchangeable biosimilar applicant, or (iv) 42 months after the first interchangeable biosimilar's application has been approved if a patent lawsuit is ongoing within the 42-month period.



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*Post-Approval Requirements or Commitments*

Approved drugs and biologics that are manufactured or distributed in the United States pursuant to FDA approvals are subject to pervasive and continuing regulation by the FDA, including, among other things, requirements relating to recordkeeping, periodic reporting, adverse event reporting, product sampling and distribution, advertising and promotion including standards and regulations for direct-to-consumer advertising, off label promotion, industry-sponsored scientific and educational activities and promotional activities involving the Internet. Biologics may be marketed only for the approved indications and in a manner consistent with the provisions of the approved labeling and reporting of adverse experiences with the product.

The FDA may impose a number of post-approval requirements or commitments as a condition of approval of a BLA. For example, the FDA may require post-marketing testing, including Phase 4 clinical trials, and surveillance programs to further assess and monitor the product's safety and effectiveness after commercialization or the FDA may place conditions on an approval that could restrict the distribution or use of the product. The FDA may also require a REMS, which could involve requirements for, among other things, medication guides, special trainings for prescribers and dispensers, patient registries and elements to assure safe use.

In addition, entities involved in the manufacture and distribution of approved drugs are required to register their establishments with the FDA and state agencies and are subject to periodic unannounced inspections by the FDA and these state agencies for compliance with cGMP requirements. The FDA has promulgated specific requirements for drug

cGMP. Changes to the manufacturing process are strictly regulated and often require prior FDA approval before being implemented. FDA regulations also require investigation and correction of any deviations from cGMP requirements and impose reporting and documentation requirements upon the sponsor and any third party manufacturers that the sponsor may decide to use. Accordingly, manufacturers must continue to expend time, money and effort in the area of production and quality control to maintain cGMP compliance.

Once an approval is granted, the FDA may issue enforcement letters or product approvals may need to be withdrawn if compliance with regulatory requirements and standards is not maintained or if problems occur after the product reaches the market. Corrective action could delay product distribution and require significant time and financial expenditures. Later discovery of previously unknown problems with a product, including adverse events of unanticipated severity or frequency, or with manufacturing processes, or failure to comply with regulatory requirements, may result in revisions to the approved labeling to add new safety information, imposition of post-market studies or clinical trials to assess new safety risks or imposition of distribution or other restrictions under a REMS program. Other potential consequences include, among other things:

- restrictions on the marketing or manufacturing of the product, suspension of the approval, complete withdrawal of product from the market or product recalls;
- 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; or
- injunctions or the imposition of civil or criminal penalties.

The FDA strictly regulates marketing, labeling, advertising and promotion of products that are placed on the market. Drugs may be promoted only for the approved indications and in accordance with the provisions of the approved labeling. The FDA and other agencies actively enforce the laws and regulations prohibiting the promotion of off-label uses, and a company that is found to have improperly promoted off-label uses may be subject to significant liability, including investigation by federal and state authorities.



***Foreign Regulation***

In order to market any product outside of the United States, we would need to comply with numerous and varying regulatory requirements of other countries and jurisdictions regarding quality, safety and efficacy and governing, among other things, clinical trials, marketing authorization, commercial sales and distribution of our products. Whether or not we obtain FDA approval for a product, we would need to obtain the necessary approvals by the comparable foreign regulatory authorities before we can commence clinical trials or marketing of the product in foreign countries and jurisdictions. Although many of the issues discussed above with respect to the United States apply similarly in the context of the European Union and other geographies, the approval process varies between countries and jurisdictions and can involve additional product testing and additional administrative review periods. The time required to obtain approval in other countries and jurisdictions might differ from and be longer than that required to obtain FDA approval. Regulatory approval in one country or jurisdiction does not ensure regulatory approval in another, but a failure or delay in obtaining regulatory approval in one country or jurisdiction may negatively impact the regulatory process in others.

***Coverage, Reimbursement and Pricing***

Significant uncertainty exists as to the coverage and reimbursement status of any products for which we may obtain regulatory approval. In the United States and foreign markets, sales of any products for which we receive regulatory approval for commercial sale will depend, in part, on the availability of coverage and the adequacy of reimbursement from third-party payors. Third-party payors include government authorities and private entities, such as managed care organizations, private health insurers and other organizations. The process for determining whether a third-party payor will provide coverage for a product may be separate from the process for setting the reimbursement rate that the payor will pay for the product. Third-party payors may limit coverage to specific products on an approved list, or formulary, which might not include all of the FDA-approved products for a particular indication. Moreover, a third-party payor's decision to provide coverage for a product does not imply that an adequate reimbursement rate will be approved. For example, the payor's reimbursement payment rate may not be adequate or may require co-payments that patients find unacceptably high. Additionally, coverage and reimbursement for products can differ significantly from payor to payor. Adequate third-party reimbursement may not be available to enable us to maintain price levels sufficient to realize an appropriate return on our investment in product development. Further, some third-party payors may require pre-approval of coverage for new or innovative devices or drug therapies before they provide reimbursement for use of such therapies.

Third-party payors are increasingly challenging the price and examining the medical necessity and cost-effectiveness of products and services, in addition to their safety and efficacy. To obtain coverage and reimbursement for any product that might be approved for sale, we may need to conduct expensive pharmaco-economic studies to demonstrate the medical necessity and cost-effectiveness of our product. These studies will be in addition to the studies required to obtain regulatory approvals. If third-party payors do not consider a product to be cost-effective compared to other available therapies, they may not cover the product after approval as a benefit under their plans or, if they do, the level of payment may not be sufficient to allow a company to sell its products at a profit. Thus, obtaining and maintaining reimbursement status is time-consuming and costly.

The U.S. and foreign governments regularly consider reform measures that affect healthcare coverage and costs. For example, the U.S. and state legislatures have shown significant interest in implementing cost containment programs to limit the growth of government-paid health care costs, including price controls, restrictions on reimbursement and requirements for substitution of generic products for branded prescription products. The Patient Protection and Affordable Care Act, as amended by the Health Care and Education Reconciliation Act (collectively, the "ACA") contains provisions that may reduce the profitability of products, including, for example, increased rebates for products sold to Medicaid programs, extension of Medicaid rebates to Medicaid managed care plans, mandatory discounts for certain Medicare Part D beneficiaries and annual fees based on pharmaceutical companies' share of sales to federal health care programs. The Centers for Medicare and Medicaid Services ("CMS") may develop new payment and delivery models, such as bundled payment models. Adoption of government controls and measures, and tightening of restrictive policies in jurisdictions with existing controls and measures, could limit payments for our products.



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The marketability of any products for which we receive regulatory approval for commercial sale may suffer if the government and third-party payors fail to provide adequate coverage and reimbursement. In addition, the focus on cost containment measures, particularly in the United States, has increased and we expect will continue to increase the pressure on pharmaceutical pricing. Coverage policies and third-party reimbursement rates may change at any time. Even if we attain favorable coverage and reimbursement status for one or more products for which we receive regulatory approval, less favorable coverage policies and reimbursement rates may be implemented in the future.

***European Union Coverage Reimbursement and Pricing***

In the European Union, pricing and reimbursement schemes vary widely from country to country. Some countries provide that drug products may be marketed only after a reimbursement price has been agreed. Some countries may require the completion of additional studies that compare the cost effectiveness of a particular drug candidate to currently available therapies, or so called health technology assessments, in order to obtain reimbursement or pricing approval.

For example, the European Union provides options for its member states to restrict the range of drug products for which their national health insurance systems provide reimbursement and to control the prices of medicinal products for human use. European Union member states may approve a specific price for a drug product or may instead adopt a system of direct or indirect controls on the profitability of the company.

***Healthcare Laws and Regulations***

Physicians, other healthcare providers, and third-party payors will play a primary role in the recommendation and prescription of any product candidates for which we obtain marketing approval. Our arrangements with healthcare professionals, principal investigators, consultants, customers and third-party payors are and will be subject to various federal, state and foreign fraud and abuse laws and other healthcare laws and regulations. These laws and regulations may impact, among other things, our arrangements with third-party payors, healthcare professionals who participate in our clinical research programs, healthcare professionals and others who purchase, recommend or prescribe our approved products, and our proposed sales, marketing, distribution and education programs. The U.S. federal and state healthcare laws and regulations that may affect our ability to operate include, without limitation, the following:

- The federal Anti-Kickback Statute, which prohibits persons from, among other things, knowingly and willfully solicit receiving, offering or paying remuneration, directly or indirectly, in cash or in kind, to induce or reward either the referral of an individual for, or the purchase, order or recommendation of, any good or service, for which payment be made under federally funded healthcare programs, such as Medicare and Medicaid. The term “remuneration” h been broadly interpreted to include anything of value;
- The federal civil and criminal false claims laws, including, without limitation, the federal civil monetary penalties law and the civil False Claims Act (which can be enforced by private citizens through qui tam actions), prohibit individu or entities from, among other things, knowingly presenting, or causing to be presented, false or fraudulent claims f payment of federal funds, and knowingly making, or causing to be made, a false record or statement material to a false or fraudulent claim to avoid, decrease or conceal an obligation to pay money to the federal government;
- The federal Health Insurance Portability and Accountability Act of 1996 ("HIPAA") which creates federal criminal la that prohibit, among other things, executing or attempting to execute a scheme to defraud any healthcare benefit program knowingly and willfully falsifying, concealing or covering up a material fact or making any materially false statement in connection with the delivery of or payment for healthcare benefits, items or services;



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- HIPAA, as amended by the Health Information Technology for Economic and Clinical Health Act of 2009 and its implementing regulations, which imposes certain obligations, including mandatory contractual terms, with respect t safeguarding the privacy, security and transmission of individually identifiable health information without the appropriate authorization by entities subject to the law, such as certain healthcare providers, health plans and healthcare clearinghouses and their respective business associates who use, disclose, store or otherwise process HIPAA-protected health information on their behalf;
- The federal transparency requirements under the Physician Payments Sunshine Act, created under the ACA, whic requires certain manufacturers of drugs, devices, biologics and medical supplies reimbursed under Medicare,

Medicaid or the Children's Health Insurance Program ("CHIP") to report to the Department of Health and Human Services ("HHS") information related to payments and other transfers of value provided to physicians and teaching hospitals and physician ownership and investment interests;

- Analogous state laws and regulations, such as state anti-kickback and false claims laws, that impose similar restrictions and may apply to items or services reimbursed by non-governmental third-party payors, including priva insurers;
- State laws that require pharmaceutical companies to implement compliance programs, comply with the pharmaceutical industry's voluntary compliance guidelines and the relevant compliance guidance promulgated by federal government, or to track and report gifts, compensation and other remuneration provided to physicians and other health care providers;
- State and local laws requiring the registration of pharmaceutical sales representatives;
- State health information privacy and data breach notification laws, which govern the collection, use, disclosure and protection of health-related and other personal information, many of which differ from each other in significant way and often are not pre-empted by HIPAA, thus complicating compliance efforts; and
- State unfair and deceptive trade practices statutes, pursuant to which significant statutory fines and penalties can imposed against pharmaceutical companies alleged to have engaged in consumer fraud.

We will be required to spend substantial time and money to ensure that our business arrangements with third parties comply with applicable healthcare laws and regulations. Recent healthcare reform legislation has strengthened these federal and state healthcare laws. For example, the ACA amends the intent requirement of the federal Anti-Kickback Statute and criminal healthcare fraud statutes to clarify that liability under these statutes does not require a person or entity to have actual knowledge of the statutes or a specific intent to violate them. Moreover, the ACA provides that the government may assert that a claim that includes items or services resulting from a violation of the federal Anti-Kickback Statute constitutes a false or fraudulent claim for purposes of the civil False Claims Act. Government regulators have been very active in the last several years in revising existing regulations and promulgating new regulations. Government enforcement regulators have also become increasingly active in bringing enforcement actions based on these laws. Because of the breadth of these laws and the narrowness of the statutory exceptions and safe harbors available, it is possible that some of our business activities could be subject to challenge under one or more of such laws.

If we are found to be in violation of these laws, we may be subject to criminal, civil and administrative sanctions including monetary penalties, damages, fines, disgorgement, individual imprisonment, exclusion from participation in government funded healthcare programs, such as Medicare and Medicaid, additional reporting requirements and oversight if we become subject to a corporate integrity agreement or similar agreement to resolve allegations of noncompliance with these laws, and reputational harm, in which case we may be required to curtail or restructure our operations. Moreover, we expect that there will continue to be federal and state laws and regulations, proposed and implemented, that could impact our future operations and business.

***Healthcare Reform***

In the United States, the European Union and other jurisdictions, there have been, and we expect there will continue to be, a number of legislative and regulatory changes and proposed changes to the healthcare system that could affect our results of operations. In particular, there have been and continue to be a number of initiatives at the United States federal and state levels that seek to reduce healthcare costs. For example, in March 2010, the ACA was enacted, which includes measures that have significantly changed the way healthcare is financed by both governmental and private payors. The provisions of the ACA of importance to the pharmaceutical and biotechnology industry are, among others, the following:

- an annual, nondeductible fee on any entity that manufactures or imports certain branded prescription drug agents biologic agents, which is apportioned among these entities according to their market share in certain government healthcare programs;
- an increase in the rebates a manufacturer must pay under the Medicaid Drug Rebate Program to 23.1% and 13% the average manufacturer price for branded and generic drugs, respectively;
- a new Medicare Part D coverage gap discount program, in which manufacturers must agree to offer 70% point-of- discounts to negotiated prices of applicable brand drugs to eligible beneficiaries during their coverage gap period, a condition for the manufacturer's outpatient drugs to be covered under Medicare Part D;
- extension of manufacturers' Medicaid rebate liability to covered drugs dispensed to individuals who are enrolled in Medicaid managed care organizations, unless the drug is subject to discounts under the 340B drug discount progr
- 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;
- expansion of eligibility criteria for Medicaid programs by, among other things, allowing states to offer Medicaid coverage to additional individuals and by adding new mandatory eligibility categories for certain individuals with income at or below 133% of the federal poverty level, thereby potentially increasing manufacturers' Medicaid reba liability;
- expansion of the entities eligible for discounts under the Public Health Service pharmaceutical pricing program;
- new requirements under the federal Physician Payments Sunshine Act for drug manufacturers to report informatio related to payments and other transfers of value made to physicians and teaching hospitals as well as ownership investment interests held by physicians and their immediate family members;
- a new Patient-Centered Outcomes Research Institute to oversee, identify priorities in, and conduct, comparative clinical effectiveness research, along with funding for such research;
- creation of the Independent Payment Advisory Board, which, if and when impaneled, will have authority to recommend certain changes to the Medicare program that could result in reduced payments for prescription drugs and
- establishment of a Center for Medicare and Medicaid Innovation at CMS to test innovative payment and service

delivery models to lower Medicare and Medicaid spending, potentially including prescription drug spending.

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Since its enactment, there have been legislative, judicial, and executive challenges to certain aspects of the ACA, including efforts to repeal or replace all or part of the ACA. While Congress has not passed comprehensive repeal legislation, two bills affecting the implementation of the ACA have been signed into law. The Tax Cuts and Jobs Act of 2017 includes a provision repealing, effective January 1, 2019, the tax-based shared responsibility payment imposed by the ACA on certain individuals who fail to maintain qualifying health coverage for all or part of a year that is commonly referred to as the “individual mandates,” and the Bipartisan Budget Act of 2018 (the "BBA") among other things, amends the ACA to increase from 50 percent to 70 percent the point-of-sale discount that is owed by pharmaceutical manufacturers who participate in Medicare Part D and to close the coverage gap in most Medicare drug plans, commonly referred to as the “donut hole.” Further, the 2020 federal spending package eliminated, effective January 1, 2020, the ACA-mandated “Cadillac” tax on high-cost employer-sponsored health coverage and medical device tax and, effective January 1, 2021, also eliminated the health insurer. Congress could continue to consider other legislation to repeal or replace certain elements of the ACA.

On December 14, 2018, a U.S. District Court judge in the Northern District of Texas ruled that the individual mandate portion of the ACA is an essential and inseverable feature of the ACA, and therefore because the mandate was repealed as part of the Tax Cuts and Jobs Act, the remaining provisions of the ACA are invalid as well. On December 18, 2019, the Court of Appeals for the Fifth Circuit court affirmed the lower court’s ruling that the individual mandate portion of the ACA is unconstitutional and it remanded the case to the district court for reconsideration of the severability question and additional analysis of the provisions of the ACA. Thereafter, on March 2, 2020, the U.S. Supreme Court agreed to hear this case. Oral argument in the case took place on November 10, 2020. On June 17, 2021, the U.S. Supreme Court dismissed the case without specifically ruling on the constitutionality of the ACA, finding that the plaintiffs lacked standing to bring the action.

Prior to the Supreme Court’s decision, an executive order was issued to initiate a special enrollment period from February 15, 2021 through May 15, 2021 for purposes of obtaining health insurance coverage through the ACA marketplace. The executive order also instructs certain governmental agencies to review and reconsider their existing policies and rules that limit access to healthcare, including among others, reexamining Medicaid demonstration projects and waiver programs that include work requirements, and policies that create unnecessary barriers to obtaining access to health insurance coverage through Medicaid or the ACA.

It is unclear how other efforts, if any, to challenge, repeal or replace the ACA, and other healthcare reform measures, will impact our business.

Other federal health reform measures have been proposed and adopted in the United States since the ACA was enacted. For example, as a result of the Budget Control Act of 2011, among other things, providers are subject to Medicare payment reductions of 2% per fiscal year which went into effect on April 1, 2013 and, due to subsequent legislative amendments to the statute, will remain in effect through 2030 pursuant to the Coronavirus Aid, Relief and Economic Security Act (the "CARES Act"). Further, the American Taxpayer Relief Act of 2012, among other things, reduced Medicare payments to several types of providers, including hospitals, imaging centers and cancer treatment center, and increased the statute of limitations period for the government to recover overpayments from providers from three to five years. The Medicare Access and CHIP Reauthorization Act of 2015 also introduced a quality payment program under which certain individual Medicare providers will be subject to certain incentives or penalties based on new program quality standards. Payment adjustments for the Medicare quality payment began in 2019. These new laws or any other similar laws introduced in the future may result in additional reductions in Medicare and other health care funding, which could negatively affect our customers and accordingly, our financial operations.

There have also been a number of proposals in the United States, at both the federal and state level, to control the escalating cost of healthcare, including the cost of drug treatments, patient reimbursement constraints, discounts, restrictions on certain product access and marketing cost disclosure and transparency measures, and we expect that coverage and reimbursement for new therapies will be increasingly restricted. For example, certain states, including California, have implemented state-level cost containment strategies, which could adversely impact adoption of higher-cost medicines that are new to the market. Further, there has been heightened governmental scrutiny over the manner in which manufacturers set prices for their marketed products, which have resulted in several recent Congressional inquiries and proposed and enacted federal and state legislation designed to, among other things, bring more transparency to product pricing, review the relationship between pricing and manufacturer patient



programs, and reform government program reimbursement methodologies for products. Most significantly, on August 16, 2022, the Inflation Reduction Act of 2022 ("IRA") was signed into law. The IRA includes provisions

that will, among others: (i) direct CMS to negotiate the price of certain single-source prescription drugs reimbursed under Medicare, and subject drug manufacturers to civil monetary penalties and a potential excise tax by offering a price that is not equal to or less than the negotiated “maximum fair price” under the law; (ii) impose requirements on drug manufacturers to provide rebates to CMS under Medicare Part B and Medicare Part D as a penalty for price increases that outpace inflation; (iii) cap Medicare Part D beneficiaries’ annual out-of-pocket drug expenses to $2,000 starting in 2025, effectively eliminating the “donut hole” for Medicare Part D; and (iv) delay the rebate rule that would limit the fees that pharmacy benefit managers can charge. The IRA also extends enhanced subsidies for individuals purchasing coverage in a health insurance marketplace through plan year 2025. The effect of the IRA on our business and the healthcare industry in general is not yet known, but we continue to evaluate its potential impact. At the state level, individual states in the United States have also become increasingly aggressive in passing legislation and implementing regulations designed to control pharmaceutical and biological product pricing, including price or patient reimbursement constraints, discounts, restrictions on certain product access and marketing cost disclosure and transparency measures, and, in some cases, designed to encourage importation from other countries and bulk purchasing. In December 2020, the U.S. Supreme Court held unanimously that federal law does not preempt the states’ ability to regulate pharmaceutical benefit managers ("PBMs") and other members of the health care and pharmaceutical supply chain, an important decision that may lead to further and more aggressive efforts by states in this area. In addition, regional healthcare authorities and individual hospitals are increasingly using bidding procedures to determine what pharmaceutical products and which suppliers will be included in their prescription drug and other healthcare programs. These measures could reduce the ultimate demand for our products, once approved, or put pressure on our product pricing.

We cannot predict what initiatives may be adopted in the future. Further federal, state, and regional developments are likely, and we expect ongoing initiatives to increase pressure on drug pricing. These changes may adversely impact the prices we or our future collaborators may charge for our products candidates, if commercialized.

***Additional Regulation***

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

*Anti-Corruption Laws*

The Foreign Corrupt Practices Act (the "FCPA") the U.S. domestic bribery statute contained in 18 U.S.C. §201, the U.S. Travel Act, the USA PATRIOT Act, and possibly other state and national anti-bribery and anti-money laundering laws in countries in which we conduct activities. These anti-corruption laws prohibit any U.S. individual or business from paying, offering or authorizing payment or offering of anything of value, directly or indirectly, to any foreign official, political party or

candidate for the purpose of influencing any act or decision of the foreign entity in order to assist the individual or business in obtaining or retaining business. This could become relevant in the conduct of international clinical trials where the sites for such trials may be a government-owned hospital. The FCPA also obligates companies whose securities are listed in the United States to comply with accounting provisions requiring the company to maintain books and records that accurately and fairly reflect all transactions of the corporation, including international subsidiaries, and to devise and maintain an adequate system of internal accounting controls for international operations. Activities that violate the FCPA, even if they occur wholly outside the United States, can result in criminal and civil fines, imprisonment, disgorgement, oversight and debarment from government contracts.



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*Foreign Regulation*

In addition to regulations in the U.S., we will be subject to a variety of foreign regulations governing clinical trials and commercial sales and distribution of our products to the extent we choose to develop or sell any products outside of the U.S. The approval process varies from country to country and the time may be longer or shorter than that required to obtain FDA approval. The requirements governing the conduct of clinical trials, product licensing, pricing and reimbursement vary greatly from country to country.

**Competition**

The biopharmaceutical industry in general, and the cell therapy field in particular, is characterized by rapidly advancing and changing technologies, intense competition and a strong emphasis on intellectual property. Our product candidates, if approved, may address multiple diseases, including B-cell driven autoimmune diseases, B-cell lymphomas and acute myeloid leukemia. We face substantial and increasing competition from many different sources, including large and specialty biopharmaceutical companies, academic research institutions, governmental agencies and public and private research institutions. Competitors may compete with us in hiring scientific and management personnel, establishing clinical study sites, recruiting patients to participate in clinical trials and acquiring technologies complementary to, or necessary for, our programs.

Our known biopharmaceutical competitors developing allogeneic CAR-NK or CAR-T The autologous CAR T cell therapies include 2seventy Bio, Allogene, Artiva Biosciences, Bristol-Myers Squibb, Caribou, Cellectis, Celularity, Celyad,

Century Therapeutics, CRISPR Therapeutics, Fate Therapeutics, Gamida Cell, Gilead, Glycostem, Gracell, ImmunityBio, Intellia, Legend Biotech, NKGen, Novartis, Precigen, Precision BioSciences, Sanofi, Takeda, directed at CD19, tisagenlecleucel, axicabtagene ciloleucel, brexucabtagene autoleucel, and Vor Biopharma, each of which has clinical-stage allogeneic programs. Biopharmaceutical companies with potentially competitive cell therapies in preclinical development include Astellas, CytoImmune, Cytovia, Editas, Indapta Therapeutics, ONK Therapeutics, Senti, Shoreline Biosciences, Surface Oncology, and WuGen. The autologous CAR-T therapies Kymriah®, Yescarta®, Tecartus® and Breyanzi®, which lisocabtagene maraleucel, have been commercially approved, commercialized by Novartis, Kite/Gilead and Bristol-Meyers Squibb Company, and are direct competitors to our product candidate NKX019. NKX019 in the setting of B cell lymphomas. These approved products are witnessing increased adoption in the market place. Bispecific CD20-directed CD3 T-cell engaging antibodies such as mosunetuzumab-axgb (Lunsumio®), which has accelerated approval, and others that are currently in development and under BLA review at approved for the FDA treatment of B-cell lymphomas are also competitors to our product candidate NKX019. NKX019, including but not limited to mosunetuzumab-axgb commercialized by Genentech/Roche, epcoritamab-bysp commercialized by AbbVie, glofitamab-gxbm commercialized by Roche, and odronextamab commercialized by Regeneron.

A large number of cell therapy companies with expertise in oncology intend to apply their technology and development capabilities to the field of autoimmune disease. Companies developing autologous cell therapies for autoimmune diseases which compete directly with NKX019 include but are not limited to AstraZeneca, Autolus, Bristol-Myers Squibb Company, Cabaletta, Cartesian, Immpact Bio, Kyverna, Nanjing Enricnk Biotech, Novartis, and Synthekine. Companies developing allogeneic cell therapies intended to treat autoimmune diseases which compete directly with NKX019 include but are not limited to Adicet, Allogene, Artiva, Atara, Caribou, Century, CRISPR Therapeutics, Fate Therapeutics, Precision Biosciences, and Sana Biotechnology.

Autologous and allogeneic cell therapies intended to treat B cell lymphomas are being developed by a number of additional companies, including but not limited to Astellas Pharma, Arsenal Biosciences, Artiva Biosciences, Capstan Therapeutics, Caribou, Cellectis, Century Therapeutics, CRISPR Therapeutics, CytoImmune, Cytovia, Editas, Galapagos, Gamida Cell, Glycostem, Gracell, ImmunityBio, Indapta, Intellia, MaxCyte, NKGen, ONK Therapeutics, Poseida Therapeutics, Precigen, Regeneron, Sanofi, Senti Bio, Shoreline Biosciences, Surface Oncology, Takeda, TScan Therapeutics, and WuGen. Autologous and allogeneic cell therapies intended to treat acute myeloid leukemia are being developed by additional companies, including but not limited to Affimed, Arcellx, Autolus, Celyad Oncology, Vor Biopharma. Furthermore, a number of companies are seeking to harness NK or T cell biology through engagers which seek to direct a patient's own NK or T cells to the site of a tumor. Such competitors include Affimed, Amgen, Dragonfly Therapeutics, GT Biopharma, Innate Pharma, and Servier. Several companies are investigating other types of immune cells, such as gamma gamma/delta T cells, natural killer T cells, and NKT. macrophages which may offer some of the same advantages as engineered NK cells. These companies include Acepodia, Adicet, Appia Bio, Athenex, Gadeta, In8Bio, Portage, Carisma Therapeutics, and Takeda.

In8Bio. In addition, numerous academic institutions are conducting preclinical and clinical research in these areas. Furthermore, a number of biopharmaceutical companies and academic groups are focused on engineering other white

blood cell types including NKT cells and gamma-delta T cells, which may offer some of the same advantages as engineered NK cells. Finally, research in immuno-oncology is one of the most active areas for the discovery and clinical development of new anticancer therapies in the biopharmaceutical industry. New approaches, such as bispecific antibodies, as well as refinements of existing modalities, such as immune checkpoint inhibitors, are constantly emerging.

Many of our current or potential competitors have significantly greater financial, technical and human resources, as well as more expertise in research and development, manufacturing, preclinical testing, conducting clinical studies and trials and commercializing and marketing approved products, than us. Mergers and acquisitions in the biopharmaceutical industry may result in even greater resource concentration among a smaller number of



competitors. Smaller or early-stage companies may also prove to be significant competitors, either alone or through collaborative arrangements with large and established companies.

Our commercial opportunity could be reduced or eliminated if our competitors develop and commercialize products that are safer, more effective, have fewer or less severe side effects, are more convenient or are less expensive than any products that we 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, price and degree of reimbursement.

**Human Capital**

We believe that our values – patient first, data driven, intellectually honest, transparent, diverse, inclusive, work/life balance, respectful, humble, creative, and ethical – are the foundations for our team and our behaviors for promoting creativity, innovation and productivity. As of December 31, 2022 December 31, 2023, we had 163 150 full-time employees, 39 36 of whom have Ph.D., M.D. or J.D. degrees. Of these full-time employees, 126 122 employees are engaged in research and development activities and 37 28 employees are engaged in finance, business development, human

resources, operations and other general and administrative functions. We have no collective bargaining agreements with our employees and we have not experienced any work stoppages. We consider our relations with our employees to be good.

We believe that a diverse and inclusive work environment is critical for driving innovation, workforce productivity and the development of new cell therapies. We embrace the principles of workplace development, diversity and inclusion set forth by the Biotechnology Innovation Organization. As part of comprehensive approach to diversity, equity and inclusion at Nkarta, we rely on data to identify gaps, set priorities and enable ongoing measurement of our progress. We publish these quarterly data on our website in the spirit of shared responsibility and accountability. Nothing on our website shall be deemed incorporated by reference into this Annual Report on Form 10-K.

*Compensation, Benefits and Well-being*

We strive to offer fair, market-competitive compensation and benefits that support our employees' overall well-being. To ensure alignment with our short- and long-term objectives, our compensation programs for all employees include base pay, short-term incentives, and opportunities for long-term incentives. Our well-being and benefit programs focus on four key pillars: physical, emotional, financial and community. We offer a wide array of benefits including comprehensive health insurance, generous time-off and leave, and retirement and financial support.



In response to the COVID-19 pandemic, we implemented significant changes that we determined were in the best interest of our employees as well as the communities in which we operate. This includes having many of our employees not in research or manufacturing work from home, while implementing additional safety measures for employees continuing critical on-site work. We also provide flexible work hours and paid time off for employees who cannot work due to circumstances related to COVID-19. We have actively encouraged employees to structure their days and work to best help address caregiving responsibilities they have with family members as well as taking care of themselves personally.



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**Item 1A. Risk Factors.**

*An investment in shares of our common stock involves a high degree of risk. You should carefully consider the following risk factors, as well as all of the other information contained in this Annual Report on Form 10-K, before making an investment decision. The risks described below are not the only ones facing us. The occurrence of any of the following*

*risks, or of additional risks and uncertainties not presently known to us or that we currently believe to be immaterial, could significantly harm our business, financial condition, results of operations and growth prospects. In such case, the trading price of shares of our common stock could decline, and you may lose part or all of your investment. This Annual Report on Form 10-K also contains forward-looking statements and estimates that involve risks and uncertainties. Our actual results could differ materially from those anticipated in the forward-looking statements as a result of specific factors, including the risks and uncertainties described below.*

**Risks Related to our Financial Position**

***We have a limited operating history and do not have any products approved for sale.***

We are a development-stage clinical-stage biopharmaceutical company without any products approved for commercial sale, and have not generated any revenue from product sales. We are focused on developing genetically-engineered human cells as therapeutics and our technologies are new and largely unproven. Since our inception in 2015, we have invested most of our resources in developing our product candidates, building our intellectual property portfolio, developing our supply chain and in-house manufacturing capability, conducting business planning, raising capital and providing general and administrative support for these operations. Consequently, we have no meaningful limited operations upon which to evaluate our business, and predictions about our future success or viability may not be as accurate as they could be if we had a longer operating history or a history of successfully developing and commercializing drug products. We have not yet demonstrated an ability to overcome many of the risks and uncertainties frequently encountered by companies in the rapidly evolving biotechnology industry. If we do not address these risks, our business, financial condition, results of operations and growth prospects will be materially adversely affected.

***We have incurred significant losses since our inception, and we expect to continue to incur significant losses for the foreseeable future.***

Since our inception in 2015, we have incurred significant operating losses. Our net losses were $113.8 million $117.5 million and $86.1 million $113.8 million for the years ended December 31, 2022 December 31, 2023 and 2021, 2022, respectively. Our accumulated deficit was $317.9 million $435.4 million as of December 31, 2022 December 31, 2023. We expect to continue to incur increasing operating losses for the foreseeable future as we continue to develop our product candidates. In addition, we anticipate that our expenses will increase substantially if, and as, we:

- continue the clinical development of NKX101 NKX019 and NKX019; our other product candidates, including in new indications;
- continue scale up and optimization of manufacturing process and prepare for commercial manufacturing;
- advance additional product candidates to clinical trials, including product candidates under the collaboration with CRISPR Therapeutics AG ("CRISPR");
- develop our current product candidates for additional disease indications;
- seek to discover and develop additional product candidates;
- establish and qualify our own clinical- and commercial-scale clinical current good manufacturing practice ("cGMP"

facilities;

- submit a biologics license application ("BLA") or marketing authorization application ("MAA") for NKX101 NKX019 and/or NKX019 our other product candidates and/or seek marketing approvals for any of our other product candida that successfully complete clinical trials;
- seek regulatory approval of our product candidates in various jurisdictions for commercial sale;



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- maintain, expand and protect our intellectual property portfolio;
- acquire or in-license other product candidates and technologies;



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- incur additional costs associated with operating as a public company;
- develop or secure marketing, sales and distribution capabilities, either internally or with third parties, to support commercialization; and
- increase our employee headcount and related expenses to support the foregoing activities.

We may never succeed in any or all of these activities and, even if we do, we may never generate revenues that are significant or large enough to achieve profitability.

***We have never generated revenue from product sales and may never achieve or maintain profitability.***

We continue to incur significant research and development and other expenses related to ongoing operations and the development of our two lead product candidates, NKX101 and including NKX019. All of our product candidates will require substantial additional development time and resources before we would are be able to apply for or receive regulatory approvals and begin generating revenue from product sales. Neither the United Sates States Food and Drug Administration ("FDA") nor any other regulatory authority has approved NKX019, NKX101 NKX019 or any of our other product candidates, and we do not anticipate generating revenues from product sales unless and until such time as NKX019, NKX101 NKX019 or another of our product candidates has been approved by the FDA or another regulatory authority, if ever, and we are able to successfully market and sell a product candidate. Our ability to generate revenues from product sales depends on our, or potential future collaborators', success in:

- completing clinical development of our product candidates;

- seeking and obtaining regulatory approvals for product candidates for which we successfully complete positive clir trials, if any;
- launching and commercializing product candidates, by establishing a commercial infrastructure or, alternatively, collaborating with a commercialization partner;
- qualifying for adequate coverage and reimbursement by government and third-party payors for our product candidates;
- establishing, maintaining and enhancing a sustainable, scalable, reproducible and transferable manufacturing proc for each of our cell therapy product candidates;
- establishing and maintaining supply and manufacturing relationships with third parties that can provide adequate products and services, in both amount and quality, to support clinical development and the market demand for our product candidates, if approved;
- obtaining market acceptance of our product candidates as a viable treatment clinical option;
- addressing any competing technological and market developments;
- implementing additional internal systems and infrastructure, as needed;
- negotiating favorable terms in any collaboration, licensing or other arrangements into which we may enter and performing our obligations in such collaborations;
- maintaining, protecting and expanding our portfolio of intellectual property rights, including patents, trade secrets, know-how, and trademarks;
- avoiding and defending against third-party interference or infringement claims; and
- attracting, hiring and retaining qualified personnel.



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We anticipate incurring significant costs associated with commercializing any approved product candidate. Our expenses could increase beyond our current expectations if we are required by the FDA or other global regulatory authorities to perform clinical trials and/or other preclinical studies in addition to, or beyond the scope of, those that we currently anticipate being required to perform.



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Even if we are able to generate revenues from the sale of any approved products, we may not become profitable or be able to sustain or increase profitability on a quarterly or annual basis. Our failure to become and remain profitable could decrease the value of our company and impair our ability to raise capital, thereby limiting our research and development programs and efforts to expand our business or continue our operations.

***We will require additional capital, which, if available, may cause dilution to our stockholders, restrict our operations or require us to relinquish rights to our product candidates.***

We have financed our operations primarily through private placements of our preferred stock, proceeds from our previous collaboration with GlaxoSmithKline, proceeds from our IPO initial public offering ("IPO") completed in July 2020, proceeds from our underwritten public offering of our common stock completed in April 2022 (the "Secondary Offering"), and our "at the market" equity offering program (the "ATM Offering Program"). We estimate that we used the proceeds of our IPO primarily to advance our product candidates through preclinical studies and clinical trial programs, the construction of our manufacturing facility, and for working capital and general corporate purposes. We intend to continue to use the proceeds from our IPO Secondary Offering and our Secondary ATM Offering Program to, among other uses, advance NKX101 and NKX019 through further in clinical development. Developing However, developing pharmaceutical products and conducting preclinical studies and clinical trials is expensive. Advancing NKX019 or any product candidate into pivotal trials will require us to raise additional capital. As of December 31, 2022 December 31, 2023, we had cash, cash equivalents, restricted cash, and short-term investments of $354.9 million $250.9 million. Our research and development expenses increased from $63.4 million for the year ended December 31, 2021 to $90.9 million for the year ended December 31, 2022 to $96.8 million for the year ended December 31, 2023.

Until and unless we can generate substantial product revenue, we expect to finance our cash needs through the proceeds from our IPO and Secondary Offering, a combination of equity offerings and debt financings, including pursuant to our ATM Offering Program, and potentially through additional license and development agreements or strategic partnerships with third parties. Financing may not be available in sufficient amounts or on reasonable terms. In addition, market volatility resulting from the ongoing conflict conflicts in the Middle East and Ukraine, rising inflation, rising interest rates, or other factors could adversely impact our ability to access capital as and when needed. We have no commitments for any additional financing and will likely be required to raise such financing through the sale of additional securities. If we sell equity or equity-linked securities, our current stockholders may be diluted, and the terms may include liquidation or other preferences that are senior to or otherwise adversely affect the rights of our stockholders. Moreover, if we issue debt, we may need to dedicate a substantial portion of our operating cash flow to paying principal and interest on such debt and we may need to comply with operating restrictions, such as limitations on incurring additional debt, which could impair our ability to acquire, sell or license intellectual property rights which could impede our ability to conduct our business. Furthermore, the issuance of additional securities, whether equity or debt, by us, or the possibility of such issuance, may cause the market price of our common stock to decline.

If we raise additional funds through licensing or collaboration arrangements with third parties, we may have to relinquish valuable rights to our product candidates, or grant licenses on terms that are not favorable to us. In addition, we

may seek additional capital due to favorable market conditions or strategic considerations even if we believe we have sufficient funds for our current or future operating plans.



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Attempting to secure additional financing may also divert our management from our day-to-day activities, which may impair or delay our ability to develop our product candidates. In addition, demands on our cash resources may change as a result of many factors currently unknown to us including, but not limited to, delays or undesired outcomes from our cost-containment efforts, such as those related to our cap on future headcount growth, centralizing our operations to a single location, or subleasing portions of our leased corporate office space in South San Francisco, and any unforeseen costs we may incur as a result of preclinical study or clinical trial delays due to the COVID-19 pandemic health epidemics or other causes, and we may need to seek additional funds sooner than planned. planned as a result. Furthermore, if, in the future, one or more banks or financial institutions enter receivership or become insolvent in response to financial conditions affecting the banking system and financial markets, our ability to access our existing cash, cash equivalents and investments may be threatened and could have a material impact on our business and financial condition. If we are unable to obtain funding on a timely basis or at all, we may be required to undertake additional cost-containment measures and/or significantly curtail or stop one or more of our research or development programs.



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***Our business and the business or operations of our research partners and other third parties with whom we conduct business have been and could continue to be adversely affected by the effects of health epidemics, including the COVID-19 pandemic, in regions where we or third parties on which we rely have business operations.***

The COVID-19 pandemic and preventative measures taken to mitigate the impact of the pandemic disrupted economic activity and business operations worldwide, including the San Francisco Bay Area, where our primary operations are located. The emergence of another health epidemic, including future outbreaks of COVID-19 variants, could result in similar disruptions.

Our operations, as well as the operations of some of our contract research organizations ("CROs"), contract development and manufacturing organizations ("CDMOs"), and clinical trial sites, were impacted by the COVID-19

pandemic and may in the future be similarly impacted by further outbreaks of COVID-19 variants or other health epidemics. For example, we experienced some delays in construction of our cGMP manufacturing facilities and in our internal research efforts as a result of the COVID-19 pandemic. COVID-19 also caused global supply shortages of certain materials, such as certain raw materials, cell culture media, disposable plastics, and equipment, that we and our CDMOs use for research and cGMP manufacturing. Due to the COVID-19 pandemic, some of our CROs experienced employee turnover/attrition, delays, or disruptions and some of our clinical trial sites had to temporarily restrict enrollment into clinical protocols. Supply chain and operational disruptions due to COVID-19 contributed to certain enrollment delays in our NKX101 clinical trial. In addition, we had minor delays in setting up clinical sites in our NKX019 clinical trial due to COVID-19 restrictions due to repurposing of healthcare personnel and facilities to support local pandemic efforts. We will continue to monitor the impact of COVID-19 and any future waves of the COVID-19 pandemic or other health epidemics on our operations, including on continued enrollment in our NKX101 and NKX019 clinical trials, as well as on our collaboration partners, CROs, CDMOs, and clinical trial sites. The COVID-19 pandemic has also impacted, and may impact in the future, the regulatory authorities to which we are subject in our industry, which may, in turn, hamper or delay our clinical development efforts. We periodically interact with health authorities such as the FDA to obtain advice, or reach consensus, on our ongoing clinical trials, product development, and manufacturing activities. If FDA personnel prioritize pandemic related efforts, we may experience delays in obtaining periodic advice which may affect our ability to move our clinical programs forward into the next phase of development.

We cannot predict the potential future impacts of a further spread of COVID-19, including its variants, or the emergence of another health epidemic on us, our research partners, including CRISPR, and other third parties with whom we conduct business. As a result of the COVID-19 pandemic or other pandemic, epidemic or outbreak of an infectious disease, we have experienced and/or may experience disruptions that could severely impact our business, preclinical studies and clinical trials, including:

- delays or difficulties in enrolling patients in our clinical trials, including our ongoing NKX101 and NKX019 clinical tr
- delays or difficulties in clinical site initiation, including difficulties in recruiting clinical site investigators and clinical s staff and in training medical personnel on how to properly thaw and administer our product candidates;
- delays or difficulties in recruitment of key personnel;
- diversion of healthcare resources away from the conduct of clinical trials, including the diversion of hospitals servir as our clinical trial sites and hospital staff supporting the conduct of our clinical trials;
- interruption of key clinical trial activities, such as clinical trial site data monitoring, due to limitations on travel impos or recommended by federal or state governments, employers and others or interruption of clinical trial subject visit and study procedures, which may impact the integrity of subject data and clinical study endpoints;
- interruption or delays in the operations of the FDA or other regulatory authorities, which may impact review and approval timelines, including the review of Investigational New Drug ("IND") or other regulatory submissions for ou product candidates;



- interruption of, or delays in receiving, supplies of our product candidates, or materials necessary for production of product candidates, from our vendors or contract manufacturing organizations due to staffing shortages, productio

slowdowns or stoppages and disruptions in delivery or supply systems;

- interruption of, or delays in manufacture of our product candidates, including at our in-house manufacturing facility and CDMOs, due to staffing shortages, production slowdowns and disruptions or inability to procure critical raw materials or other supplies in a timely fashion;
- delays or disruptions in the planning, construction or qualification of our cGMP facility for commercial-scale manufacture of our product candidates;
- interruptions in preclinical studies due to restricted or limited operations at our laboratory facility;
- interruptions, or delays in receiving supplies and materials necessary for our business operations, and research ar development activities;
- increases in the cost of services or supplies necessary for our research and development activities; and
- interruption or delays to our discovery and clinical activities.

On January 30, 2023, it was announced that the U.S. public health emergency declarations related to COVID-19 will end on May 11, 2023. On January 31, 2023, the FDA indicated that it would soon issue a Federal Register notice describing how the termination of the public health emergency will impact the agency's COVID-19 related guidances, including the clinical trial guidance and updates thereto. At this point, it is unclear how, if at all, these developments will impact our efforts to develop and commercialize our product candidates.

The ultimate impact of the COVID-19 outbreak or a similar health epidemic is highly uncertain. The extent of any delays or impacts will depend on future developments that are highly uncertain and cannot be predicted with confidence, but these delays could have a material impact on our business, financial condition, and/or results of operations.

**Risks Related to Our Business and Industry**

***Our business depends upon the success of our CAR NK cell technology platform.***

Our success depends on our ability to utilize our chimeric antigen receptor-natural receptor natural killer cell ("CAR NK") cell technology platform to generate product candidates, to obtain regulatory approval for product candidates derived from it, and to then commercialize our product candidates addressing one or more indications. A Phase 1 clinical trials trial to evaluate our first two lead CAR NK cell product candidates candidate, NKX019, in humans with certain hematological malignancies is ongoing. ongoing, and preparations for an additional Phase 1 clinical trial for NKX019 in patients with lupus nephritis ("LN") are underway. Although NKX101 has also been in a Phase 1 clinical trial for certain hematologic malignancies, we have stopped enrolling new patients in that clinical trial. Although we may explore our options for implementing certain changes in that program, we cannot guarantee that we will pursue any further development of NKX101 in the near future or at all. All of our product candidates developed from our technology platform will require significant additional clinical and non-clinical development, review and approval by the FDA or other regulatory authorities in one or more jurisdictions, substantial investment, access to sufficient commercial manufacturing capacity and significant marketing efforts before they can be successfully commercialized. If any of our product candidates encounter safety or efficacy problems, developmental delays or regulatory issues or other problems, such problems could impact the

development plans for our other product candidates because all of our product candidates are based on the same core CAR NK cell engineering technology.



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***Utilizing CAR NK cells represents a novel therapeutic approach, to the treatment of cancer, and we must overcome significant challenges in order to develop, commercialize and manufacture our product candidates.***

We have concentrated our research and development efforts on utilizing CAR NK cells as an immuno-oncology therapy. immunotherapy for the treatment of certain diseases, specifically cancers and, most recently, autoimmune diseases. To date, the FDA has approved only a few limited number of cell-based therapies for commercialization as treatments for cancer, no cell-based therapies have been approved for commercial use for the treatment of an autoimmune disease, and no natural killer ("NK")-based cell therapy has been approved for commercial use by any regulatory authority. The processes and requirements imposed by the FDA or other applicable regulatory authorities may cause delays and additional costs in obtaining approvals for marketing authorization for our product candidates. Because our CAR NK cell platform product candidates are novel, and cell-based therapies are relatively new, especially as potential treatments for autoimmune diseases, regulatory agencies may lack precedents for evaluating product candidates like our CAR NK cell product candidates. As the cell therapy field develops further, the processes and requirements imposed by the regulatory agencies may evolve in a manner that adversely impacts us. The novelty of our product candidates may lengthen the regulatory review process, including the time it takes for the FDA to review our IND applications if and when submitted, increase our development costs and delay or prevent approval and commercialization of our CAR NK cell platform product candidates.



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Use of CAR NK cell therapies may not gain the acceptance of the public or the medical community, especially for the treatment of autoimmune diseases. The patients with autoimmune disease that we will target with NKX019 are typically not at risk of near-term death, even if they may suffer life-threatening symptoms, so the patients will need to deem the benefits of cell therapy to be worth the risk of unknown potential adverse side effects.

Additionally, advancing novel immuno-oncology therapies immunotherapies creates significant challenges for us, including:

- enrolling sufficient numbers of patients in clinical trials;
- training a sufficient number of medical personnel on how to properly thaw and administer our cells, especially in ar solid tumor trial wherein the cells are given through a procedure by trained medical doctors;
- training a sufficient number of medical and clinical laboratory personnel in the proper collection and handling of clinical samples in our clinical trials to enable a sufficient understanding of CAR NK cell pharmacokinetics and pharmacodynamics for the design of an optimal dosing regimen;
- educating medical personnel regarding the potential side-effect profile of our cells and, as the clinical program progresses, on observed side effects with the therapy;
- developing a reliable and safe and an effective means of genetically modifying our cells;
- manufacturing and cryopreservation our cells on a large scale and in a cost-effective manner;
- sourcing starting material suitable for clinical and commercial manufacturing; and
- establishing sales and marketing capabilities, as well as developing a manufacturing process and distribution netw to support the commercialization of any approved products.

We must be able to overcome these challenges in order for us to develop, commercialize and manufacture our product candidates utilizing CAR NK cells.

***Certain aspects of the function and production of CAR NK cells are currently unknown or poorly understood, and may only become known through further preclinical testing and clinical trials. Any potential re-engineering required may result in delays and additional expenses.***

Current CAR NK cell therapy is a relatively new field. To date, no CAR NK cell therapies have been licensed in the United States or elsewhere to treat cancer, and no cell therapies of any type have been licensed for the treatment of autoimmune diseases. The history of manufacturing CAR NK cells for clinical use is limited. Our understanding of NK cell biology is continuously expanding and this is particularly true in relation to autoimmune diseases where there is limited clinical data available and where we have no prior experience. If we find that our current manufacturing processes are inadequate, or should we identify opportunities for material improvement, adaptation of process improvements may require significant additional time and resources to complete. As studies utilizing NK cell biology develop, new information may become available requiring us to change our product candidate. Process improvements or new clinical data might also necessitate new pre-clinical studies and clinical protocols to establish product comparability. If we are unable to show comparability after a process change, further changes to our manufacturing process and/or clinical trials will be required. For example, if sufficient comparability is not shown, we may be required to repeat one or more clinical trials. A requirement to run a new clinical trial or repeat a clinical trial would delay clinical development and commercialization of the relevant product candidate.

Prior clinical experience with NK cell therapy is has been predominantly based on cells from haplomatched donors, i.e., at least half of the major Human Leukocyte Antigen ("HLA"), types matched between donor and recipient. Our ongoing NKX101 Phase 1 clinical trial evaluated trials, however, are currently evaluating product candidates manufactured from patient specific haplo-related donors and completely unrelated donors (used off the shelf) (i.e. used "off-the-shelf"). Based

on preliminary clinical results, we have moved forward into expansion cohorts and further development of NKX101 using off the shelf product only. There is a risk that the our early clinical results from our Phase 1 clinical trials using off-the-shelf NKX019 and NKX101 may not be reflective of future clinical trial results which may require us to re-evaluate HLA matching. If it becomes apparent through future preclinical testing or clinical trials that such matching is required, the production of NKX019, NKX101, NKX019, and our other product candidates as



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standardized, off-the-shelf products for all patients will not be achievable. Instead, we would need to establish an alternative approach for each of our product candidates to achieve coverage of the addressable patient population.

Furthermore, the killer immunoglobulin-like receptor ("KIR"), is found on the surface of NK cells and recognizes certain HLA types. If there is a match between KIR and the HLA type, KIR acts as a natural inhibitor of



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NK activity, thereby serving to prevent immune reactions against an individual's own cells. In both NKX101 and NKX019 our Phase 1 clinical trials, the product candidate is administered regardless of specific KIR phenotype. As we continue our clinical trials, we may discover that retaining a KIR mismatch is required to achieve clinically meaningful activity, and we may need to factor KIR mismatch into the donor and product selection process for patients enrolled in our clinical trials. We also continue to analyze for donor characteristics that correlate with clinical activity and we may decide to select for donors to enhance activity of our products in the clinic.

In addition, with respect to the development of NKX101 for the treatment of malignancies, tumors are sometimes able to evade detection by naturally occurring NK cells by shedding the NKG2D ligands found on malignant cells. While NKX101 has been engineered to resist this shedding mechanism, there can be no guarantee that tumor cells will not retain or regain the ability to shed NKG2D ligand completely despite the presence of NKX101, which would give such tumors a degree of resistance against NKX101. If we discover that tumors develop a resistance to NKX101 as a result of such NKG2D ligand shedding, we will need to reengineer NKX101 to counteract this effect, or we may need to change or abandon our development efforts for NKX101.

Finally, there is limited history Any reengineering of CAR NK cells manufacturing for clinical our product candidates or change to the processes we use and to manufacture our understanding product candidates could require the redesign of

NK cell biology is continuously expanding. If we find that our current manufacturing processes are inadequate, or should we identify opportunities for material improvement, adaptation of process improvements may require significant periods of time. Process improvements might also necessitate new pre-clinical studies and clinical protocols to establish product comparability. If we are unable to show comparability after a process change, further changes to our manufacturing process and/or clinical trials will be required. For example, if sufficient comparability is not shown, we may be required to repeat one or more clinical trials.

The foregoing processes would require us to redesign the clinical protocols and clinical trials for our product candidates, and could require significant additional time and resources to complete, and the participation of a significant number of additional clinical trial participants and donors, any of which would delay the clinical development of our product candidates and their eventual commercialization.

***Clinical development involves a lengthy and expensive process with an uncertain outcome, and we may encounter substantial delays due to a variety of reasons outside our control.***

Clinical trials are expensive, time consuming and subject to substantial uncertainty. Failure can occur at any time during the clinical trial process, due to scientific feasibility, safety, efficacy, changing standards of medical care and other variables. The results from preclinical testing or early clinical trials of a product candidate may not predict the results that will be obtained in later phase clinical trials of the product candidate. We, the FDA, or other applicable regulatory authorities may suspend or terminate clinical trials of a product candidate at any time for various reasons, including, but not limited to, a belief that subjects participating in such trials are being exposed to unacceptable health risks or adverse side effects, or other adverse initial experiences or findings. The FDA, or other applicable regulatory authorities may also require us to conduct additional preclinical studies or clinical trials due to negative or inconclusive results or other reasons, fail to approve the raw materials, manufacturing processes or facilities of third-party manufacturers upon which we rely, find deficiencies in the manufacturing processes or facilities upon which we rely, and change their approval policies or regulations or their prior guidance to us during clinical development in a manner rendering our clinical data insufficient for approval. In addition, data collected from clinical trials may not be sufficient to support the submission of a BLA, MAA or other applicable regulatory filings. We cannot guarantee that any clinical trials that we may plan or initiate will be conducted as planned or completed on schedule, if at all.

A failure of one or more of our clinical trials could occur at any stage, and any failure could prevent us from obtaining the FDA and other regulatory approvals necessary to commercialize our product candidates. Events that may prevent successful initiation, timely completion, or positive outcomes of our clinical development include, but are not limited to:

- delays in obtaining regulatory approval to commence a clinical trial;



- delays in reaching agreement on acceptable terms with prospective clinical trial sites or CROs, the terms of which be subject to extensive negotiation and may vary significantly among different trial sites and CROs;

- our inability to recruit sufficient patients for our clinical trials in a timely manner or at all;
- delays in achieving a sufficient number of clinical trial sites or obtaining the required institutional review board ("IRI approval at each clinical trial site;
- imposition of a temporary or permanent clinical hold by us or by the FDA or other regulatory agencies based on emerging data;
- clinical sites deviating from trial protocol or dropping out of a trial;
- our inability to obtain long-term follow-up data due to patient drop out or in cases where patients elect to receive p protocol treatment for their disease before it progresses;
- suspension or termination of a clinical trial by the IRB of the institutions in which such trials are being conducted o the Data Safety Monitoring Board ("DSMB") (where applicable);
- delays in sufficiently developing, characterizing, scaling up, optimizing or controlling a manufacturing process suita for clinical trials, or production delays, shutdowns or setbacks at any of our contract manufacturers;
- delays due to additional regulatory, site and clinical trial participant approvals required if a product candidate, especially a product candidate custom manufactured for a specific patient, does not meet the required specificatio
- delays in reaching a consensus with regulatory agencies on the design or implementation of our clinical trials;
- changes in regulatory requirements or guidance that may require us to amend or submit new clinical protocols, or such requirements may not be as we anticipate;
- changes in the standard of care or treatment landscape on which a clinical development plan was based, which m require new or additional trials;
- insufficient quantities or inadequate quality of our product candidates or other materials necessary to conduct preclinical studies or clinical trials of our product candidates, including potential limitations to the availability of age such as fludarabine ("Flu"), cyclophosphamide ("Cy"), or other agents administered to patients prior to treatment o combination with our product candidates; candidates or delays in the manufacturing of product candidates due to scale up or improvements to our manufacturing process;
- clinical trials of our product candidates producing negative or inconclusive results, which may result in our decidin regulators requiring us, to conduct additional clinical trials or abandon product development programs;
- failure of enrolled patients in foreign countries to adhere to clinical protocol as a result of differences in healthcare services or cultural customs, or additional administrative burdens associated with foreign regulatory schemes; or
- failure of ourselves or any third-party manufacturers, contractors or suppliers to comply with regulatory requiremer maintain adequate quality controls, or be able to provide sufficient product supply to conduct and complete preclin studies or clinical trials of our product candidates.

For example, following a recent interim evaluation of response data in our NKX101 clinical trial for the treatment of relapsed or refractory acute myeloid leukemia ("r/r AML") or higher risk myelodysplastic syndromes ("MDS"), we decided to prioritize our planned NKX019 Phase 1 trial for the treatment of LN and deprioritize our NKX101 program. Enrollment in our NKX101 clinical trial has been closed. We plan to evaluate the design of the clinical trial, dosing schedule, and manufacturing processes before pursuing any further development of NKX101, although we cannot guarantee that we will pursue any further development of NKX101 in the near future or at all.



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In addition, disruptions Disruptions caused by or related to the pandemics, epidemics, or outbreaks of infectious disease, including future outbreaks of COVID-19 pandemic variants, may increase the likelihood that we encounter such difficulties or delays in initiating, enrolling, conducting or completing our planned and ongoing preclinical studies and clinical trials, as applicable. For example, we periodically interact with health authorities such as the FDA to obtain advice, or reach consensus, on our ongoing clinical trials, product development, and manufacturing activities. If these health authorities need to prioritize efforts related to futurewaves a pandemic, epidemic, or outbreak of the infectious disease, including future outbreaks of COVID-19 pandemic or other health epidemics, variants, then we may experience delays in obtaining periodic advice which may affect our ability to move our clinical programs forward into the next phase of development. For instance,

Moreover, principal investigators for our clinical trials may serve as scientific advisors or consultants to us from time to time and receive compensation in 2020, the FDA temporarily postponed routine surveillance inspections connection with such services. Under certain circumstances, we may be required to report some of domestic manufacturing facilities and implemented various policies and systems these relationships to prioritize domestic inspections in response to the COVID-19 pandemic The FDA resumed conducting domestic surveillance inspections on February 7, 2022, but if the FDA or comparable foreign regulatory authorities outside authorities. The FDA or comparable foreign regulatory authority may conclude that a financial relationship between us and a principal investigator has created a conflict of interest or otherwise affected the U.S. adopt similar restrictions or other policy measures in response to future waves interpretation of the COVID-19 pandemic trial. The FDA or other health epidemics comparable foreign regulatory authority may therefore question the integrity of the data generated at the applicable clinical trial site and the utility of the clinical trial itself may be jeopardized. This could result in the future, we may experience delays a delay in their regulatory activities. If global health concerns prevent approval, refusal to accept or rejection, of our marketing applications by the FDA or comparable foreign regulatory authority, as the case may be, and may ultimately lead to the denial of marketing approval of our product candidates.

We may, from time to time, such as for our planned NKX019 clinical trial for the treatment of LN, establish partnerships in relation to our clinical trials, receiving advisory services and other regulatory authorities support from conducting their regular inspections, reviews or other regulatory activities, it could significantly impact third parties. For example, we have partnered with Lupus Therapeutics, the ability clinical research affiliate of the FDA Lupus Research Alliance, to accelerate development of NKX019 through select sites of the Lupus Clinical Investigators Network ("LuCIN"). Although we believe that these partnerships will enable us to accelerate the development of our product candidates and clinical trials, we cannot guarantee that such collaborations will be successful and, in the event they are not, we may lose our competitive advantage and/or other regulatory authorities to timely review and process our regulatory submissions.incur additional costs.

As regulatory expectations regarding the genome editing of cellular therapies continue to evolve with data emerging on chromosomal abnormalities from CAR T therapies or other sources, our pipeline programs that involve gene-edited cells, including an allogeneic, off-the-shelf CAR NK cell product candidate targeting the CD70 tumor antigen ("NKX070") and an allogeneic, off-the-shelf product candidate that comprises both engineered NK cells and engineered T cells ("NK+T") programs , on which we are collaborating with CRISPR, could be impacted. For example, the FDA may require additional or new release assays for manufactured lots of any product candidates that have been gene edited, which, as a result, could slow development of our gene-edited product candidates and increase expenses.

In addition, the FDA's and other regulatory authorities' policies with respect to clinical trials may change and additional government regulations may be enacted. For example, passed in December 2022, the Food and Drug Omnibus Reform Act ("FDORA") requires sponsors to develop and submit a diversity action plan for each Phase 3 clinical trial or any other "pivotal study" of a new drug or biological product. These plans are meant to encourage the enrollment of more diverse patient populations in late-stage clinical trials of FDA-regulated products. Specifically, actions plans must include the sponsor's goals for enrollment, the underlying rationale for those goals and an explanation of how the sponsor intends to meet them. In addition to these requirements, the legislation directs the FDA to issue new guidance on diversity action plans. If we are slow or unable to adapt to changes in existing requirements or the adoption of new requirements or policies governing clinical trials, our development plans may be impacted.

If we experience further delays in the initiation, enrollment, or completion of any preclinical study or clinical trial of our product candidates, or if any preclinical studies or clinical trials of our product candidates are canceled, the commercial prospects of our product candidates may be materially adversely affected, and our ability to generate product revenues from any of these product candidates will be delayed or not realized at all. In addition, any delays in completing our clinical trials may increase our costs and slow down our product candidate development and approval process.

***Our business is highly dependent on the clinical success of our product candidates, and on the clinical success of NKX101 and NKX019, in particular, and we may fail to develop NKX101, NKX019 and/or our other product candidates successfully or be unable to obtain regulatory approval for them.***

We cannot guarantee that NKX101 and NKX019 or any of our other product candidates, will be safe and effective, or will be approved for commercialization, on a timely basis or at all. Although certain of our employees have prior experience with clinical trials, regulatory approvals, and cGMP manufacturing, we have not previously completed any clinical trials or submitted a BLA to the FDA, or similar regulatory approval filings to comparable foreign authorities, for any product candidate, and we cannot be certain that NKX101 and NKX019 or any of our other product candidates will be successful in clinical trials or receive regulatory approval. In particular, we have limited prior experience in developing treatments for autoimmune diseases and our resources and processes have historically been focused on the development of NK cell therapies for cancer. The FDA, and other comparable global regulatory authorities can delay, limit or deny approval of a product candidate for many reasons. For further details about such reasons, see "*—Clinical development involves a lengthy and expensive process with an uncertain outcome, and we may encounter substantial delays due to a variety of reasons outside our control.*" Any delay in obtaining, or inability to obtain, applicable regulatory approval will delay or harm our ability to successfully commercialize NKX101, NKX019 or any of our other product candidates, especially and could materially adversely affect our business, financial condition, results of operations and growth prospects.



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NKX101 NKX019 is in an early-stage Phase I clinical trial development and is subject to the risks inherent in drug development. In April December 2022, we announced preliminary the opening of three dose-expansion cohorts in our Phase I clinical trial to evaluate NKX019 monotherapy and NKX019 in combination with rituximab in patients with large B-cell lymphoma ("LBCL"). Preliminary results from these cohorts did not meet our expectations, based on the clinical experience of NKX019 in the dose finding portion of the Phase 1 study. As a result, we are no longer enrolling patients in those dose-expansion cohorts. In October 2023, we announced the opening of a new cohort in our clinical trial of NKX019 for the treatment of B-cell malignancies. The new cohort introduces a compressed dosing schedule, where patients receive NKX019 doses on Days 0, 3, and 7 following standard lymphodepleting conditioning ("LD"), rather than Days 0, 7 and 14 following LD in prior cohorts. The new cohort schedule is designed to intensify exposure to NKX019 in the first week after LD, when internal data suggest that NKX019 exposure is highest. We may also use data from this new cohort to inform future dosing strategies across our platform.

Due to the commercial availability of multiple therapeutic agents that target CD19, as well as others that are in various stages of development, we have had significant difficulty, and may continue to have significant difficulty, enrolling subjects who have not previously been exposed to a CD19-directed cellular therapy into our Phase 1 clinical trial of NKX019 for the treatment of B-cell malignancies, which has impacted our ability to obtain data about NKX019 activity in certain patient

populations and slowed enrollment. If we are unable to enroll sufficient numbers of patients who have not previously received CD19 CAR T-cell therapy in our current or future NKX019 clinical trials in a timely manner, the clinical development and subsequent commercialization of NKX019 for treatment of those patient populations may be delayed or may not be possible at all.

In October 2023, we announced that we had received clearance of an Investigational New Drug ("IND") application by the FDA to evaluate NKX019 for the treatment of LN. The planned multi-center, open label, dose escalation Phase 1 clinical trial will evaluate the safety and clinical activity of NKX019 in patients with refractory LN. There are no cell therapies licensed to date in the United States or elsewhere to treat autoimmune diseases and we have no prior experience in developing treatments for autoimmune diseases. We cannot guarantee that our development of NKX019 for the treatment of LN will be successful. We may also choose to develop NKX019 for additional autoimmune or other indications, but we may not be able to advance NKX019 through the development process for any of these additional indications. Even if we receive regulatory approval to market NKX019 for the treatment of LN or any additional indications, NKX019 for any of these indications may not be successfully commercialized, widely accepted in the marketplace or more effective than other commercially available alternatives. If we are unable to successfully develop and commercialize NKX019 for LN or these additional autoimmune indications, our commercial opportunity will be limited, and our business, financial condition and growth prospects will be materially adversely affected.



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If our ongoing Phase 1 or later clinical trials of NKX019 encounter safety, efficacy, manufacturing problems, enrollment issues, development delays, regulatory issues, or other problems, our development plans for NKX019 could be significantly impaired, which could materially adversely affect our business, financial condition, results of operations and growth prospects.

NKX101, our other clinical-stage product candidate, is also subject to the risks inherent in drug development. NKX101 has been studied in dose-expansion cohort in a Phase 1 clinical trial for the treatment of blood cancers including r/r AML or MDS. Following a recent interim evaluation of the clinical response data, we decided to deprioritize the clinical development of NKX101. Further enrollment in the trial has been closed. We do not plan to pursue any further development of NKX101 without first evaluating our options for the trial design, dosing regimen, and manufacturing process for the program. We cannot guarantee that we will pursue any further development of NKX101 in the near future or at all. Even if we do decide in the future to further develop NKX101 for the treatment of relapsed r/r AML or refractory acute myeloid leukemia ("r/r

AML") or higher risk myelodysplastic syndromes ("MDS"). MDS, we may not be successful in doing so. If clinical development of NKX101 is restarted in the ongoing future and the Phase 1 or our later clinical trials of NKX101 for the treatment of AML or MDS encounter concerning safety signals, efficacy concerns, manufacturing problems, enrollment issues, development delays, regulatory issues, or other problems, our development plans for NKX101 could be significantly impaired, which could materially adversely affect our business, financial condition, results of operations and growth prospects.

We may also develop If we restart development of NKX101 for additional indications if we at a later point and are able to obtain clinical proof-of-concept from our NKX101 Phase 1 trials trial for blood cancers including r/r AML and MDS. MDS, we may also develop NKX101 for additional indications. We may not be able to advance any of these indications through the development process. The potential development of NKX101 for treating solid tumors, for example, would be subject to a number of risks including a hostile tumor microenvironment and trafficking to tumor site. The development of treatments to treat solid tumors often requires larger and more expensive clinical trials than for treating blood cancers. Even if we receive regulatory approval to market NKX101 for the treatment of any of these additional indications, any such additional indications may not be successfully commercialized, widely accepted in the marketplace or more effective than other commercially available alternatives. If we are unable to successfully develop and commercialize NKX101 for these additional indications, our commercial opportunity will may be limited.

Furthermore, the potential development of because NKX019 and NKX101 for treating solid tumors is subject to a number of risks related to use of cell therapies in general including a hostile tumor microenvironment and trafficking to tumor site. Additional risks from direct liver delivery of a cell therapy using a catheter through the hepatic artery generally include potential damage to arteries from the catheter placement itself, from use of imaging contrast, radiation exposure, and differences between catheter models potentially introducing variability into the observed clinical effects. The development of treatments to treat solid tumors often requires larger and more expensive clinical trials than for treating blood cancers.

In December 2022, we announced data from the dose escalation portion of the multi-center Phase 1 clinical trial of NKX019 for the treatment of B-cell malignancies. The dose-expansion portion of the Phase 1 study is ongoing. NKX019 is being investigated in dose expansion cohorts as a combination therapy with rituximab, as well as a monotherapy, in both patients with large B-cell lymphoma ("LBCL") who have previously received autologous CD19 CAR T-cell therapy and those who have not. Due to the availability of multiple commercially available agents that target CD19, as well as others that are in various stages of commercialization, we have had increasing difficulty, and may continue to have increased difficulty, enrolling subjects into trials with NKX019 who have not previously been exposed to a CD19- directed cellular therapy. This could impact the ability to obtain data about NKX019 activity in certain patient populations and slow enrollment. If our ongoing Phase 1 or later clinical trials of NKX019 encounter safety, efficacy, manufacturing problems, enrollment issues, development delays, regulatory issues, or other problems, our development plans for NKX019 could be significantly impaired, which could materially adversely affect our business, financial condition, results of operations and growth prospects. Furthermore, because NKX101 and NKX019 are our most advanced product candidates, and because our other product candidates are based on similar technology, if our clinical trials of NKX101 NKX019 or NKX019 NKX101

experience any of the foregoing issues, our development plans for our other product candidates in our pipeline could also be significantly impaired, which could materially adversely affect our business, financial condition, results of operations and growth prospects.

We intend to may develop our product candidates both as monotherapy and or potentially as combination therapy a common form of cancer treatment, with one or more currently approved cancer therapies. Even if any product candidate we develop were to receive marketing approval or be commercialized for use in combination with other existing therapies, we would continue to be subject to the risks that the FDA or similar regulatory authorities outside of the United States could revoke approval of the combination therapy used with our product candidate or that safety, efficacy, manufacturing or supply issues could arise with these existing therapies. This could result in our own products being removed from the market or being less successful commercially.

We may also evaluate our product candidates in combination with one or more other cancer therapies that have not yet been approved for marketing by the FDA or similar regulatory authorities outside of the United States. If the FDA or similar regulatory authorities outside of the United States do not approve these other drugs or revoke their approval of, or if safety, efficacy, manufacturing, or supply issues arise with, the drugs we choose to evaluate in combination with any product candidate we develop, we may be unable to obtain approval of or market our product candidates.



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***Clinical data supporting the effectiveness of CD19-targeted cell therapies against autoimmune disease are limited, and CD19-targeted CAR NK cell therapies, such as NKX019, may not provide the same, or any, therapeutic benefit against LN or other autoimmune diseases, or be competitive with respect to other CD19-targeted therapies for the treatment of autoimmune disease.***

46 Although we believe that our allogeneic CD19-targeting CAR NK cell product candidate NKX019 may have disease-modifying potential in autoimmune disease, such as LN, the use of CD19-targeted CAR cell therapies, and, in particular, allogeneic CD19 CAR NK cell therapies, represents a novel approach for the treatment of autoimmune disease, and is supported by limited clinical data. To date, no cell therapies have been approved by the FDA for the treatment of autoimmune disease. We cannot guarantee that our planned clinical trial for NKX019 in LN and any other future clinical development of NKX019 for the treatment of autoimmune diseases will be successful. Our belief that NKX019 may be effective as a treatment for autoimmune disease is based largely on our understanding of the mechanism behind the

positive clinical data reported by certain academic groups for the use of a CD19 CAR T-cell therapy in a limited number of patients with autoimmune disease, as well as on our own in vitro studies showing that NKX019 can kill B-cells in peripheral blood mononuclear cells ("PBMCs") obtained from patients with autoimmune diseases and observations regarding the effect of NKX019 on B-cells from our ongoing NKX019 Phase 1 clinical trial in patients with non-Hodgkin lymphoma ("NHL"). We have made certain assumptions regarding the mechanism of action responsible for the preliminary efficacy shown in the reported studies and how that mechanism of action and our own in vitro data and data from our NKX019 trial in NHL will translate to the response of patients with autoimmune diseases, such as LN, to NKX019, which may or may not be correct. We cannot know with any certainty whether NKX019 will be effective against LN, other forms of systemic lupus erythematosus ("SLE"), or any other autoimmune disease, or whether NKX019 will be competitive as a treatment for such indications against CD19 CAR T cell therapies. We also face competition from a large number of cell therapy companies with capabilities and expertise in oncology who are also advancing development programs in autoimmune diseases, which may impact our ability to successfully develop and commercialize NXK019. For further details about such reasons, see "—

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*Enrollment and retention of patients in clinical trials is an expensive and time-consuming process and could be delayed, made more difficult or rendered impossible by multiple factors outside our control*" and "—*If we fail to compete effectively with academic institutions and other biopharmaceutical companies that develop similar or alternatives to cellular immunotherapy product candidates, our business will be materially adversely affected*." If NKX019 is shown to not be sufficiently effective against LN or other autoimmune diseases in clinical trials, we experience delays in our ability to advance NKX019 through clinical development for LN or other autoimmune diseases, or we are unable to successfully compete against other companies in the development and commercialization of NKX019, the commercial prospects of NKX019, as well as our business, financial condition and growth prospects, would be materially adversely affected.

***Enrollment and retention of patients in clinical trials is an expensive and time-consuming process and could be delayed, made more difficult or rendered impossible by multiple factors outside our control.***

Identifying and qualifying patients to participate in our clinical trials is critical to our success. Clinical trials of a new product candidate require the enrollment of a sufficient number of patients, including patients who are suffering from the disease that the product candidate is intended to treat and who meet other eligibility criteria. The rates of patient enrollment, a significant component in the timing of clinical trials, are affected by many factors, including:

- our ability to open clinical trial sites;
- the size and nature of the patient population;
- the design and eligibility criteria of the clinical trial;
- the proximity of subjects to clinical sites;
- the patient referral practices of physicians; physicians, including as a result of their assessment of the clinical trial parameters;
- changing medical practice patterns or guidelines related to the indications we are investigating;

- competing clinical trials or approved therapies which present an attractive alternative to patients and their physicia
- perceived risks and benefits of the product candidate under study, including as a result of adverse effects observe similar or competing therapies;
- our ability to obtain and maintain patient consents due to various reasons;
- the risk that enrolled subjects will drop out or die before completion of the trial;
- patients failing to complete a clinical trial or returning for post-treatment follow-up;
- our ability to manufacture the requisite supply of our product candidates for a patient and our clinical trials; and
- any failure or any delay by us or by our clinical sites to obtain sufficient quantities of components and supplies necessary for the conduct of our clinical trials, including any inability to obtain agents such as cyclophosphamide, fludarabine, Cy, Flu, or other agents administered to patients prior to treatment or in combination with our product candidates.

In addition, we We need to compete with many ongoing clinical trials and approved therapies to recruit patients into our expected clinical trials. Our clinical trials may also compete with other clinical trials of product candidates that are in a similar cellular immunotherapy area as our product candidates, and this competition could reduce the number and types of patients available to us, because some patients who might have opted to enroll in our trials may instead opt to enroll in a trial being conducted by one of our competitors. Since For example, due to the commercial availability of multiple therapeutic agents that target CD19 for the treatment of cancer, as well as others that are in various stages of development, we have had significant difficulty in our Phase 1 NKX019 clinical trial for the treatment of B-cell malignancies and may continue to have significant difficulty in our current or future NKX019 clinical trials for certain indications, including B-cell malignancies, enrolling subjects who have not previously been exposed to a CD19-directed cellular therapy. Additionally, for our ongoing NKX019 clinical trial for the treatment of cancer, our planned NKX019 clinical trial for the treatment of LN, and any future NKX019 clinical trials of ours for the treatment of other autoimmune diseases, the number of qualified clinical investigators is limited, so we may conduct some of our clinical trials at the same clinical trial sites that some of our competitors use, which will reduce the number of patients who are available for our clinical trials at such clinical trial site. A number of cell therapy companies have recently announced plans for clinical trials for the treatment of LN and/or other autoimmune diseases, which may increase competition in the future for investigators and/or patients for our planned NKX019 clinical trial for the treatment of LN and any other NKX019 clinical trials that we may initiate in the future for the treatment of other autoimmune diseases. Furthermore, we intend to use Cy as the LD prior to treatment with NKX019 in our planned NKX019 clinical trial for the treatment of LN. If this is ineffective or we decide to change the protocol to use a combination of Flu and Cy, as the LD, physicians may choose to refer patients to other clinical trials conducted by

one of our competitors. If we are unable to enroll a sufficient number of patients in our clinical trials in a timely manner, our completion of clinical trials may be delayed or may not be achieved, which would prevent us from further developing or commercializing our product candidates. candidates in certain patient subpopulations or at all.



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The clinical development of our product candidates depends on our ability to manufacture and provide the requisite supply of our product candidates for our clinical trials. Any failure or delays by us to manufacture and provide our product candidates in sufficient quantity and quality for the conduct of our clinical trials, may delay our ability to enroll and treat patients in, or complete, our current or future clinical trials of our product candidates on time, if at all. For further details regarding risks related to the manufacture of our product candidates, see "Risks Related to Manufacturing" below, including "

*47—Our manufacturing process is novel and complex, and we may encounter difficulties in production, or difficulties with internal manufacturing, which would delay or prevent our ability to provide a sufficient supply of our product candidates for clinical trials or our products for patients, if approved."*

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The clinical development of our product candidates also depends on the availability of a sufficient supply of certain other materials and agents used in our clinical trials. For example, certain of our clinical trial protocols require the use of fludarabine and cyclophosphamide, Flu and/or Cy, agents which are routinely used in oncology studies, and which we use in certain of our clinical trial protocols to condition patients for treatment with our product candidates. Further, we may develop certain of our product candidates as a combination therapy with other cancer therapies, which would require the availability and use of those therapeutic agents in certain of our clinical trial protocols. Recently, the FDA reported a shortage of fludarabine and it is uncertain how long the fludarabine shortage may last. Certain of our clinical trial sites have reported that they are experiencing a shortage of fludarabine, which has resulted in some enrollment delays. We do not know how long the fludarabine shortage may last. Any failure or delays by us or by our clinical sites to obtain sufficient quantities of fludarabine or our product candidates and other components and agents necessary for the conduct of our clinical trials, may delay our ability to enroll and treat patients in, or complete, our current or future clinical trials of our product candidates on time, if at all.

If we are unable to enroll a sufficient number of patients in our clinical trials in a timely manner, our completion of clinical trials may be delayed or may not be achieved, which would prevent us from further developing or commercializing

our product candidates candidates.

***Our preclinical pipeline programs may experience delays or may never advance to clinical trials, which would adversely affect our ability to obtain regulatory approvals or commercialize these programs on a timely basis or at all.***

In order to obtain FDA or other regulatory authority approval to market a new biological product we must demonstrate proof of safety, purity, potency and efficacy in humans. To meet these requirements, we will have to conduct adequate and well-controlled clinical trials. Before we can commence clinical trials for a product candidate, we must complete extensive preclinical testing and studies that support our planned INDs in the United States. We began clinical development for our first product candidate, Other than NKX019 and NKX101, in 2020 and our second product candidate, NKX019, in 2021, and the rest all of our programs, including NKX070, are in preclinical development. We cannot be certain of the timely completion or outcome of our preclinical testing and studies and cannot predict if the FDA will accept our proposed clinical programs or if the outcome of our preclinical testing and studies will ultimately support the further development of our programs. As a result, we cannot be sure that we will be able to submit INDs or similar applications for our preclinical programs on the timelines we expect, if at all, and we cannot be sure that submission of INDs or similar applications will result in the FDA or other regulatory authorities allowing clinical trials to begin.

Conducting preclinical testing is a lengthy, time-consuming and expensive process. The length of time may vary substantially according to the type, complexity and novelty of the program, and often can be several years or more per program. Any delays in preclinical testing and studies conducted by us or potential future partners may cause us to incur additional operating expenses. The commencement and rate of completion of preclinical studies and clinical trials for a product candidate may be delayed by many factors, including, for example:



- inability to generate sufficient preclinical or other in vivo or in vitro data to support the initiation of clinical trials;
- delays in reaching a consensus with regulatory agencies on acceptable clinical trial design or manufacturing proce and
- the FDA not allowing us to rely on previous findings of safety and efficacy for other similar but approved products a published scientific literature.

Moreover, because standards for pre-clinical assessment are evolving and may change rapidly, even if we reach an agreement with the FDA on a pre-IND proposal, the FDA may not accept the IND submission as presented, in which case patient enrollment would be placed on partial or complete hold and treatment of enrolled patients could be discontinued while the product candidate is re-evaluated. Even if clinical trials do begin for our preclinical programs, our clinical trials or development efforts may not be successful.



***The results of preclinical studies and early-stage clinical trials may not be predictive of future results. Interim, "topline" and preliminary data from our clinical trials may differ materially from the final data. Initial success in any clinical trials may not be indicative of results obtained when these trials are completed or in later stage trials.*** ***trials*****.**

The results of preclinical studies may not be predictive of the results of clinical trials, and the results of any early-stage clinical trials we commence may not be predictive of the results of the later-stage clinical trials. For example, preclinical models as applied to cell therapy in oncology do not adequately represent the clinical setting, and thus cannot predict clinical activity nor all potential risks, and may not provide adequate guidance as to appropriate dose or administration regimen of a given therapy.

From time to time, we may publicly disclose preliminary or "topline" data from our clinical trials, which is based on a preliminary analysis of then-available data, and the results and related findings and conclusions are subject to change following a more comprehensive review of the data related to the particular trial, including as patient enrollment continues and more data on existing patients becomes available. We also make assumptions, estimations, calculations and conclusions as part of our analyses of data, and we may not have received or had the opportunity to fully and carefully evaluate all data. As a result, the topline results that we report, including the preliminary Phase 1 clinical data for NKX101 and NKX019 reported in April 2022 and updated Phase 1 clinical data for NKX019 reported in December 2022, may differ from, and may not be indicative of, future results of the same clinical trials, or different conclusions or considerations may qualify such topline results once additional data have been received and fully evaluated. For example, the preliminary results from the three dose expansion cohorts we announced opening in December 2022 as part of our Phase 1 NKX019 clinical trial for the treatment of B-cell malignancies did not meet expectations. We are now no longer enrolling patients in those dose expansion cohorts and in October 2023, we announced the opening of a new cohort with a compressed dosing schedule. We will now evaluate the results of this new cohort before committing additional resources to the program. Also, an interim evaluation of the data from the most recent dose-expansion cohort of our NKX101 Phase 1 clinical trial indicated that the aggregate clinical response rate for the 20 patients in the cohort was meaningfully lower than it had been for the first six patients in the cohort. As a result, we have now deprioritized further development of NKX101.

Topline data also remain subject to audit and verification procedures that may result in the final data being materially different from the preliminary data we previously published. As a result, topline data should be viewed with caution until the

final data are available and negative differences between preliminary or interim data and final data could materially adversely affect the prospects of any product candidate that is impacted by such data updates.

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



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disagree with the conclusions reached, our ability to obtain approval for, and commercialize, our product candidates may be harmed.

***If any of our product candidates, or any competing product candidates, demonstrate relevant, serious adverse events, we may be required to halt or delay further clinical development.***

Undesirable side effects that may be caused by our product candidates could cause us or regulatory authorities to interrupt, delay or halt clinical trials and could result in a more restrictive label than anticipated or the delay or denial of regulatory approval by the FDA or comparable foreign regulatory authorities. Results of our clinical trials could reveal a high and unacceptable severity and prevalence of side effects or unexpected characteristics.

Preliminary Updated data from the dose-escalation portion of our NKX019 Phase 1 clinical trial in B-cell malignancies were reported in December 2022, and updated interim data from our NKX101 Phase 1 clinical trial were reported in April 2022, and updated June 2023. The most common higher-grade (Grade ≥3) adverse events in the interim data from reported for patients in the dose escalation portion of our NKX019 Phase 1 clinical trial were reported in December 2022. The most common higher-grade adverse events in the early data for both trials B-cell malignancies were myelosuppression, – a condition resulting in fewer red blood cells, white blood cells and platelets, which is common in the treated patient

populations post lymphodepleting conditioning ("LD"). The early data from the NKX101 clinical trial indicated that adverse events experienced by certain patients included infusion reactions, such as transient fever and fluid responsive hypotension. population after LD. In the dose escalation dose-escalation phase of the NKX019 Phase 1 clinical trial, certain patients experienced adverse events including transient fevers and infusion-related reactions. Three patients in the NKX019 dose escalation dose-escalation study were assessed to have cytokine release syndrome ("CRS"), despite the rapid onset and rapid resolution, not consistent with previously described presentations of CRS with CAR T cell therapies.



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The most common higher-grade (Grade ≥3) adverse events in the interim data reported in June 2023 for patients with r/r AML in the NKX101 Phase 1 clinical trial were myelosuppression – a condition resulting in fewer red blood cells, white blood cells and platelets, as well as infections such as sepsis and pneumonia, occasionally requiring supplementary oxygen, which are common in the treated patient population after LD. The interim data from the NKX101 clinical trial indicated that adverse events experienced by certain patients with r/r AML included infusion reactions, CRS, and one case of immune effector cell-associated neurotoxicity (in each case, ≤grade 2). A more recent review of the data from additional patients enrolled in a dose-expansion cohort in our NKX101 clinical trial has indicated that the safety profile of NKX101 is consistent with the data reported in June 2023.

While the preliminary interim data reported to date from our NKX101 NKX019 and NKX019 NKX101 Phase 1 clinical trials indicate that NK cell-based therapies may be better-tolerated as compared to T cell-based therapies due to biologic differences between these cell types, there can be no assurance that patients will not experience CRS, neurotoxicity, Graft-versus-host disease ("GvHD"), or other serious adverse events associated with our specific product candidates NKX101 or NKX019. NKX019 and NKX101. For instance, NKX101 targets NKG2D ligands, which is not yet a well-characterized modality. NKG2D targets multiple ligands, and the extent and impact of ligand expression is currently not fully characterized. For example, there are risks that ligands may be expressed on either known or an as-yet-underappreciated population of healthy cells. Therefore, such cells may also be targeted by NKX101 and lead to adverse events of unknown frequency and severity as well as potentially decreased efficacy. Such adverse events may cause delays in completion of our clinical programs.

Furthermore, in some instances, the diseases we may be seeking to treat may be less serious than the later stage cancers traditionally being treated with cell therapies or other immunotherapy products. Therefore, we believe the FDA and other regulatory authorities likely will apply a different benefit-risk threshold such that any potential harmful side effects may outweigh the benefits of our product candidates and require us to cease clinical trials or deny approval of our product candidates. We believe tolerance for adverse events in the autoimmune patient populations being pursued with cell-based therapies, such as in the LN patients in our NKX019 clinical trial, will be lower than it is in oncology, and the risks of negative impact from these toxicities may therefore be higher for our autoimmune programs than for our oncology programs or the oncology programs of others.

If unacceptable side effects arise in the development of our product candidates such that there is no longer a positive benefit-risk profile, we, the FDA, the IRBs at the institutions in which our trials are conducted, or the DSMB could suspend or terminate our clinical trials or the FDA or comparable foreign regulatory authorities could order us to cease clinical trials or deny approval of our product candidates for any or all targeted indications. Treatment-related side effects could also affect patient recruitment or the ability of enrolled patients to complete the trial or result in potential product liability claims. In addition, these side effects may not be appropriately recognized or managed by the treating medical staff, and inadequate training in recognizing or managing the potential side effects of our product candidates could result in patient injury or death.

***If we fail to compete effectively with academic institutions and other biopharmaceutical companies that develop similar or alternatives to cellular immunotherapy product candidates, our business will be materially adversely affected.***

The development and commercialization of new cellular immunotherapy products is highly competitive. We face competition from existing and future competitors with respect to each of our product candidates currently in development, and will face competition with respect to other product candidates that we may seek to develop or commercialize in the future. For example, the autologous cell therapies tisagenlecleucel, axicabtagene ciloleucel, brexucabtagene autoleucel, and lisocabtagene maraleucel, which have been commercially approved, are direct competitors to our product candidate NKX019 in hematology. A large number of cell therapy companies with capabilities and expertise in oncology are advancing development programs in autoimmune diseases. In addition, other competitors, including biopharmaceutical companies, have clinical-stage or earlier stage cell therapy product candidates for hematologic malignancies and/or autoimmune diseases, and a number of other companies are seeking to harness NK biology through engagers that seek to direct a patient's own NK cells to the site of a tumor or are investigating other types of immune cells. Other biopharmaceutical companies are developing bispecific antibodies, which are also direct competitors to NKX019 for hematologic malignancies. Numerous academic institutions are also conducting preclinical and clinical research in these areas, as well as with other white blood cell types including NKT cells and gamma-delta T cells. It is also possible that new competitors, including those developing similar product candidates or alternatives to cellular immunotherapy product candidates, may emerge and acquire significant market share. Such competitors may have an advantage over us due to their greater size, resources or institutional experience, or may develop product candidates that are safer, more effective, more widely accepted, more cost-effective or enable higher patient quality of life than ours. More established biopharmaceutical companies may also develop and commercialize their product candidates at a faster rate, which could render our product candidates obsolete or non-competitive before they are fully developed or commercialized. If we are not

able to compete effectively against our existing and potential competitors, our business, financial condition, results of operations and growth prospects may be materially adversely affected.

***We have entered into a research collaboration with CRISPR Therapeutics regarding certain product candidates, and we may enter into additional collaborations with third parties to develop or commercialize other product candidates. Our prospects with respect to those product candidates will depend in significant part on the success of those collaborations, and we may not realize the benefits of such collaborations.***

We may form strategic alliances or create joint ventures or collaborations with respect to our product candidates that we believe will complement or augment our existing business. We routinely engage, and are engaged, in partnering discussions with a range of pharmaceutical and biotechnology companies and could enter into new collaborations at any time. If we enter into a collaboration, strategic alliance or license arrangement, there is no guarantee that the collaboration will be successful, or that any future partner will commit sufficient resources to the development, regulatory approval, and commercialization effort for such products, or that such alliances will result in us achieving revenues that justify such transactions.



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In May 2021, we entered into a Research Collaboration Agreement with CRISPR (as amended, the "CRISPR Agreement") to establish research plans for the purpose of collaboratively designing and advancing up to two allogeneic, gene-edited NK cell therapies and one allogeneic, gene-edited NK+T cell therapy for use in the treatment of oncology, autoimmune disease, or infectious disease up to the filing of an application to a regulatory authority to request the ability to start a clinical trial. The first product candidate being developed in partnership with CRISPR is NKX070, and together with CRISPR, we may advance NKX070 for the treatment of solid tumors and blood cancers. The second product candidate being developed in partnership with CRISPR is NK+T. In May 2022, we amended the CRISPR Agreement to revise the transfer of materials and nomination provisions. On March 8, 2023, the CRISPR Agreement was further amended to permit Nkarta's advancement of CRISPR-licensed product candidates targeting a specified tumor antigen and incorporate associated development and regulatory approval milestones and sales based royalties. In addition, under the CRISPR Agreement, we have received licenses from CRISPR for four CRISPR-Cas9 gene editing targets and will receive a license from CRISPR for up to one more CRISPR-Cas9 gene editing target that can be engineered into an unlimited number of its own NK cell products. CRISPR also has an option to co-develop and co-commercialize a future CAR NK cell program.

If CRISPR, or any potential future collaboration partner, does not perform in the manner that we expect or fulfill their responsibilities in a timely manner or at all, the research, clinical development, regulatory approval and commercialization efforts related to the product candidates that are the subject of the collaboration with CRISPR, or that potential future collaboration partner, could be delayed or terminated. If we terminate the CRISPR Agreement in its entirety or with respect to a particular product candidate under the research collaboration with CRISPR, due to a material breach by CRISPR or CRISPR's insolvency, then we have the right to negotiate a license from CRISPR to continue research, development, and commercialization of the terminated product candidate(s) on our own at our sole expense. We would need to pay CRISPR milestones and royalties for the terminated product candidate(s), and we may not be able to negotiate terms to the license that are favorable to us. Furthermore, assumption of sole responsibility for further development would greatly increase our expenditures and may mean we would need to limit the size and scope of one or more of our programs, seek additional funding and/or choose to stop work altogether on one or more of the affected product candidates. This could result in a limited potential to generate future revenue from such product candidates, and our business could be materially and adversely affected.

Whenever we enter into collaborations with third parties, we could face the following risks:

- collaborators have significant discretion in determining the efforts and resources that they will apply to these collaborations;
- collaborators could independently develop, or develop with third parties, products and processes that compete dir or indirectly with our products or product candidates;
- collaborators may not properly enforce, maintain or defend our intellectual property rights or may use our proprieta information in a way that gives rise to actual or threatened litigation that could jeopardize or invalidate our intellect property or proprietary information or expose us to potential litigation, or other intellectual property proceedings;
- disputes may arise between a collaborator and us that cause the delay or termination of the research, developmer commercialization of the product candidate, or that result in costly litigation or arbitration that diverts management attention and resources;
- if a present or future collaborator of ours were to be involved in a business combination, the continued pursuit and emphasis on our product development or commercialization program under such collaboration could be delayed, diminished or terminated; and
- collaboration agreements may restrict our right to independently pursue new product candidates.

If conflicts arise between our collaborators and us, including CRISPR, our collaborators may act in a manner adverse to us and could limit our ability to implement our strategies. CRISPR or future collaborators may develop, either alone or with others, products in related fields that are competitive with the products or potential products that are the subject of these collaborations. Competing products, either developed by the collaborators or to which the collaborators have rights, may result in the withdrawal of support for our product candidates. Our collaborators may preclude us from entering into collaborations with their competitors, fail to obtain timely regulatory approvals, terminate their agreements with us prematurely or fail to devote sufficient resources to the development and commercialization of products. Any of these developments could harm our product development efforts.

As a result, we may not be able to realize the benefit of new or existingcollaboration agreements and strategic partnerships if we are unable to successfully integrate them with our existing operations, which could delay our timelines or otherwise adversely affect our business. We also cannot be certain that, following a strategic transaction or license, we will achieve the revenue or specific net income that justifies such transaction.

***We may seek special designations by the regulatory authorities to expedite regulatory approvals, but may not be successful in receiving such designations, and even if received, they may not benefit the development and regulatory approval process.***

Where possible, we plan to pursue accelerated development strategies in areas of high unmet need. We may seek an accelerated approval pathway for one or more of our product candidates from the FDA or comparable foreign regulatory authorities. Under the accelerated approval provisions in the Federal Food, Drug, and Cosmetic Act, and the FDA's implementing regulations, the FDA may grant accelerated approval to a product candidate designed to treat a serious or life-threatening condition that provides meaningful therapeutic benefit over available therapies upon a determination that the product candidate has an effect on a surrogate endpoint or intermediate clinical endpoint that is reasonably likely to predict clinical benefit. The FDA considers a clinical benefit to be a positive therapeutic effect that is clinically meaningful in the context of a given disease, such as irreversible morbidity or mortality. For the purposes of the accelerated approval program, a surrogate endpoint is a marker, such as a laboratory measurement, radiographic image, physical sign, or other measure that is thought to predict clinical benefit, but is not itself a measure of clinical benefit. An intermediate clinical endpoint is a clinical endpoint that can be measured earlier than an effect on irreversible morbidity or mortality that is reasonably likely to predict an effect on irreversible morbidity or mortality or other clinical benefit. The accelerated approval pathway may be used in cases in which the advantage of a new drug over available therapy may not be a direct therapeutic advantage, but is a clinically important improvement from a patient and public health perspective. If granted, accelerated approval is usually contingent on the sponsor's agreement to conduct, in a diligent manner, additional post-approval confirmatory clinical trials to verify and describe the drug's clinical benefit. If such post-approval clinical trials fail to confirm the drug's clinical benefit, the FDA may withdraw its approval of the drug.

We may seek various approval from the FDA or comparable regulatory authorities through the use of other expedited programs available through regulatory authority approval program, such as Regenerative Medicine Advanced Therapy ("RMAT") designation, Breakthrough Therapy designation, Fast Track designation, or PRIority MEdicine ("PRIME"), from

regulatory authorities, for any certain product candidate candidates that we develop. A product candidate may receive RMAT designation from the FDA if it is a regenerative medicine therapy that is intended to treat, modify, reverse or cure a serious or life-threatening condition, and preliminary clinical evidence on a clinically meaningful endpoint, indicates that the product candidate has the potential to address an unmet medical need for such condition. A breakthrough therapy is defined by the FDA as a drug that is intended, alone or in combination with one or more other drugs, to treat a serious or life-threatening disease or condition, and preliminary clinical evidence indicates that the drug may demonstrate substantial improvement over currently approved therapies on one or more clinically significant endpoints, such as substantial treatment effects observed early in clinical development. If a product is intended for the treatment of a serious or life-threatening condition and preclinical or clinical data demonstrate the potential to address an unmet medical need for this condition, the product sponsor may apply for Fast Track Designation by the FDA. PRIME is a voluntary scheme launched by the European Medicines Agency ("EMA"), to strengthen support for the development of medicines that target an unmet medical need through enhanced interaction and early dialogue with developers of promising medicines in order to optimize development plans and speed up evaluation to help such medicines reach patients earlier.



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Seeking and obtaining these designations is dependent upon results of our clinical program, and we cannot guarantee whether and when we may have the data from our clinical programs to support an application to obtain any such designation. Prior to submitting a BLA, we may seek feedback from the FDA or comparable foreign regulatory authorities and will otherwise evaluate our ability to receive accelerated approval. There can be no assurance that after our evaluation of the feedback and other factors we will decide to pursue a BLA for accelerated approval or any other form of expedited development, review or approval. Similarly, there can be no assurance that after subsequent feedback from the FDA, EMA or comparable foreign regulatory authorities, we will continue to pursue accelerated approval or any other form of expedited development, review or approval, even if we initially decide to do so. Furthermore, if we decide to submit an application for an expedited regulatory designation (e.g., Fast Track designation or Breakthrough Therapy designation), there can be no assurance that such submission or application will be granted or that any expedited development, review or approval will be granted on a timely basis, or at all. The FDA and the EMA, as applicable, have broad discretion whether or not to grant any of these designations, so even if we believe a particular product candidate is eligible for one or more of these designations, we cannot assure you that the applicable regulatory authority would decide to grant it. Even The FDA, EMA or other comparable foreign regulatory authorities could also require us to conduct further clinical trials prior to considering to file our application or granting approval of any type. A failure to obtain accelerated approval or any other form of expedited development, review or approval for our product candidate would result in a longer time period to commercialization of such

product candidate, could increase the cost of development of such product candidate and could harm our competitive position in the marketplace. Furthermore, even if we do receive the designations we may apply for, we may not experience a faster development process, review or approval compared to conventional FDA or EMA procedures, as applicable. The FDA or EMA, as applicable, may rescind any granted designations if it believes that the designation is no longer supported by data from our clinical development program.



In addition, changes in regulatory frameworks may impact our clinical development programs. For instance, the recent enactment of FDORA introduces reforms intending to expand the FDA's ability to regulate products receiving accelerated approval. Pursuant to FDORA, the FDA is authorized to require a post-approval study to be underway prior to approval in addition to being completed within a specified time period following approval. FDORA also requires the FDA to specify the conditions of any required post-approval study and requires sponsors to submit progress reports for required post-approval studies and any conditions required by the FDA. FDORA enables the FDA to initiate enforcement action for the failure to conduct with due diligence a required post-approval study, including a failure to meet any required conditions specified by the FDA or to submit timely reports. Additionally, FDORA increased the FDA's oversight of confirmatory trials and created a formal procedure to withdraw products approved through accelerated approval on an expedited basis for non-compliance with post-approval requirements. In March 2023, the FDA issued draft guidance on clinical trial considerations for supporting accelerated approval of oncology therapeutics, noting that although single-arm trials have been commonly used to support accelerated approval, a randomized controlled trial is the preferred approach for more robust efficacy and safety assessment. It is unclear how these proposals, future policy changes, and changes in FDA regulation will impact our clinical development programs. To the extent the FDA requires us to amend the design of our clinical trials or requires additional trials to meet changes in the data requirements for approval, our clinical timelines and approval will be delayed, which can have an adverse effect on our business and operations.

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

Regulatory authorities in some jurisdictions, including the United States and Europe, may designate drugs for relatively low prevalence populations as orphan drugs. Under the Orphan Drug Act, the FDA may designate a drug as an orphan drug if it is a drug intended to treat a rare disease or condition, which is generally defined as a patient population of fewer than 200,000 individuals annually in the United States, or a patient population greater than 200,000 in the United States where there is no reasonable expectation that the cost of developing the drug will be recovered from sales in the United States. In the United States, orphan drug designation entitles a party to financial incentives such as opportunities for grant funding towards clinical trial costs, tax advantages and user-fee waivers. On December 16, 2021, we announced that the FDA granted orphan drug designation to NKX101 for the treatment of AML.

Similarly, in Europe, the European Commission grants orphan drug designation after receiving the opinion of the EMA Committee for Orphan Medicinal Products on an orphan drug designation application. orphan drug designation is intended to promote the development of drugs that are intended for the diagnosis, prevention or treatment of life-threatening or chronically debilitating conditions affecting not more than 5 in 10,000 persons in Europe and for which no satisfactory method of diagnosis, prevention, or treatment has been authorized (or the product would be a significant benefit to those affected). Additionally, designation is granted for drugs intended for the diagnosis, prevention, or treatment of a life-threatening, seriously debilitating or serious and chronic condition and when, without incentives, it is unlikely that sales of the drug in Europe would be sufficient to justify the necessary investment in developing the drug. In Europe, orphan drug designation entitles a party to a number of incentives, such as protocol assistance and scientific advice specifically for designated orphan medicines, and potential fee reductions depending on the status of the sponsor.

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

Even if we obtain orphan drug exclusivity for our product candidates, that exclusivity may not effectively protect those product candidates from competition because different therapies can be approved for the same condition and the same therapies can be approved for different conditions but used off-label. Even after an orphan drug is approved, the FDA can subsequently approve another drug for the same condition if the FDA concludes that the later drug is clinically superior in that it is shown to be safer, more effective or makes a major contribution to patient care. In addition, a designated orphan drug may not receive orphan drug exclusivity if it is approved for a use that is broader than the indication for which it received orphan designation. Moreover, orphan drug exclusive marketing rights in the United States may be lost if the FDA later determines that the request for designation was materially defective or if the manufacturer is unable to assure sufficient quantity of the drug to meet the needs of patients with the rare disease or condition. orphan Orphan drug designation neither shortens the development time or regulatory review time of a drug nor gives the drug any advantage in the regulatory review or approval process. While we may seek orphan drug designation for applicable indications for our product candidates, we may never

receive such designations. Even if we do receive such designations, there is no guarantee that we will enjoy the benefits of those designations.

***Public opinion and scrutiny of cell-based immuno-oncology therapies for treating cancer immunotherapies may impact public perception of our company and product candidates, or impair our ability to conduct our business.***

Our platform utilizes a relatively novel technology involving the genetic modification of human NK cells derived from adult healthy donors, and utilization of those modified cells in other individuals, and no NK cell-based immunotherapy has been approved to date. Further, many other cell therapies are in development, including NK cells derived from induced pluripotent stem cells (iPSCs) ("iPSCs"), and negative results from those therapies may affect perception of NK cell therapy derived from adult healthy donors. Public perception may be influenced by claims, such as claims that NK cell-based immunotherapy is ineffective, unsafe, unethical, or immoral and, consequently, our approach may not gain the acceptance of the public or the medical community. Negative public reaction to cell-based immunotherapy in general could result in greater government regulation and stricter labeling requirements of cell-based immunotherapy products, including any of our product candidates, and could cause a decrease in the demand for any products we may develop. Adverse public attitudes may adversely impact our ability to enroll clinical trials. More restrictive government regulations or negative public opinion could have an adverse effect on our business or financial condition and may delay or impair the development and commercialization of our product candidates or demand for any products we may develop.



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***We may not identify or discover other product candidates and may fail to capitalize on programs or product candidates that may present a greater commercial opportunity or for which there is a greater likelihood of success.***

Our business depends upon our ability to identify, develop and commercialize product candidates. A key element of our strategy is to discover and develop additional product candidates based upon our NK cell engineering platform. We are seeking to do so through our internal research programs and may also explore strategic collaborations for the discovery of new product candidates. Research programs to identify product candidates require substantial technical, financial and human resources, whether or not any product candidates are ultimately identified. In addition, targets for different cancers therapeutic targets may require changes to our NK manufacturing platform, which may slow down development or make it impossible to manufacture our product candidates. Our research programs may initially show promise in identifying

potential product candidates, yet fail to yield product candidates for clinical development for many reasons, including the following:

- the research methodology or technology platform used may not be successful in identifying potential product candidates;
- competitors may develop alternatives that render our product candidates obsolete or less attractive;
- we may choose to cease development if we determine that clinical results do not show promise;
- product candidates we develop may nevertheless be covered by third parties' patents or other exclusive rights;
- a product candidate may be shown to have harmful side effects or other characteristics that indicate it is unlikely to effective or otherwise does not meet applicable regulatory criteria; and
- a product candidate may not be accepted as safe and effective by patients, the medical community or third-party payors.

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Because we have limited resources, we must choose to pursue and fund the development of specific types of treatment, or treatment for a specific type of cancer or autoimmune disease, and we may forego or delay pursuit of opportunities with certain programs or product candidates or for indications that later prove to have greater commercial potential. Our estimates regarding the potential market for our product candidates could be inaccurate, and if we do not accurately evaluate the commercial potential for a particular product candidate, we may relinquish valuable rights to that product candidate through strategic collaboration, licensing or other arrangements in cases in which it would have been more advantageous for us to retain sole development and commercialization rights to such product candidate. Alternatively, we may allocate internal resources to a product candidate in a therapeutic area in which it would have been more advantageous to enter into a partnering arrangement.

If any of these events occur, we may be forced to abandon or delay our development efforts with respect to a particular product candidate or fail to develop a potentially successful product candidate.

***If third parties that we rely on to conduct clinical trials do not successfully carry out their contractual duties, comply with regulatory requirements or meet expected deadlines, we may not be able to obtain marketing approval for or commercialize our product candidates.***

We do not have the ability to independently conduct clinical trials. We rely on medical institutions, clinical investigators, contract laboratories, and other third parties, such as CROs to advise on, conduct, or otherwise support clinical trials for our product candidates. candidates, including conducting our NKX019 clinical trial for the treatment of LN, a disease area in which we have no prior experience. We rely heavily on these parties for execution of clinical trials for our product candidates and control only certain aspects of their activities. Nevertheless, we are responsible for ensuring that each of our clinical trials is conducted in accordance with the applicable protocol, legal and regulatory requirements and scientific standards, and our reliance on CROs and other third parties will not relieve us of our regulatory responsibilities.

For any violations of laws and regulations during the conduct of our clinical trials, we could be subject to untitled letters, warning letters or enforcement action that may include civil penalties up to and including criminal prosecution.



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We and the third parties on which we rely for clinical trials are required to comply with regulations and requirements, including GCPs good clinical practices ("GCP") for conducting, monitoring, recording and reporting the results of clinical trials to ensure that the data and results are scientifically credible and accurate, and that the trial patients are adequately informed of the potential risks of participating in clinical trials and their rights are protected. These regulations are enforced by the FDA, the competent authorities of the European Union member states, and comparable foreign regulatory authorities for any drugs in clinical development. The FDA enforces GCP requirements through periodic inspections of clinical trial sponsors, principal investigators and trial sites. If we or these third parties fail to comply with applicable GCP, the clinical data generated in our clinical trials may be deemed unreliable and the FDA or comparable foreign regulatory authorities may require us to perform additional clinical trials before approving our marketing applications. We cannot assure you that, upon inspection, the FDA will determine that any of our future clinical trials do not deviate from GCP. In addition, our clinical trials must be conducted with product candidates produced under cGMP regulations. Our failure or the failure of these third parties to comply with these regulations may require us to repeat clinical trials, which would delay the marketing approval process and could also subject us to enforcement action. The COVID-19 pandemic and For example, government measures taken in response have also to the COVID-19 pandemic had a significant impact on our CROs, and we expect that they will face similar measures in response to future pandemics, epidemics, or outbreaks of infectious disease may result in further disruption, disruptions, which may would affect our ability to initiate and complete our preclinical studies and clinical trials. We also are required to register certain ongoing clinical trials and provide certain information, including information relating to the trial's protocol, on a government-sponsored database, ClinicalTrials.gov, within specific timeframes. Failure to do so can result in fines, adverse publicity and civil and criminal sanctions.

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

- have staffing difficulties;

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

If third parties do not perform our clinical trials in a satisfactory manner, breach their obligations to us or fail to comply with regulatory requirements, we would be unable to rely on clinical data collected by these third parties and may be required to repeat, extend the duration of, or increase the size of any clinical trials we conduct, which could significantly delay commercialization and require significantly greater expenditures.

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



In some instances, our product candidates may be evaluated in clinical trials conducted by certain clinical investigatorswho are our collaborators. We may have limited or no control over the design and administration of these investigator-sponsored trials and will have no control over the submission or approval of any IND or foreign equivalent required to conduct these trials. The investigator-sponsored trials could, depending on the actions of such third parties, jeopardize the validity of the clinical data generated, identify significant concerns with respect to our product candidates that could impact our findings or clinical trials, and adversely affect our ability to obtain marketing approval from the FDA or other applicable regulatory authorities. To the extent the results of any of these investigator-sponsored trials are inconsistent with, or different from, the results of our current or future company-sponsored trials or raise concerns regarding our product candidates, the FDA or a foreign regulatory authority may question the results of our company-sponsored trial

or subject such results to greater scrutiny than it otherwise would. In these circumstances, the FDA or such foreign regulatory authorities may require us to obtain and submit additional clinical data, which could delay clinical development or marketing approval of our product candidates. In addition, while investigator-sponsored trials could be useful to inform our own clinical development efforts, there is no guarantee that we will be able to use the data from these trials to form the basis for regulatory approval of our product candidates.

***Our business and the business or operations of our research partners and other third parties with whom we conduct business have been and could in the future be adversely affected by the effects of pandemics, epidemics, and outbreaks of infectious diseases in regions where we or third parties on which we rely have business operations.***

The COVID-19 pandemic and measures taken to mitigate the impact of the pandemic disrupted economic activity and business operations worldwide, including the San Francisco Bay Area, where our primary operations are located. The emergence of one or more pandemics, epidemics, or outbreaks of infectious diseases, including future outbreaks of COVID-19 variants, Respiratory Syncytial Virus ("RSV"), or the flu, could result in similar disruptions.

Our operations, as well as the operations of some of our contract research organizations ("CROs"), contract development and manufacturing organizations ("CDMOs"), and clinical trial sites, were impacted by the COVID-19 pandemic and may in the future be similarly impacted by future pandemics, epidemics, or outbreaks of infectious disease. For example, as a result of the COVID-19 pandemic, we experienced some delays in completing the construction of our cGMP manufacturing facilities, global supply shortages of certain materials that we and our CDMOs use for research and cGMP manufacturing, employee turnover/attrition, delays and/or disruptions at our CROs, and delays in setting up certain clinical sites and enrollment in our clinical trials.

The emergence of a future pandemic, epidemic, or outbreak of infectious disease may impact the regulatory authorities to which we are subject in our industry, which may, in turn, hamper or delay our clinical development efforts. For instance, the COVID-19 pandemic resulted in a significant increase in the FDA workload, as well as the need to reprioritize the projects under review, and a future pandemic, epidemic, or outbreak of infectious disease may do so again in the future.

We cannot predict the potential future impacts of the emergence of another pandemic, epidemic, or outbreak of infectious disease on us, our research partners, including CRISPR, and other third parties with whom we conduct business. We may experience disruptions as a result of a pandemic, epidemic, or outbreak of infectious disease that could severely impact our business, preclinical studies and clinical trials, including:

- delays or difficulties in enrolling patients in our clinical trials, including our ongoing NKX019 clinical trial for cancer planned NKX019 clinical trial for LN;
- delays or difficulties in clinical site initiation, including difficulties in recruiting and training clinical site investigators clinical site staff;
- delays or difficulties in recruitment of key personnel;
- diversion of healthcare resources away from the conduct of clinical trials, including the diversion of hospitals servi as our clinical trial sites and hospital staff supporting the conduct of our clinical trials;

- interruption of key clinical trial activities, such as clinical trial site data monitoring, due to limitations on travel impos or recommended by federal or state governments, employers and others or interruption of clinical trial subject visit and study procedures, which may impact the integrity of subject data and clinical study endpoints;
- interruption or delays in the operations of the FDA or other regulatory authorities, which may impact review and approval timelines, including the review of IND or other regulatory submissions for our product candidates;
- interruption of, or delays in receiving, supplies of our product candidates, or materials necessary for production of product candidates, from our vendors or contract manufacturing organizations due to staffing shortages, productio slowdowns or stoppages and disruptions in delivery or supply systems;
- interruption of, or delays in manufacture of our product candidates, including at our in-house manufacturing facility and CDMOs, due to staffing shortages, production slowdowns and disruptions or inability to procure critical raw materials or other supplies in a timely fashion;
- delays or disruptions in the qualification of our cGMP facility for commercial-scale manufacture of our product candidates;
- interruptions in preclinical studies due to restricted or limited operations at our laboratory facility;
- interruptions, or delays in receiving supplies and materials necessary for our business operations, and research ar development activities;
- increases in the cost of services or supplies necessary for our research and development activities; and
- interruption or delays to our discovery and clinical activities.

The extent of any delays or impacts due to pandemics, epidemics, or outbreaks of infectious disease, or government regulations in response to the foregoing, will depend on future developments that are highly uncertain and cannot be predicted with confidence, but these delays could have a material impact on our business, financial condition, and/or results of operations.

***If we are not able to establish pharmaceutical or biotechnology collaborations on commercially reasonable terms, or at all, we may have to alter our development and commercialization plans.***

The advancement of our product candidates and development programs and the potential commercialization of our current and future product candidates will require substantial additional cash to fund expenses. For some of our programs, we may seek to collaborate with pharmaceutical and biotechnology companies to develop and commercialize such product

candidates, such as our recent collaboration with CRISPR. Any of these relationships, including our relationship with CRISPR, may require us to incur non-recurring and other charges, increase our near and long-term expenditures, issue securities that dilute our existing stockholders, relinquish valuable rights to our product candidates, or disrupt our management and business.



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We face significant competition in seeking appropriate strategic partners and the negotiation process is time-consuming and complex. Whether we reach a definitive agreement for new collaborations 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 progress of our clinical trials, the likelihood of approval by the FDA or similar regulatory authorities outside the United States, the potential market for the subject product candidate, the costs and complexities of manufacturing and delivering such product candidate to patients, the potential of competing products, the existence of uncertainty with respect to our ownership of technology, which can exist if there is a challenge to such ownership without regard to the merits of the challenge and industry and market conditions generally. The collaborator may also consider alternative product candidates or technologies for similar indications that may be available to collaborate on and whether such a collaboration could be more attractive than the one with us for our product candidate. Further, we may not be successful in our efforts to establish a strategic partnership or other alternative arrangements for future product candidates because they may be deemed to be at too early of a stage of development for collaborative effort or third parties may not view them as having the requisite potential to demonstrate safety and efficacy. Any delays in entering into new collaborations or strategic partnership agreements related to any product candidate we develop could delay the development and commercialization of our product candidates, which would harm our business prospects, financial condition, and results of operations.

***We have entered into a research collaboration with CRISPR Therapeutics regarding certain product candidates, and we may enter into additional collaborations with third parties to develop or commercialize other product***



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***candidates. Our prospects with respect to those product candidates will depend in significant part on the success of those collaborations, and we may not realize the benefits of such collaborations.***

***We may form strategic alliances or create joint ventures or collaborations with respect to our product candidates that we believe will complement or augment our existing business. We routinely engage, and are engaged, in partnering discussions with a range of pharmaceutical and biotechnology companies and could enter into new collaborations at any time. If we enter into a collaboration, strategic alliance or license arrangement, there is no guarantee that the collaboration will be successful, or that any future partner will commit sufficient resources to the development, regulatory approval, and commercialization effort for such products, or that such alliances will result in us achieving revenues that justify such transactions.***

In May 2021, we entered into a Research Collaboration Agreement with CRISPR (as amended, the "CRISPR Agreement") to establish research plans for the purpose of collaboratively designing and advancing allogeneic, gene-edited NK cell therapies and an allogeneic, gene-edited NK+T cell therapy for use in the treatment of oncology, autoimmune disease, or infectious disease up to the filing of an application to a regulatory authority to request the ability to start a clinical trial. See Item 1, Business for additional information. If CRISPR, or any potential future collaboration partner, does not perform in the manner that we expect or fulfill their responsibilities in a timely manner or at all, the research, clinical development, regulatory approval and commercialization efforts related to the product candidates that are the subject of the collaboration with CRISPR, or that potential future collaboration partner, could be delayed or terminated.

If we terminate the CRISPR Agreement in its entirety or with respect to a particular product candidate under the research collaboration with CRISPR, due to a material breach by CRISPR or CRISPR's insolvency, then we have the right to negotiate a license from CRISPR to continue research, development, and commercialization of the terminated product candidate(s) on our own at our sole expense. We would need to pay CRISPR milestones and royalties for the terminated product candidate(s), and we may not be able to negotiate terms to the license that are favorable to us. Furthermore, assumption of sole responsibility for further development would greatly increase our expenditures and may mean we would need to limit the size and scope of one or more of our programs, seek additional funding and/or choose to stop work altogether on one or more of the affected product candidates. This could result in a limited potential to generate future revenue from such product candidates, and our business could be materially and adversely affected.

Whenever we enter into collaborations with third parties, we could face the following risks:

- collaborators have significant discretion in determining the efforts and resources that they will apply to these collaborations;
- collaborators could independently develop, or develop with third parties, products and processes that compete dire or indirectly with our products or product candidates;
- collaborators may not properly enforce, maintain or defend our intellectual property rights or may use our proprieta information in a way that gives rise to actual or threatened litigation that could jeopardize or invalidate our intellectu property or proprietary information or expose us to potential litigation, or other intellectual property proceedings;
- disputes may arise between a collaborator and us that cause the delay or termination of the research, developmer commercialization of the product candidate, or that result in costly litigation or arbitration that diverts management attention and resources;
- if a present or future collaborator of ours were to be involved in a business combination, the continued pursuit and emphasis on our product development or commercialization program under such collaboration could be delayed,

diminished or terminated; and

- collaboration agreements may restrict our right to independently pursue new product candidates.



If conflicts arise between our collaborators and us, including CRISPR, our collaborators may act in a manner adverse to us and could limit our ability to implement our strategies. CRISPR or future collaborators may develop, either alone or with others, products in related fields that are competitive with the products or potential products that are the subject of these collaborations. Competing products, either developed by the collaborators or to which the collaborators have rights, may result in the withdrawal of support for our product candidates. Our collaborators may preclude us from entering into collaborations with their competitors, fail to obtain timely regulatory approvals, terminate their agreements with us prematurely or fail to devote sufficient resources to the development and commercialization of products. Any of these developments could harm our product development efforts.

As a result, we may not be able to realize the benefit of new or existingcollaboration agreements and strategic partnerships if we are unable to successfully integrate them with our existing operations, which could delay our timelines or otherwise adversely affect our business. We also cannot be certain that, following a strategic transaction or license, we will achieve the revenue or specific net income that justifies such transaction.

***If we fail to compete effectively with academic institutions and other biopharmaceutical companies that develop similar or alternatives to cellular immunotherapy product candidates, our business will be materially adversely affected.***

The development and commercialization of new cellular immunotherapy products is highly competitive. We face competition from existing and future competitors with respect to each of our product candidates currently in development, and will face competition with respect to other product candidates that we may seek to develop or commercialize in the future. For example, the autologous cell therapies Kymriah®, Yescarta®, Tecartus® and Breyanzi®, which have been commercially approved, are direct competitors to our product candidate NKX019. In addition, other competitors, including biopharmaceutical companies, have clinical-stage or earlier stage allogenic programs, and a number of other companies are seeking to harness NK biology through engagers that seek to direct a patient's own NK cells to the site of a tumor or are investigating other types of immune cells. Other biopharmaceutical companies are developing bi-specific antibodies, which are also direct competitors to NKX019. Numerous academic institutions are also conducting preclinical and clinical research in these areas, as well as with other white blood cell types including NKT cells and gamma-delta T cells. It is also possible that new competitors, including those developing similar or alternatives to cellular immunotherapy product candidates, may emerge and acquire significant market share. Such competitors may have an advantage over us due to their greater size, resources or institutional experience, or may develop product candidates that are safer, more effective, more widely accepted, more cost-effective or enable higher patient quality of life than ours. More established biopharmaceutical companies may also develop and commercialize their product candidates at a faster rate, which could render our product candidates obsolete or non-competitive before they are fully developed or commercialized. If we are not

able to compete effectively against our existing and potential competitors, our business, financial condition, results of operations and growth prospects may be materially adversely affected.

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

As of December 31, 2022 December 31, 2023, we had 163 150 full-time employees. We will need to continue In October 2023, we announced a reduction in headcount of 18 positions, as well as a cap on future headcount growth. As part of these measures we also reallocated existing headcount among our functions. However, in the future, our operation may require us to expand our managerial, operational, clinical, quality, human resources, legal, manufacturing, supply chain, finance, commercial and and/or other resources in order to manage our operations and clinical trials, continue our development activities and eventually commercialize our product candidates. Our management and personnel, systems and facilities currently in place may not be adequate to support this future growth. In addition, competition for qualified personnel needed to support this future growth is intense and it may be difficult for us to attract and retain quality personnel generally, and as a result of any impact the reduction in force may have on potential employees' perception of our company and culture. Our need to effectively execute our growth strategy requires that we:

- discover new product candidates, develop the process and analytical methods for IND-enabling studies and FDA submissions, complete the required IND-enabling studies for each, and receive approval from the FDA and other regulatory authorities to initiate clinical trials for such product candidates;
- manage our clinical trials effectively;



- identify, recruit, retain, incentivize and integrate additional employees;
- expand into additional office and laboratory space as if we grow our employee base;
- complete the qualification of manage our in-house clinical GMP cGMP manufacturing facility and establish and validate a our commercial GMP cGMP manufacturing facility; and
- continue to improve our operational, financial and management controls, reports systems and procedures.

If we are unable to attract skilled employees increase the size of our organization or manage our future growth effectively, it will impair our ability to execute our business strategy and our business, financial condition, results of operations and growth prospects will be materially adversely affected.

***If we fail to attract and retain senior management, clinical, and key scientific personnel, we may be unable to successfully develop our product candidates, conduct our clinical trials and commercialize our product candidates.***

Our success depends in part on our continued ability to attract, retain and motivate highly qualified management, clinical and scientific personnel. We are highly dependent upon our senior management, particularly our chief executive officer, as well as other members of our senior management team. The loss of services of any of these individuals could delay or prevent the successful development of our product pipeline, initiation or completion of our planned clinical trials or the commercialization of our future product candidates. We do not have employment agreements with our senior management team.

Competition for qualified personnel in the biotechnology and pharmaceuticals field is intense due to the limited number of individuals who possess the skills and experience required by our industry. In October 2023, we announced implementation of certain cost containment measures and a reduction in force of approximately 10%. This reduction in force, as well as any others we may need to implement in the future, may have a detrimental impact on company culture and employee morale, which may hurt our ability to retain employees. We will need to hire additional personnel as if we expand our clinical development and manufacturing activities, or if we initiate commercial activities. We may not be able to attract and retain quality personnel on acceptable terms, or at all. If we are unable to hire and retain the qualified personnel we need to operate our business, our business, financial condition, results of operations and growth prospects would be materially adversely affected. In addition, to the extent we hire personnel from competitors, we may be subject to allegations that they have been improperly solicited or that they have divulged proprietary or other confidential information, or that their former employers own their research output.

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

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

- decreased demand for any product candidate that we may develop;
- loss of revenue;
- substantial monetary awards to trial participants or patients;
- significant time and costs to defend the related litigation;
- withdrawal of clinical trial participants;
- increased insurance costs;
- the inability to commercialize any product candidate that we may develop; and

- injury to our reputation and significant negative media attention.

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Any such outcomes could materially adversely affect our business, financial condition, results of operations and growth prospects.

***The increasing use of social media platforms presents new risks and challenges.***

Social media is increasingly being used to communicate about our clinical development programs and the diseases our product candidates are being developed to treat. We intend to utilize appropriate social media in connection with communicating about our development programs. Social media practices in the biopharmaceutical industry continue to evolve and regulations relating to such use are not always clear. This evolution creates uncertainty and risk of noncompliance with regulations applicable to our business. For example, patients may use

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social media channels to report an alleged adverse event during a clinical trial. When such disclosures occur, we may fail to monitor and comply with applicable adverse event reporting obligations, or we may not be able to defend our business or the public's legitimate interests in the face of the political and market pressures generated by social media due to restrictions on what we may say about our investigational products. There is also a risk of inappropriate disclosure of sensitive information or negative or inaccurate posts or comments about us on any social networking website, or a risk that a post on a social networking website by any of our employees may be construed as inappropriate promotion. If any of these events were to occur or we otherwise fail to comply with applicable regulations, we could incur liability, face regulatory actions, or incur other harm to our business.

***Our insurance policies may be inadequate, may not cover all of our potential liabilities and may potentially expose us to unrecoverable risks.***

We do not carry insurance for all categories of risk that our business may encounter. Although we maintain product liability insurance coverage that also covers our clinical trials, such insurance may not be adequate to cover all liabilities that we may incur, and we may be required to increase our product liability insurance coverage. We anticipate that we will

need to increase our insurance coverage each time we commence a clinical trial and if we successfully commercialize any product candidate. Insurance availability, coverage terms and pricing continue to vary with market conditions. We endeavor to obtain appropriate insurance coverage for insurable risks that we identify. However, we may fail to correctly anticipate or quantify insurable risks, we may not be able to obtain appropriate insurance coverage and insurers may not respond as we intend to cover insurable events that may occur. Any significant uninsured liability may require us to pay substantial amounts, which would materially adversely affect our business, financial condition, results of operations and growth.

In addition, although we are dependent on certain key personnel, we do not have any key man life insurance policies on any such individuals. Therefore, if any of our chief executive officer or other executive officers die or become disabled, we will not receive any compensation to assist with such individual's absence. The loss of such person could materially adversely affect our business, financial condition, results of operations and growth prospects.

***Our business involves the use of hazardous materials and we and our third-party manufacturers and suppliers must comply with environmental laws and regulations, which can be expensive and restrict how we do business.***

Our research and development and manufacturing activities and our third-party manufacturers' and suppliers' activities involve the controlled storage, use and disposal of hazardous materials owned by us. We and our manufacturers and suppliers are subject to laws and regulations governing the use, manufacture, storage, handling and disposal of these hazardous materials. In some cases, these hazardous materials and various wastes resulting from their use are stored at our manufacturers' facilities pending their use and disposal.

We cannot eliminate the risk of contamination, which could cause an interruption of our research and development efforts and business operations, including drug supply and inventory, and environmental damage resulting in costly clean-up and liabilities under applicable laws and regulations governing the use, storage, handling and disposal of these materials and specified waste products. Although we believe that the safety procedures utilized by our third-party manufacturers and suppliers for handling and disposing of these materials generally comply with the standards prescribed by these laws and regulations, we cannot guarantee that this is the case or eliminate the risk of accidental contamination or injury from these materials. In such an event, we may be held liable for any resulting damages and such liability could exceed our resources and state or federal or other applicable authorities may curtail our use of certain materials and/or interrupt our business operations. Furthermore, environmental laws and regulations are complex, change frequently and have tended to become more stringent over time. We cannot predict the impact of such changes and cannot be certain of our future compliance. We do not currently carry biological or hazardous waste insurance coverage. Any contamination by such hazardous materials could therefore materially adversely affect our business, financial condition, results of operations and growth prospects.

***Our business could be negatively impacted by the failure to address emerging environmental, social, and corporate governance matters.***

There is an increasing focus from investors, employees, business partners, and other stakeholders concerning environmental, social, and corporate governance ("ESG") matters. The expectations related to ESG matters are rapidly evolving and, while we have internal efforts directed at ESG matters and preparations for any increased required future disclosures, we may be perceived to not be adequately addressing these matters, which could negatively impact our reputation and our business. Moreover, the SEC has recently proposed, and may continue to



propose, certain mandated ESG reporting requirements, such as the SEC's proposed rules designed to enhance and standardize climate-related disclosures, which, if finally approved, would significantly increase our compliance and reporting costs and may also result in disclosures that could have a negative impact on investor perception. In addition, we currently do not report our environmental emissions, and our lack of reporting could result in certain investors declining to invest in our common stock. We may also be required to increase our disclosure of ESG-related matters in the coming years as a result of regulatory changes that have been adopted or may be adopted in the future. For example, the SEC has recently adopted certain mandated ESG reporting requirements designed to enhance and standardize climate-related disclosures and the State of California has also enacted its own climate-disclosure requirements. Compliance with these disclosure requirements may require us to significantly increase our compliance and reporting costs and may also result in disclosures that could have a negative impact on investor perception.

**Risks Related to Manufacturing**

***Our manufacturing process is novel and complex, and we may encounter difficulties in production, or difficulties with internal manufacturing, which would delay or prevent our ability to provide a sufficient supply of our product candidates for clinical trials or our products for patients, if approved.***

Our product candidates are genetically engineered human cells, and the process of manufacturing such product candidates, as well as engineered K562 cells and viral vectors, is complex, highly regulated and subject to numerous risks. Manufacturing our product candidates involves harvesting white blood cells from a donor, isolating the NK cells, activating and expanding the NK cells, genome editing the NK cells (for certain product candidates with such edits), introducing a gamma-retrovirus with genes encoding the proteins we wish to express, cryopreservation, storage and eventually shipment. As a result of these complexities, the cost to manufacture our cellular product candidates, our proprietary, engineered K562 stimulatory cells ("NKSTIM"), and viral vector is generally higher than traditional small-molecule chemical compounds or biologics, and the manufacturing process is presently less reliable and more difficult to reproduce.

Our manufacturing process will be susceptible to product loss or failure, or product variation that may negatively impact patient outcomes, due to logistical issues associated with the collection of starting material from the donor, shipping such material to the manufacturing site, shipping the final product to the clinical trial recipient, preparing the product for administration, manufacturing issues or different product characteristics resulting from the differences in donor starting materials, variations between reagent lots, interruptions in the manufacturing process, contamination, equipment or reagent failure, improper installation or operation of equipment, vendor or operator error, inconsistency in cell growth and variability in product characteristics.

Even minor deviations from normal manufacturing processes could result in reduced production yields, product defects and other supply disruptions. If microbial, viral or other contaminations are discovered in our product candidates or in any of the manufacturing facilities in which products or other materials are made, such manufacturing facilities may need to be closed for an extended period of time to investigate and remedy the contamination. Any failure in the manufacturing processes could render a batch of product unusable, could impact supply and delay the progress of our clinical trials, could affect the regulatory approval of such product candidate, could cause us to incur fines or penalties or could harm our reputation and that of our product candidates.

Our manufactured product candidates may fail to meet the required specifications for any of a variety of reasons, including variability in starting material, deviations from normal manufacturing process, or insufficient optimization of specific process steps. This failure to meet specifications could result in supply shortages, or delays related to obtaining additional regulatory, site and patient approvals to continue dosing patientsin patients in the clinical trial. If the required additional approvals cannot be obtained, additional delays may occur as manufacturing would need to be restarted, enrollment may be delayed, and/or the patient patients may be unable to remain in the study. Any delay in the clinical development or commercialization of NKX101, NKX019 or our other product candidates could materially adversely affect our business, financial condition, results of operations and growth prospects.



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We may make changes to our manufacturing process at various points during development, and even after commercialization, for various reasons, such as to control costs, achieve scale, decrease processing time, increase manufacturing success rate or for other reasons. Efforts to scale up and improve our manufacturing processes across our platform are ongoing. Changes to our manufacturing process 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 our

ongoing clinical trials, or the performance of the product once commercialized. We previously filed a manufacturing process change amendment with the FDA for our NKX101 Phase 1 clinical trial for the treatment of AML as part of ongoing scale up and optimization of manufacturing across our platform. In October 2023, we announced that, in the dose-expansion cohort in the NKX101 clinical trial in which fludarabine and cytarabine ("flu/ara-C") was being used as LD, we had begun dosing patients with NKX101 product that had been generated with the amended manufacturing process. However, a subsequent interim review of the clinical response data from the cohort indicated that the aggregate response rate for the 20 patients in total in the cohort was meaningfully lower than what had been observed and previously reported for the first 6 patients in the cohort. We have closed enrollment in the clinical trial and deprioritized the NKX101 program.

Changes to our process made during the course of clinical development could also require us to show the comparability of the product candidate used in earlier clinical phases or at earlier portions of a trial to the product candidate used in later clinical phases or later portions of the trial. It is difficult to establish comparability of cell therapy products, and this may complicate efforts to verify process changes during scale up. Other changes to our manufacturing process made before or after commercialization could require us to show the comparability of the resulting product to the product candidate used in the clinical trials using earlier processes. Such showings could require us to collect additional nonclinical or clinical data from any modified process prior to obtaining marketing approval for the product candidate produced with such modified process. If such data are not ultimately comparable to that seen in the earlier trials or earlier in the same trial in terms of safety or efficacy, or if regulatory authorities do not agree that comparability has been established, 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, which would materially adversely affect our business, financial condition, results of operations and growth prospects.

Although we We are manufacturing NKX019 in our own internal manufacturing facility to supply drug product for the NKX019 our Phase 1 clinical trial, trials. We have in the past, and plan to manufacture other product candidates, including NKX101, in our internal manufacturing facilities may again in the future, we may encounter problems or delays with the internal production of our product candidates. We believe our current clinical cGMP manufacturing facility will supply our anticipated non-pivotal clinical trial needs, but if the dose and number of cycles needed increases, our current manufacturing process may not be able to support the enrollment of trials which could lead to delays until we scale up the manufacturing. Although we have an internal cGMP manufacturing facility for the production of certain of our product candidates for our early-stage clinical trials, has been completed, we do not yet have operate a cGMP facility for the commercial-scale manufacture of our product candidates. We have only recently begun building Although we built a commercial-scale cGMP manufacturing facility. Building a facility, maintaining our commercial-scale facility and manufacturing product candidates in our own facilities will require an increase in staff and significant internal resources. Our manufacturing facilities will be subject to compliance with regulatory requirements, which we may struggle to meet. We may encounter problems with properly staffing our internal manufacturing facilities due to hiring challenges or other issues. For example, factors such as potential future pandemics, epidemics, or outbreaks of COVID-19 variants and related infectious disease or government-imposed restrictions in response to the foregoing could impact our ability to properly staff production of our product candidates. We experienced delays in the construction of our cGMP manufacturing facilities due to the COVID-19 pandemic and current macroeconomic conditions and may in the future experience similar delays due to

future COVID-19 outbreaks. Current inflationary pressures are negatively affecting and could continue to negatively affect the costs of constructing our commercial-scale manufacturing facility. Global supply chain disruptions, including procurement delays and long lead times on certain materials, have adversely impacted and could continue to adversely impact the scheduled completion and/or costs of constructing our commercial-scale manufacturing facility. We may also encounter problems with training the staff we have to effectively manage and control the complex manufacturing process required to produce our product candidates and comply with all necessary regulations. We may also find it difficult to properly manage supply chain issues critical to the manufacturing process. If we are unable to build, maintain, and properly staff our manufacturing facilities, manage and control the manufacturing process, and comply with regulations, the clinical development or commercialization of our product candidates could be significantly delayed, which would materially adversely affect our business, financial condition, results of operations and growth prospects.

***We rely on third parties to manufacture certain of our product candidates, or certain materials for use in the production of our product candidates, or may rely on third parties to manufacture certain of our product candidates in the future, which increases the risk***



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***that we will not have sufficient quantities of such***



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***materials or product candidates, or materials, or such quantities at an acceptable cost, which could delay, prevent or impair our development or commercialization efforts.***

Although we are building have built a commercial-scale manufacturing facility, we do not yet operate our own cGMP facility for the production of commercial supplies of the product candidates that we are developing or evaluating in our development programs or supplies of such product candidates for pivotal clinical trials. We have limited personnel with experience in drug manufacturing and currently lack the resources and the capabilities to manufacture any of our product candidates on a commercial scale. If we are unable to successfully build, maintain and staff our own commercial-scale cGMP facility, we will need to rely on third parties for commercial-scale manufacture of our product candidates. Although we intend to manufacture NKX101 at our cGMP facility in 2023,

Also, although we currently rely on a third-party manufacturer for manufacture our clinical supply of NKX101. We compete with other companies for access to third party at our own cGMP facilities and cannot assure continued access.

In addition, facility, we currently outsource manufacturing of certain critical materials necessary for production of our product candidates, including NKSTIM and viral vectors. Even though we have established our own internal cGMP facility for clinical supply of certain product candidates, and even if we successfully establish our own cGMP manufacturing facility for manufacture of our product candidates on a commercial scale, we will continue to outsource manufacturing of certain materials necessary for production of our product candidates. If we are unable to outsource the manufacturing of these materials or our established third-party manufacturers delay delivery of or fail to provide certain materials as needed for the production of our product candidates, then the production of our clinical or commercial supply may be impacted. We compete with other companies for access to third party cGMP facilities and cannot assure continued access.

In order to conduct clinical trials of product candidates, we will need to have them manufactured in potentially large quantities. Our third-party manufacturers may be unable to increase the manufacturing capacity for any of our product candidates or other necessary materials in a timely or cost-effective manner, or at all. In addition, quality issues may arise during scale-up activities and at any other time. If these third-party manufacturers are unable to, or do not, scale up the manufacture of our product candidates or other necessary materials in sufficient quality and quantity, the development, testing and clinical trials of that product candidate may be delayed or infeasible, and regulatory approval or commercial launch of that product candidate may be delayed or not obtained, which could significantly harm our business.

We do not currently have any agreements with third-party manufacturers for long-term commercial supply. We may be unable to enter into agreements with third-party manufacturers for commercial supplies of any product candidate or any material necessary for production of a product candidate that we develop, or may be unable to do so on acceptable terms. Even if we establish and maintain arrangements with third-party manufacturers, reliance on third-party manufacturers for either clinical or commercial supply entails risks, including:

- reliance on the third-party for regulatory compliance and quality assurance;
- the possible breach of the manufacturing agreement by the third-party;
- the possible misappropriation of our proprietary information, including our trade secrets and know-how; and
- the possible termination or nonrenewal of the agreement by the third-party at a time that is costly or inconvenient f us.

Third-party manufacturers may not be able to comply with cGMP requirements or similar regulatory requirements outside the United States. The failure of our third-party manufacturers to comply with applicable requirements could result in sanctions being imposed on us, including fines, injunctions, civil penalties, delays, suspension or withdrawal of approvals, license revocation, seizures or recalls of product candidates or products, operating restrictions and/or criminal prosecutions, any of which could significantly and adversely affect supplies of our product candidates.

If the third parties that we engage to supply any materials or to manufacture any products product candidates for our preclinical tests and clinical trials should cease to continue to do so for any reason, including due to the effects of the a pandemic, epidemic, or outbreak of infectious disease, such as a future outbreak of a COVID-19 pandemic variant, and the actions undertaken by governments and private enterprises to contain COVID-19, such health event, we likely would experience delays in advancing these tests and trials while we identify and qualify replacement suppliers or manufacturers and we may be unable to obtain replacement supplies on terms that are favorable to us. In addition, if we are not able to obtain adequate supplies of our product candidates or the substances used to manufacture them, it will be more difficult for us to develop our product candidates and compete effectively. At For example, at some of our contract manufacturing sites, we have experienced delays in the past as a result of COVID-19-related restrictions, including temporary shutdowns, and instances of COVID-19 cases impacting personnel have resulted in some delays.personnel.

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

***We are reliant on a sole supplier for certain steps of our manufacturing process.***

Our manufacturing process for NKX101 NKX019 and for NKX019 NKX101 depends on the use of the Miltenyi CliniMACS CliniMACS® Plus system, and related reagents, all of which are only available from Miltenyi as the sole supplier. In addition, some of these reagents, at the time of procurement, typically expire after approximately four to six months. This short expiration period means that stocking the reagents in large quantities for future needs would not be an effective strategy to mitigate against the risk of shortage due to disruption of the supply chain.

Furthermore, while many of the reagents and consumables used in our manufacturing process are available from more than one commercial supplier, we have not confirmed the suitability of the use of all such reagents and consumables in our manufacturing process. Even if we are able to replace any raw materials or consumables with an alternative, such alternatives may cost more, result in lower yields or not be as suitable for our purposes. In addition, some of the raw materials that we use are complex materials, which may be more difficult to substitute. Therefore, supply disruptions could result in delays and additional regulatory submissions and prevent us from being able to manufacture our product candidates due to the unsuitability of the substituted reagent or consumable that we are able to procure. Substitution of some or all of these reagents and materials may require substantial changes to our manufacturing process, which may

require us to establish product comparability. If we are unable to show comparability after a process change, further changes to our manufacturing process and/or clinical trials will be required. For example, if sufficient comparability is not shown, we may be required to repeat one or more clinical trials.

Any disruption in supply of these instruments and reagents could also result in delays in our clinical trials, which would materially adversely affect our business, financial condition, results of operations and growth prospects.

***Delays in commissioning and receiving regulatory approvals for our manufacturing facilities could delay our development plans and thereby limit our ability to develop our product candidates and generate revenues.***

We believe that internal cGMP manufacturing is important to facilitate clinical product supply, lower the risk of manufacturing disruptions and enable more cost-effective manufacturing. We have a cGMP facility in South San Francisco, California that allows us to supply the product candidates needed for our early-stage clinical trials. We have also leased built, and are working to qualify, a property where we are building a facility which may be used for the commercial-scale manufacture of our product candidates. The design, construction, qualification, regulatory approvals and maintenance for such facilities require substantial capital and technical expertise and any delay would limit our development activities and our opportunities for growth.

Furthermore, our manufacturing facilities will be subject to ongoing, periodic inspection by the FDA and other comparable regulatory agencies to ensure compliance with cGMP. Our failure to follow and document our adherence to these regulations or other regulatory requirements may lead to significant delays in the availability of



product candidates for clinical use or may result in the termination of or a hold on a clinical study. Failure to comply



with applicable regulations could also result in sanctions being imposed on us, including fines, injunctions, civil penalties, a requirement to suspend or put on hold one or more of our clinical trials, failure of regulatory authorities to grant marketing approval of our drug candidates, delays, suspension or withdrawal of approvals, license revocation, seizures or recalls of drug candidates, operating restrictions and criminal prosecutions, any of which could materially adversely affect our business, financial condition, results of operations and growth prospects.

We also may encounter problems with the following:

- complying with regulations regarding evolving donor infectious disease testing, traceability, manufacturing, release product candidates and other requirements from regulatory authorities outside the United States;
- achieving adequate or clinical-grade materials that meet regulatory agency standards or specifications with consis and acceptable production yield and costs;
- bacterial, fungal or viral contamination in our manufacturing facilities;
- disruptions due to natural disasters or supply chain interruptions; and
- shortages of qualified personnel, raw materials or key contractors.

Our product candidates, if approved by applicable regulatory authorities, may require significant commercial supply to meet market demand. In these cases, we may need to increase, or "scale up," the production process by a significant factor over the initial level of production. If we fail to develop sufficient manufacturing capacity and experience, whether internally or with a third party, are delayed in doing so, or fail to manufacture our product candidates economically or on reasonable scale or volumes, or in accordance with cGMP, or if the cost of this scale-up is not economically feasible, our development programs and commercialization of any approved products will be materially adversely affected and we may not be able to produce our product candidates in a sufficient quantity to meet future demand and our business, financial condition, results of operations and growth prospects may be materially adversely affected.

***The optimal donor and manufacturing parameters for our product candidates have not been definitively established, which may hinder our ability to optimize our product candidates or to address any safety or efficacy issues that may arise.***

If any of our clinical trials reveal issues with the safety or efficacy of any of our product candidates, modification of the donor selection criteria or the manufacturing process may be necessary to address such issues. Alternatively, we may choose to modify the manufacturing process in an effort to improve the efficiency of the process or efficacy of the product candidates. However, although research to establish the optimal donor and manufacturing parameters is ongoing, we have not, at present, fully characterized or identified how donor characteristics and manufacturing process parameters affect the optimal cancer cell killing ability for our engineered NK cell product candidates for in vitro and animal efficacy studies or how such potency differences may translate into efficacy to be seen in human clinical trials, including both the proportion of patients who achieve a meaningful clinical response, and the duration of any such clinical responses. As a result, our ability to improve our manufacturing process or product potency, safety, or efficacy according to such parameters is limited and may require significant trial and error, which may cause us to incur significant costs or could result in significant delays to the clinical development and eventual commercialization of our product candidates. We continue to work to better establish the optimal donor and manufacturing parameters for our product candidates. Efforts to scale up and optimize our manufacturing processes across our platform are ongoing. If we are unable to manufacture sufficient supply of our product candidates for our current, planned, or future clinical trials, the clinical development and potential eventual commercialization of may be delayed, and we may be materially harmed as a result.

***We are dependent on third parties to store our CAR NK cells, viral vector, master and working cell banks of NKSTIM, and any damage or loss would cause delays in replacement, and our business could suffer.***

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The CAR NK cells, the viral vector, and the master and working cell banks of NKSTIM are stored in freezers at third-party biorepositories and will also be stored in our freezers at our production facility. facilities. If these materials are damaged at these facilities, including by the loss or malfunction of these freezers or our back-up power systems, as well as by damage from fire, power loss or other natural disasters, we would need to establish replacement CAR NK cells, viral vector, and master and working cell banks of NKSTIM, which would impact clinical supply and delay our patients' treatments. If we are unable to establish replacement materials, we could incur significant additional expenses and liability to patients whose treatment is delayed, and our business could suffer.

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***We have not yet developed a validated methodology for freezing and thawing commercial-scale quantities of CAR NK cells, which we believe will be required for the storage and distribution of our CAR NK cell product candidates.***

We have not yet demonstrated that CAR NK cells, which can be frozen and thawed in smaller quantities, can also be frozen and thawed in commercial scale quantities without damage, in a cost-efficient manner and without degradation over time. We may encounter difficulties not only in developing freezing and thawing methodologies for large scale use, but also in obtaining the necessary regulatory approvals for using such methodologies in treatment. If we are unable to freeze CAR NK cells for shipping purposes, our ability to promote adoption and standardization of our product candidates, as well as achieve economies of scale by centralizing our production facility, will be limited. Even if we are able to successfully freeze and thaw CAR NK cells in large quantities, we will still need to develop a cost-effective and reliable distribution and logistics network, which we may be unable to accomplish.

Furthermore, we have not yet demonstrated long-term stability of cryopreserved CAR NK cells and therefore do not know if we will be able to store the cryopreserved cells for extended periods of time. If we are unable to demonstrate long-term stability, we will need to reduce the manufacturing batch size to ensure that the material we produce will be used before it expires. In that case, the scaling of our production processes will not deliver the efficiencies we expect, and the cost per dose of our product candidates will be substantially higher.

For these and other reasons, we have not yet established the long-term stability of our cryopreserved CAR NK cells and we may not be able to commercialize CAR NK cells on a large scale or in a cost-effective manner. If such product candidate is found to be instable, unstable, we would be required to conduct more frequent manufacturing runs, which could cause us to incur significant additional expenses.

**Risks Related to Our Intellectual Property**

***If our license agreement with National University of Singapore and St. Jude Children's Research Hospital, Inc. is terminated, we could lose our rights to key components enabling our NK cell engineering platform.***

In August 2016, we entered into a license agreement with the National University of Singapore and St. Jude Children's Research Hospital, Inc. (the "Licensors"). Pursuant to this license, the Licensors granted to us an exclusive, worldwide, royalty-bearing, sublicensable license under to specified patents and patent applications related to NK cell technology in the field of therapeutics. We are reliant upon certain rights and proprietary technology provided to us under this license for the production and development of certain of our product candidates, such as NKX019, NKX101 NKX019 and NKX070. We make single-digit royalty payments, patent expenses, license maintenance fees and milestone payments to the Licensors. The term of the license agreement extends until expiration of the last of the patent rights licensed to us by the Licensors, which is currently expected to occur in approximately 2039. The Licensors may terminate the license agreement upon the occurrence of certain events, such as an uncured material breach by us, the cessation of our business or our insolvency, liquidation or receivership. If the Licensors terminate or narrow the license agreement, we could lose the use of intellectual property rights that may be material or necessary to the development or production of our product candidates, including NKX019, NKX101 NKX019 and NKX070, which could impede or prevent our successful commercialization of such product candidates and materially adversely affect our business, financial condition, results of operations and growth prospects.

Furthermore, our patent license agreement with the Licensors is field-specific and has been granted to us in the field of therapeutics. This license agreement permits the Licensors to practice the licensed rights, and to allow non-profit academic third parties to practice the licensed rights for certain academic purposes. As such, Further, one of the Licensors' patent families from which we license certain patents in a and patent family applications contains other certain patents and patent applications that is licensed to us by the Licensors have been licensed to at least one other third party. Although these the patents and patent applications licensed to the at least one third party should not be overlapping overlap with our licensed patents and patent applications, there is a risk that inadvertent overlap may occur, and thus, resources may have to be expended to resolve any such overlap and to prevent other licensees from practicing under our licensed patents rights. If any of the foregoing were to occur, it could delay our development and commercialization of our product candidates, which in turn could materially adversely affect our business, financial condition, results of operations and growth prospects.

***If any patent protection we obtain is not sufficiently robust, our competitors could develop and commercialize products and technology similar or identical to ours.***

64 The market for cell therapy is highly competitive and subject to rapid technological change. Our success depends, in large part, on our ability to maintain a competitive position in the development and protection of technologies and products for use in these fields and to obtain and maintain patent protection in the United States and other countries with respect to our product candidates and our technology. We have sought, and intend to seek, to protect our proprietary position by filing patent applications in the United States and abroad related to our product candidates and our technology that are important to our business. If we are unable to protect our intellectual property, our competitive position could be materially adversely affected, as third parties may be able to make, use or sell products and technologies that are substantially the same as ours without incurring the sizeable development and licensing costs that we have incurred. This, in turn, would materially adversely affect our ability to compete in the market.

The patent position of biotechnology and pharmaceutical companies generally is uncertain, involves complex legal and factual questions and has, in recent years, been the subject of much litigation. As a result, the issuance, scope, validity, enforceability, term, and commercial value of our patent rights are highly uncertain. Our pending and future patent applications may not result in patents being issued that protect our technology or product candidates or effectively prevent others from commercializing competitive technologies and product candidates.

The patent prosecution process is expensive, time-consuming and complex, and we may not be able to file, prosecute, maintain, enforce or license all necessary or desirable patent applications at a reasonable cost or in a timely manner. We also may fail to identify patentable aspects of our research and development output, or may identify patentable aspects of our research and development output once it is too late to obtain patent protection.

Claim scope in a patent application can be significantly reduced before the patent is issued, and claim scope in a patent can be reinterpreted after issuance. Even if the patent applications we license or own do issue as patents, they may not issue in a form that will provide us with any meaningful protection, prevent competitors or other third parties from competing with us or otherwise provide us with any competitive advantage. Our competitors or other third parties may be able to circumvent our patents by developing similar or alternative products in a non-infringing manner.

***Claims brought against us for infringing, misappropriating or otherwise violating intellectual property rights of third parties or engaging in unfair competition, would be costly and time-consuming and could prevent or delay us from successfully developing or commercializing our product candidates.***

Our success depends in part on our ability to develop, manufacture and market our technology and use our technology without infringing the proprietary rights of third parties. We, our licensors, or our collaborators may be subject to third-party claims that could cause us to incur substantial expenses to defend, and these claims, if successful, could require us to pay substantial damages and/or limit our ability to commercialize our product candidates if we, our licensors, or our collaborators are found to be infringing a third party's intellectual property rights.

We are aware of third-party patents and patent applications that may relate to the areas in which we are developing product candidates. For example, under the CRISPR Agreement, we are collaboratively designing and advancing certain gene-edited NK cell therapies and have received licenses from CRISPR for certain CRISPR-Cas9 gene editing targets that can be engineered into our own NK cell therapies. Third parties could assert that CRISPR does not have rights to certain CRISPR-Cas9 technologies, or could assert and have asserted in the past, that the CVC Group does not have rights to certain CRISPR-Cas9 technologies, including inventorship and ownership rights to some of the CVC Group's patents, or that such rights are limited. Third parties could seek to assert their issued patents relating to CRISPR-Cas9 technologies against us or our collaborators based on our CRISPR-Cas9-based activities, or those of our collaborators, including commercialization of gene-edited NK cell therapies.



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Additionally, as our industry expands and more patents are issued, the risk increases that there may be patents issued to third parties that relate to our product candidates and technology of which we are not aware or that we may need to challenge to continue our operations as currently contemplated. As a result, our technology and any future products that we commercialize could be alleged to infringe patent rights or other proprietary rights of third parties, which may require costly litigation and, if we are not successful in defending against such litigation, could cause us to pay substantial damages and/or limit our ability to commercialize our product candidates. Issued patents are entitled to a presumption of validity in many countries, including the United States and many European countries, and issued patents held by others that claim our technology or any of our product candidates may limit our freedom to operate, including our ability to commercialize our product candidates, unless and until these patents expire or are declared invalid or unenforceable in a court of applicable jurisdiction, if we do not obtain a license or other right to practice the claimed inventions. We may decide to file reexaminations, inter partes reviews, and other post-grant proceedings before the USPTO and other comparable proceedings (e.g., oppositions) in foreign jurisdictions, including to challenge the validity of third-party patents that may relate to the areas in which we are developing product candidates and technology. Such proceedings can be unpredictable and time-consuming and can divert management attention and financial resources.

We employ individuals who were previously employed at other biotechnology or pharmaceutical companies, including our competitors or potential competitors. Accordingly, we may be subject to claims that these employees, or we, have used or disclosed trade secrets or other proprietary information of their former employers.

Third parties could threaten or initiate litigation or other legal proceedings alleging that we have infringed their patents, trade secrets, trademarks or other intellectual property rights. Litigation may make it necessary to defend ourselves by determining the scope, enforceability and validity of third-party proprietary rights, or to establish our proprietary rights. Regardless of whether any such claims that we are infringing patents or other intellectual property rights have merit, such claims can be time consuming, divert management attention and financial resources and are costly to evaluate and defend.

Results of any such litigation are difficult to predict and may require us to stop treating certain conditions, obtain licenses or modify our product candidates or technology while we develop non-infringing substitutes, or may result in significant settlement costs. Litigation can involve substantial damages for infringement (and if the court finds that the infringement was willful, we could be ordered to pay treble damages and the patent owner's attorneys' fees), and the court could prohibit us from selling our product candidates or require us to take a license from a third party, which the third party is not required to do at a commercially reasonable price or at all. If a license is available from a third party, we may have to pay substantial royalties, upfront fees, or milestone fees, or grant cross-licenses to intellectual property rights for our product candidates or technology. We may also have to redesign our product candidates or technology so they do not infringe third-party intellectual property rights, which may not be possible or may require substantial monetary expenditures and time, during which our product candidates may not be available for manufacture, use, or sale.

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

There are many patents issued and applied for in the biotechnology industry, and we may not be aware of patents or patent applications held by others that relate to our business. We cannot guarantee that any of our or our licensors' patent searches or analyses, including but not limited to the identification of relevant patents, analysis of the scope of relevant patent claims or determination of 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 elsewhere that is relevant to or necessary for the development and commercialization of our product candidates in any jurisdiction.

For example, patent applications in the United States and many international jurisdictions are typically not published until 18 months after the filing of certain priority documents (or, in some cases, are not published until they issue as patents) and publications in the scientific literature often lag behind actual discoveries. Thus, we cannot be certain that others have not filed patent applications or made public disclosures relating to our technology or our contemplated technology. A third party may have filed, and may in the future file, patent applications directed to our product candidates or technology similar to ours or that of our licensors. Any such patent application may have an earlier priority date than our patent applications or patents, or those of our licensors, which could further require us to obtain rights to patents directed to such technologies. Under certain circumstances, if third parties have filed such patent applications, an interference proceeding in the United States can be initiated by any such third party, or by the USPTO itself, to determine who was the first to invent any of the subject matter recited by the patent claims of our applications or issued patents.

Furthermore, after issuance, the scope of patent claims remains subject to construction as 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, and we may incorrectly determine that our product candidates or technology are not covered by a third party's 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 elsewhere that we consider relevant may also be incorrect. Changes in patent laws and regulations may also affect the expiration date of any patent in the United States or elsewhere that we consider relevant. If we fail to correctly identify or interpret relevant patents or the expiration dates thereof, we may be subject to infringement claims. We cannot guarantee that we will be able to successfully settle or otherwise resolve such infringement claims. If we fail in any such dispute, in addition to being forced to pay monetary damages, we may be temporarily or permanently prohibited from commercializing our product candidates. We may also be forced to attempt to redesign our product candidates or technology in a manner that no longer infringes third-party intellectual property rights. Any of these events, even if we were ultimately to prevail, could require us to divert substantial financial and management resources that we would otherwise be able to devote to the development and commercialization of our product candidates.

***Our development and commercialization rights to our current and future product candidates and technology are subject, in part, to the terms and conditions of licenses granted to us by others.***

We are a party to a variety of intellectual property license agreements with third parties and expect to enter into additional license agreements in the future. These license agreements provide us with access to certain rights and proprietary technology from third parties for the production and development of our current and future product candidates, including NKX019, NKX101 NKX019 and NKX070. However, these licenses may not provide exclusive rights to use such intellectual property and technology in all relevant fields of use and in all territories in which we choose to develop or commercialize our technology and product candidates in the future. As a result, we may not be able to prevent competitors from developing and commercializing competitive products in territories included in all of our licenses.

We also engage in collaborations with scientists at academic and non-profit institutions to access technologies and materials that are not otherwise available to us. Although the agreements that govern these collaborations may include an option to negotiate an exclusive license to the institution's rights in any inventions that are created in the course of these collaborations, we may not be able to come to a final agreement for an exclusive license with the institution.

We also have entered, and may in the future enter, into collaboration or license agreements with commercial entities to access technologies and materials that are not otherwise available to us. Our agreements with such entities may provide licenses to technology useful for the discovery, development, or commercialization of our product candidates. These licenses may, in some instances, be non-exclusive. For example, we have entered into an agreement with CRISPR, which grants us a non-exclusive license on up to five gene-editing targets to enable us to independently research, develop and commercialize NK cell therapies that have been gene-edited using CRISPR's gene-editing technology.



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Such licenses and other contracts may be the subject of disagreements with the grantors and/or various third parties regarding the interpretation of such licenses and contracts. The resolution of any such disagreements that may arise could affect the scope of our rights to the relevant technology, or affect financial or other obligations under the relevant agreement, either of which could inhibit our ability to utilize the underlying technology in a cost-effective manner to develop and commercialize our product candidates, which in turn could materially adversely affect our business, financial condition, results of operations and growth prospects.

Our existing license agreements impose, and we expect that our future license agreements will impose, various diligence, milestone payment, royalty, insurance, indemnification and other obligations on us. Under certain circumstances such as a material breach of terms, our licensors could terminate our license agreements. If these in-licenses are terminated, or if the underlying patents fail to provide the intended exclusivity, competitors could have the freedom to seek regulatory approval of, and to market, products substantially the same as or identical to ours. In addition, we may seek to obtain additional licenses from our licensors and, in connection with obtaining such licenses, we may agree to amend our existing licenses in a manner that may be more favorable to the licensors, including by agreeing to terms that could enable third parties (potentially including our competitors) to receive licenses to a portion of the intellectual property that is subject to our existing licenses.

In addition, we may not have the right to control the preparation, filing, prosecution, maintenance, enforcement and defense of patents and patent applications directed to the technology that we license from third parties. Therefore, we cannot be certain that these patents and patent applications will be prepared, filed, prosecuted, maintained, enforced and defended in a manner consistent with our best interests. For example, if we do not have the right to control patent prosecution and maintenance of patents and patent applications directed to the technology that we license from licensors, such licensors could file terminal disclaimers and/or take other actions that could shorten the term of the patents or patent applications. If our licensors fail to prosecute, maintain, enforce and defend such patents, or lose rights to those patents or patent applications, the rights we have licensed may be reduced or eliminated, and our right to develop and commercialize any of our product candidates that are the subject of such licensed rights could be impaired. Additionally, we may be required to reimburse our licensors for all of their expenses related to the prosecution, maintenance, enforcement and defense of patents and patent applications that we in-license from them.



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Furthermore, our licensors may have relied on third-party consultants or collaborators or on funds from third parties such that our licensors are not the sole and exclusive owners of the patents we in-licensed. For example, CRISPR has licensed certain rights to a worldwide patent portfolio that covers various aspects of the CRISPR-Cas9 editing platform technology including, compositions of matter and methods of use, including their use in targeting or cutting DNA, from Dr. Emmanuelle Charpentier. In addition to Dr. Charpentier, this patent portfolio has named inventors who assigned their rights to the Regents of the University of California or the University of Vienna, to whom we refer together with Dr. Charpentier, as the CVC Group. Accordingly, CRISPR has non-exclusive or co-exclusive rights to the patent rights that protect the core CRISPR-Cas9 gene-editing technology. If other third parties have ownership 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 harm our competitive position, and our business.



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***Duration of patent terms may be inadequate to protect our competitive position on our product candidates for an adequate amount of time, and the expiration of our patents may subject us to increased competition.***

As of December 31, 2022 December 31, 2023, the patent portfolio that is assigned to us, jointly owned with others or licensed to us includes issued patents in the United States, Europe, Japan, and other jurisdictions outside the United

States, and pending patent applications in the United States, Europe, Japan, and other jurisdictions outside the United States across our platform, NKX019, NKX101 NKX019, and NKX070 patent families. Our portfolio of issued patents, excluding pending patent applications, has estimated expiration dates between 2024 and 2040. Our portfolio, including issued patents, and including pending applications if they issue, has estimated expiration dates between 2024 and 2043. 2044. For instance, composition of matter composition-of-matter claims in our licensed patent portfolio that relate to our engineered K562 cells NKSTIM are estimated to expire in Q4 2024. We plan to file additional patent applications that could potentially allow for further increase of the exclusive market protection for use certain uses of NKX019, NKX101 NKX019, and NKX070 product candidates. However, we can provide no assurance that we will be able to file or receive additional patent protection for these or other product candidates.

Patent expiration dates may be shortened or lengthened by a number of factors, including terminal disclaimers, patent term adjustments, supplemental protection certificates and patent term extensions. Patent term extensions and supplemental protection certificates, and the like, may be impacted by the regulatory process and may not significantly lengthen patent term. Our patent protection could also be reduced or eliminated for noncompliance with various procedural, document submission, fee payment and other requirements imposed by government patent agencies. agencies, or by changes in regulations or laws. In addition, if we fail to apply for applicable patent term extensions or adjustments, we will have a more limited time during which we can enforce our granted patent rights.

Given the amount of time required for the development, testing and regulatory review of product candidates, patents protecting such candidates might expire before or shortly after such product candidates are commercialized. We expect to seek extensions of patent terms in the United States and, if available, in other countries where we have or will obtain patent rights. In the United States, the Drug Price Competition and Patent Term Restoration Act of 1984 permits a patent term extension of up to five years beyond the normal expiration of the patent; provided that the patent is not enforceable for more than 14 years from the date of drug approval, which is limited to the approved indication (or any additional indications approved during the period of extension). Furthermore, only one patent per approved product can be extended and only those claims directed to the approved product, a method for using it or a method for manufacturing it may be extended. However, the applicable authorities, including the FDA and the United States Patent and Trademark Office (the "USPTO") 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 we are responsible for patent prosecution and maintenance of patent rights in-licensed to us, we could be exposed to liability to the applicable patent owner. If we or our licensors fail to maintain the patents and patent applications covering our product candidates and technologies, we may not be able to prevent a competitor from marketing products that are the same as or similar to our product candidates. Further, others commercializing products similar or identical to ours, and our competitors may be able to 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 the case, which could increase competition for our product candidates and materially adversely affect our business, financial condition, results of operations and growth prospects.

***If any patent protection we obtain is not sufficiently robust, our competitors could develop and commercialize products and technology similar or identical to ours.***

The market for cell therapy is highly competitive and subject to rapid technological change. Our success depends, in large part, on our ability to maintain a competitive position in the development and protection of technologies and products for use in these fields and to obtain and maintain patent protection in the United States and other countries with respect to our product candidates and our technology. We have sought, and intend to seek, to protect our proprietary position by filing patent applications in the United States and abroad related to our product candidates and our technology that are important to our business. If we are unable to protect our intellectual property, our competitive position could be materially adversely affected, as third parties may be able to make, use or sell products and technologies that are substantially the same as ours without incurring the sizeable development and licensing costs that we have incurred. This, in turn, would materially adversely affect our ability to compete in the market.

The patent position of biotechnology and pharmaceutical companies generally is uncertain, involves complex legal and factual questions and has, in recent years, been the subject of much litigation. As a result, the issuance, scope, validity, enforceability and commercial value of our patent rights are highly uncertain. Our pending and future patent applications may not result in patents being issued that protect our technology or product candidates or effectively prevent others from commercializing competitive technologies and product candidates.

The patent prosecution process is expensive, time-consuming and complex, and we may not be able to file, prosecute, maintain, enforce or license all necessary or desirable patent applications at a reasonable cost or in a timely manner. We also may fail to identify patentable aspects of our research and development output, or may identify patentable aspects of our research and development output once it is too late to obtain patent protection.

Claim scope in a patent application can be significantly reduced before the patent is issued, and its scope can be reinterpreted after issuance. Even if the patent applications we license or own do issue as patents, they may not issue in a form that will provide us with any meaningful protection, prevent competitors or other third parties from competing with us or otherwise provide us with any competitive advantage. Our competitors or other third parties may be able to circumvent our patents by developing similar or alternative products in a non-infringing manner.

***Even after issuance, our owned and in-licensed patents may be subject to challenge, which if successful could require us to obtain licenses from third parties, which may not be available on commercially reasonable terms result in a partial or at all, or to cease the use complete loss of the underlying technology, patent rights, which could materially adversely affect our business.ability to protect our competitive position.***

The issuance of a patent is not conclusive as to its inventorship, scope, validity or enforceability, and our patents, even after issuance, may be challenged in the courts or patent offices in the United States and abroad. Third-party challenges may result in a loss of exclusivity or in our patent claims being narrowed, invalidated or held unenforceable, which could limit our ability to prevent others from using or commercializing similar or identical technology and products, or could limit the duration of the patent protection of our technology and product candidates.

Even if our patents are determined to be valid and enforceable, they may not be interpreted sufficiently broadly to prevent others from marketing products similar to ours or designing around our patents.

Ex Post-grant proceedings such as inter partes review, post-grant review, and ex parte reexaminations have been filed by one or more third parties against certain licensed patents in our portfolio. Ex parte reexaminations of U.S. Patent Nos. 9,511,092 (the "'092 Patent"), 10,774,309 (the "'309 Patent"), and 10,829,737 (the "'737 Patent") were recently concluded, resulting in the claims of each Patent being maintained United States, or comparable proceedings (e.g., oppositions) in amended form. None of the claims of the '092, '309, and '737 Patents as maintained in amended form relate to any of our current product candidates. Additional ex parte reexaminations foreign jurisdictions, could be filed in the future and although we plan to vigorously protect our intellectual property rights, as with all legal proceedings, there can be no guarantee as to the outcome, and, regardless of the merits of third-party challenges, such proceedings are time-consuming and costly. As a result of such reexaminations, proceedings, our rights under the relevant patents could be narrowed or lost, and in the course of such proceedings, we may incur substantial costs, and the time and attention of our management may be diverted from the development and commercialization of our product candidates.



***We may not identify relevant third-party patents Ex parte reexaminations were previously filed by one or may incorrectly interpret the relevance, scope or expiration of a third-party patent, which could materially adversely affect our ability to develop, manufacture and market our product candidates.***

There are many patents issued or applied for in the biotechnology industry, and we may not be aware of patents or patent applications held by others that relate to our business. We cannot guarantee that any of our or our licensors' patent searches or analyses, including but not limited to the identification of relevant patents, analysis of the scope of relevant patent claims or determination of 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 elsewhere that is relevant to or necessary for the development and commercialization of our product candidates in any jurisdiction.

For example, patent applications in the United States and many international jurisdictions are typically not published until 18 months after the filing of certain priority documents (or, in some cases, are not published until they issue as

patents) and publications in the scientific literature often lag behind actual discoveries. Thus, we cannot be certain that others have not filed patent applications or made public disclosures relating to our technology or our contemplated technology. A third party may have filed, and may in the future file, patent applications directed to our product candidates or technology similar to ours or that of our licensors. Any such patent application may have an earlier priority date than our patent applications or patents, or those of our licensors, which could further require us to obtain rights to patents directed to such technologies. Under certain circumstances, if more third parties have filed such patent applications, an interference proceeding against certain licensed patents in our portfolio and concluded with the United States can be initiated by any such third party, or by the USPTO itself, to determine who was the first to invent any of the subject matter recited by the patent claims of our applications or issued patents.

Furthermore, after issuance, the scope of each reexamined patent claims remains subject to construction as determined by an interpretation of the law, the written disclosure being maintained 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, and we may incorrectly determine that our product candidates or technology are not covered by a third party's 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 elsewhere that we consider relevant may also be incorrect. If we fail to correctly identify or interpret relevant patents, we may be subject to infringement claims. We cannot guarantee that we will be able to successfully settle or otherwise resolve such infringement claims. If we fail in any such dispute, in addition to being forced to pay monetary damages, we may be temporarily or permanently prohibited from commercializing our product candidates. We may also be forced to attempt to redesign our product candidates or technology in a manner that no longer infringes third-party intellectual property rights. Any of these events, even if we were ultimately to prevail, could require us to divert substantial financial and management resources that we would otherwise be able to devote to the development and commercialization of our product candidates.

***Claims brought against us for infringing, misappropriating or otherwise violating intellectual property rights of third parties or engaging in unfair competition, would be costly and time-consuming and could prevent or delay us from successfully developing or commercializing our product candidates.***

Our success depends in part on our ability to develop, manufacture and market our technology and use our technology without infringing the proprietary rights of third parties. We or our collaborators may be subject to third-party claims that could cause us to incur substantial expenses to defend and these claims, if successful, could require us to pay substantial damages and/or limit our ability to commercialize our product candidates if we or our collaborators are found to be infringing a third party's intellectual property rights.



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We are aware of third-party patents and patent applications that may relate to the areas in which we are developing product candidates. Additionally, as our industry expands and more patents are issued, the risk increases that there may be patents issued to third parties that relate to our product candidates and technology of which we are not aware or that we

may need to challenge to continue our operations as currently contemplated. As a result, our technology and any future products that we commercialize could be alleged to infringe patent rights or other proprietary rights of third parties, which may require costly litigation and, if we are not successful in defending against such litigation, could cause us to pay substantial damages and/or limit our ability to commercialize our product candidates. Issued patents are entitled to a presumption of validity in many countries, including the United States and many European countries, and issued patents held by others that claim our technology or any of our product candidates may limit our freedom to operate, including our ability to commercialize our product candidates, unless and until these patents expire or are declared invalid or unenforceable in a court of applicable jurisdiction, if we do not obtain a license or other right to practice the claimed inventions.

We employ individuals who were previously employed at other biotechnology or pharmaceutical companies, including our competitors or potential competitors. Accordingly, we may be subject to claims that these employees, or we, have used or disclosed trade secrets or other proprietary information of their former employers.

Third parties could threaten or initiate litigation or other legal proceedings alleging that we have infringed their patents, trade secrets, trademarks or other intellectual property rights. Litigation may make it necessary to defend ourselves by determining the scope, enforceability and validity of third-party proprietary rights, or to establish our proprietary rights. Regardless of whether any such claims that we are infringing patents or other intellectual property rights have merit, such claims can be time consuming, divert management attention and financial resources and are costly to evaluate and defend.

Results of any such litigation are difficult to predict and may require us to stop treating certain conditions, obtain licenses or modify our product candidates or technology while we develop non-infringing substitutes, or may result in significant settlement costs. Litigation can involve substantial damages for infringement (and if the court finds that the infringement was willful, we could be ordered to pay treble damages and the patent owner's attorneys' fees), and the court could prohibit us from selling our product candidates or require us to take a license from a third party, which the third party is not required to do at a commercially reasonable price or at all. If a license is available from a third party, we may have to pay substantial royalties, upfront fees, or milestone fees, or grant cross-licenses to intellectual property rights for our product candidates or technology. We may also have to redesign our product candidates or technology so they do not infringe third-party intellectual property rights, which may not be possible or may require substantial monetary expenditures and time, during which our product candidates may not be available for manufacture, use, or sale.amended form.

***We may not be able to effectively monitor unauthorized use of our intellectual property and enforce our intellectual property rights against infringement, and may incur substantial costs as a result of bringing litigation or other proceedings relating to our intellectual property rights.***

Monitoring unauthorized use of our intellectual property is difficult and costly. From time to time, we review our competitors' products for potential infringement of our rights. We may not be able to detect unauthorized use of, or take appropriate steps to enforce, our intellectual property rights. Any inability to meaningfully monitor unauthorized use of our

intellectual property could result in competitors offering products that incorporate our product candidates or service features, which could in turn reduce demand for our products.

We may also, from time to time, seek to enforce our intellectual property rights against infringers when we determine that a successful outcome is probable and may lead to an increase in the value of the intellectual property.



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If we choose to enforce our patent rights against a party, that party could counterclaim that our patent is invalid and/or unenforceable. The defendant may challenge our patents through proceedings before the Patent Trial and Appeal Board ("PTAB"), including inter partes and post-grant review. Proceedings to challenge patents are also available internationally, including, for example, opposition proceedings and nullity actions. In patent litigation in the United States, counterclaims alleging invalidity and/or unenforceability and PTAB challenges are commonplace. Grounds for a validity challenge could be an alleged failure to meet any of several statutory requirements, including lack of novelty, obviousness, lack of written description 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. Third parties may also raise similar claims before the PTAB, even outside the context of litigation. 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 and the patent examiner were unaware during prosecution. If a defendant were to prevail on a legal assertion of invalidity and/or unenforceability, we may lose at least part, and perhaps all, of the patent protection on our product candidates.

In addition, such lawsuits and proceedings are expensive and would consume time and resources and divert the attention of managerial and scientific personnel even if we were successful in stopping the infringement of such patents. Litigation is inherently unpredictable, and there is a risk that the court will decide that such patents are not valid and that we do not have the right to stop the other party from using the inventions. Furthermore, 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. There is also the risk that, even if the validity of such patents is upheld, the court will refuse to stop the other party on the ground that such other party’s activities do not infringe our intellectual property rights.

There could also 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 materially adversely affect the price of our common stock. Finally, any uncertainties resulting from the initiation and continuation of any litigation could materially adversely affect our ability to raise the funds necessary to continue our operations.



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***We will not seek to protect our intellectual property rights in all jurisdictions throughout the world and we may not be able to adequately enforce our intellectual property rights even in the jurisdictions where we seek protection.***

We have a number of international patents and patent applications and expect to continue to pursue patent protection in many of the significant markets in which we intend to do business. However, filing, prosecuting and defending patents relating to our product candidates and technology, including all of our in-licensed patent rights, in all countries throughout the world would be prohibitively expensive. We must ultimately seek patent protection on a country-by-country basis, which is an expensive and time-consuming process with uncertain outcomes. Accordingly, we may choose not to seek patent protection in certain countries, and we will not have the benefit of patent protection in such countries.

Furthermore, the protection offered by intellectual property rights in certain countries outside of the United States may be less extensive than those that in the United States. Consequently, we may not be able to prevent third parties from utilizing proprietary technology in all countries outside of the United States, even if we pursue and obtain issued patents in particular foreign jurisdictions, or from selling or importing products made using our proprietary technology in and into the United States or other jurisdictions. Such products may compete with our products, and our patent rights or other intellectual property rights may not be effective or sufficient to prevent them from competing. If such competing products arise in jurisdictions where we are unable to exercise intellectual property rights to combat them, our business, financial condition, results of operations and growth prospects could be materially adversely affected.



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***Changes in U.S. patent law or the patent law of other jurisdictions could decrease the certainty of our ability to obtain patents and diminish the value of patents in general, thereby impairing our ability to protect our current and any future product candidates.***

The U.S. Supreme Court and the Court of Appeals for the Federal Circuit have made, and will likely continue to make, changes in how the patent laws of the United States are interpreted. For example, in recent years the U.S. Supreme Court modified some tests used by the USPTO in granting patents, over the past 20 years, which may decrease the likelihood that we will be able to obtain patents and increase the likelihood of a challenge of any patents we obtain or license. Similarly, international courts have made, and will likely continue to make, changes in how the patent laws in their respective jurisdictions are interpreted. Those changes may materially adversely affect our patent rights and our ability to obtain issued patents.

Changes in either the patent laws or interpretation of the patent laws in the United States could increase the uncertainties and costs surrounding the prosecution of patent applications and the enforcement or defense of issued

patents. For instance, the Leahy-Smith America Invents Act (the "America Invents Act"), enacted in 2011, included a number of significant changes to patent law in the United States. Many of the substantive changes to patent law under the America Invents Act came into effect in March 2013. For example, in March 2013, the United States transitioned from a “first-to-invent” patent system to a patent system in which, assuming that other requirements for patentability are met, the first inventor to file a patent application is entitled to the patent on an invention regardless of whether a third party was the first to invent the claimed invention. The America Invents Act also included a number of significant changes that affect the way patent applications are prosecuted and how issued patents may be challenged, such as allowing third-party submission of prior art to the USPTO during patent prosecution and new post-grant administrative proceedings which can be used by third parties to attack the validity of an issued patent, including post-grant review, inter partes review and derivation proceedings. The America Invents Act and its implementation could increase the uncertainties and/or costs surrounding the prosecution of our patent applications and the enforcement or defense of our issued patents, all of which could materially adversely affect our business, financial condition, results of operations and growth prospects.



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In addition, the Federal Circuit and U.S. Supreme Court has have ruled on several patent cases in recent years, either narrowing the scope, and limiting the duration, of patent protection available in certain circumstances or weakening the rights of patent owners in certain situations. In addition to increasing uncertainty with regard to our ability to obtain patents in the future, this combination of events has created uncertainty with respect to the value of patents, once obtained. Depending on 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 patents that we own, have licensed or might obtain in the future.

Similarly, changes in patent law and regulations in other countries or jurisdictions, changes in the governmental bodies that enforce them or changes in how the relevant governmental authority enforces patent laws or regulations may weaken our ability to obtain new patents or to enforce patents that we own or have licensed or that we may obtain in the future, which in turn could materially adversely affect our business, financial condition, results of operations and growth prospects. For example, the complexity and uncertainty of European patent laws have also increased in recent years. In Europe, a new unitary patent system will take took effect on June 1, 2023, which will significantly impact European patents, including those granted before the introduction of such a system. Under the unitary patent system, European patent applications will have the option, upon grant of a patent, of becoming a Unitary Patent, which will be subject to the jurisdiction of the Unitary Patent Court (the "UPC"). As the UPC is a new court system, there is no precedent for the court

or any decisions that it may take, increasing the uncertainty of any litigation. Existing European During a seven-year transitional period, patent owners may remove patents, that have not lapsed as patent applications, and supplementary protection certificates ("SPCs") from the jurisdiction of June 1, 2023 and for which the UPC, provided that no action has been filed before the UPC, will have the option of opting by filing a request to opt out of the jurisdiction of the UPC and remaining UPC. Such “opted-out” patents will remain or issue as national patents in the UPC countries. Patents under the jurisdiction of the UPC will be potentially vulnerable to a single UPC-based revocation challenge that, if successful, could invalidate the patent in all countries that have ratified the UPC agreement. We cannot predict with certainty the long-term effects of any potential changes.



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***We may fail to obtain or enforce assignments of intellectual property rights from our employees and contractors.***

While it is our policy to require our employees and contractors who may be involved in the conception or development of intellectual property to execute agreements assigning such intellectual property to us, we may be unsuccessful in executing an enforceable agreement with each party who in fact conceives or develops intellectual property that we regard as our own. Furthermore, our assignment agreements may not be self-executing or may be breached, and we may be forced to bring or defend claims to determine the ownership of what we regard as our intellectual property, and we may not be successful in such claims. If we fail in bringing or defending any such claims, in addition to paying monetary damages, we may lose valuable intellectual property rights. Such an outcome could materially adversely affect our business, financial condition, results of operations and growth prospects. Even if we are successful in defending against such claims, litigation could result in substantial costs and distraction to management and other employees.

***If we are not able to adequately prevent disclosure of trade secrets and other proprietary information, the value of our technology and product candidates could be materially diminished.***

Trade secrets are difficult to protect. We rely on trade secrets to protect our proprietary information and technologies, especially where we do not believe patent protection is appropriate or obtainable, or where such patents would be difficult to enforce. We rely in part on confidentiality agreements with our employees, consultants, contractors, collaboration partners, scientific collaborators, and other advisors to protect our trade secrets and other proprietary information. We cannot guarantee that we have entered into such agreements with each party that may have had access to our proprietary information or technologies, or that such agreements, even if in place, will not be circumvented. These agreements may not effectively prevent disclosure of proprietary information or technology and may not provide an adequate remedy in the event of unauthorized disclosure of such information or technology. In addition, others may independently discover our trade secrets and proprietary information, in which case we may have no right to prevent them from using such trade secrets or proprietary information to compete with us. Costly and time-consuming litigation could be necessary to enforce and determine the scope of our proprietary rights, and failure to obtain or maintain trade secret protection could materially adversely affect our business, financial condition, results of operations and growth prospects.

***The U.S. government could choose to exercise certain rights in technology developed under government-funded research, which could eliminate our exclusive use of such technology or require us to commercialize our product candidates in a way we consider sub-optimal.***

The U.S. government has certain rights in some of our licensed patents (including U.S. Patent Nos. 7,435,596, 8,026,097, 11,673,937, and certain related U.S. patent applications) in accordance with the Bayh-Dole Act of 1980. These rights in certain technology developed under government-funded research include, for example, a nonexclusive, nontransferable, irrevocable, paid-up license to use those inventions for governmental purposes. In addition, the U.S. government has the right to may exercise certain "march-in rights," which require us to grant exclusive licenses to such inventions to a third party if the U.S. government determines that: (i) adequate steps have not been taken to commercialize the invention; (ii) government action is necessary to meet public health or safety needs; or (iii) government action is necessary to meet requirements for public use under federal regulations.regulations; or (iv) the general requirement that patented products be manufactured substantially in the United States unless domestic manufacture is not feasible has not been satisfied or waived.

The U.S. government also has the right to take title to such technology if we fail to disclose the invention of such technology to the government and fail to file an application to register the intellectual property within specified time limits. In addition, the U.S. government may acquire title to patent rights in any country in which a patent application is not filed within specified time limits. To the extent any of our owned or in-licensed intellectual property, now or in the future, is generated through the use of U.S. government funding, these provisions of the Bayh-Dole Act may apply.



Intellectual property generated under a government-funded program is also subject to certain reporting requirements. In addition, the U.S. government requires that any products embodying any of these inventions or produced through the use of any of these inventions be manufactured substantially in the United States. States unless domestic manufacture is not feasible or the requirement is waived. If we are unable to obtain a waiver from the government agency that provided the underlying research funding, we may be limited in our ability to contract with non-U.S. product manufacturers for products related to such intellectual property.

The exercise of any of the foregoing rights of the U.S. government over technology that we own or use in the development and commercialization of our product candidates could prevent us from enjoying the exclusive use of such technology, or could cause us to incur additional expenses in the commercialization of our product candidates. Any of the foregoing could materially adversely affect our business, financial condition, results of operations and growth prospects.

**Risks Related to Commercialization**

***If any of our product candidates are approved for marketing and commercialization and we have not developed or secured marketing, sales and distribution capabilities, either internally or from third parties, we will be unable to successfully commercialize such products and may not be able to generate product revenue.***

We currently have limited sales, marketing or distribution expertise. We will need to develop internal sales, marketing and distribution capabilities and infrastructure to commercialize any product candidate that gains FDA or other regulatory authority approval, which would be expensive and time-consuming, or enter into partnerships with third parties to perform these services. If we decide to market any approved products directly, we will need to commit significant financial and managerial resources to develop a marketing and sales force with technical expertise and supporting distribution, administration and compliance capabilities. If we rely on third parties to market products or decide to co-promote products with partners, we will need to establish and maintain marketing and distribution arrangements with third parties, and there can be no assurance that we will be able to enter into such arrangements on acceptable terms or at all. In entering into third-party marketing or distribution arrangements, any product revenue we receive will depend upon the efforts of the third parties and we cannot assure you that such third parties will establish adequate sales and distribution capabilities or be successful in gaining market acceptance for any approved product. If we are not successful in commercializing any product approved in the future, if any, either on our own or through third parties, our business, financial condition, results of operations and growth prospects could be materially adversely affected.



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***Our product candidates, including NKX101 and NKX019, could be subject to regulatory limitations following approval, if and when such approval is granted.***

Following approval of a product candidate, if any, we must comply with comprehensive government regulations regarding the manufacture, labeling, marketing, distribution and promotion of biologic products. We must comply with the

FDA's labeling protocols, which prohibits promoting "off-label uses." We may not be able to obtain the labeling claims necessary or desirable to successfully commercialize our products, including NKX101 and NKX019 or other product candidates in development.

The FDA and foreign regulatory authorities could impose significant restrictions on use of an approved product including potentially restricting its use to limited clinical centers as well as through the product label, as well as on advertising, promotional and distribution activities associated with such approved product. The FDA or a foreign regulatory authority could also condition their approval on the performance of post-approval clinical trials, patient monitoring or testing, which could be time-consuming and expensive. If the results of such post-marketing trials are not satisfactory, the FDA or such foreign regulatory authority could withdraw marketing authorization or may condition continued marketing on commitments from us or our partners that may be expensive and/or time-consuming to fulfill.



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In addition, if we or others identify side-effects after any of our products are on the market, if our products fail to maintain a continued acceptable safety profile after approval, if manufacturing problems occur subsequent to regulatory approval, or if we, our manufacturers or our partners fail to comply with regulatory requirements, including those mentioned above, we or our partners could be subject to the following:

- restrictions on our ability to conduct clinical trials, including full or partial clinical holds on ongoing or planned clinic trials;
- restrictions on such products' manufacturing processes;
- changes to the product label;
- restrictions on the marketing of a product;
- education requirements for prescribers;
- additional requirements prior to product distribution;
- restrictions on product distribution;
- requirements to conduct post-marketing clinical trials;
- Untitled or Warning Letters from the FDA;
- withdrawal of the product from the market;
- refusal to approve pending applications or supplements to approved applications that we submit;
- recall of products;
- fines, restitution or disgorgement of profits or revenue;
- suspension or withdrawal of regulatory approvals;
- refusal to permit the import or export of our products;
- product seizure;
- injunctions; or

- imposition of civil or criminal penalties.

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Any one or a combination of these penalties could prevent us from achieving or maintaining market acceptance of the affected product, or could substantially increase the costs and expenses of commercializing such product, which in turn could delay or prevent us from generating any revenue or profit from the sale of such product and could materially adversely affect our business, financial condition, results of operations and growth prospects. In addition, third-party payors may impose limitations on centers and personnel that may administer our products, including but not limited to requiring third-party accreditation to be obtained before the use of our products is reimbursed in such a center, which could materially adversely affect our potential commercial success and lead to slower market acceptance.

***The market opportunities for our product candidates, if and when approved, may be limited, and if such market opportunities are smaller than we expect, our revenues could be materially adversely affected and our business could suffer.***

Our initial clinical trials evaluate have been evaluating NKX019 and NKX101 and NKX019 in relapsed/refractory patients who have been previously treated with other anti-cancer therapies. We are developing a clinical trial to evaluate NKX019 in patients with refractory LN. We do not know at this time whether either NKX101 NKX019 or NKX019 NKX101 or any of our product candidates will be safe for use in humans or whether they will demonstrate any anti-cancer or autoimmune activity. If the activity is sufficient, we may initially seek approval of any product candidates we develop as a therapy for patients who have received one or more prior treatments. Depending on the activity we note in the initial clinical trials, we plan to conduct additional clinical trials in less heavily pretreated populations in order to expand use of our product candidates in a broader group of patients and increase market opportunities. However, there is no guarantee that product candidates we develop, even if approved for later lines of therapy, would be approved for earlier lines of therapy, and, prior to any such approvals, we will have to conduct additional clinical trials.

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The number of patients who have the cancers specific diseases we are targeting may turn out to be lower than expected. Additionally, the potentially addressable patient population for our current programs or future product candidates may be limited. Potentially addressable patient populations for of our product candidates are only estimates. These

estimates could prove to be incorrect, and the estimated number of potential patients in the United States and elsewhere could be lower than expected. It may also be that such patients may not be otherwise amenable to treatment with our product candidates, or patients could become increasingly difficult to identify and access for a variety of reasons including other drugs being approved, any of which could materially adversely affect our business, financial condition, results of operations and growth prospects.

***The commercial success of any of our product candidates will depend upon such product candidate's degree of market acceptance by physicians, patients, third-party payors and others in the medical community.***

Our product candidates may not be commercially successful. Even if requisite approvals are obtained from the FDA in the United States and other regulatory authorities internationally, the commercial success of our product candidates will depend, in part, on the acceptance by physicians, patients and healthcare payors of cell therapy products in general, and our product candidates in particular, as medically necessary, cost-effective and safe. Physicians, patients, healthcare payors and others in the medical community may not accept any product that we commercialize. If these products do not achieve an adequate level of acceptance, we may not generate significant product revenue and may not become profitable. The degree of market acceptance of cell therapy products and, in particular, our product candidates, if approved for commercial sale, will depend on several factors, including:

- the efficacy and safety of such product candidates as demonstrated in clinical trials;
- the potential and perceived advantages of product candidates over alternative treatments;
- the cost of treatment relative to alternative treatments; treatments, and the availability of coverage or reimburseme by government and private payors to enable patients to afford our product candidates;
- the clinical indications for which the product candidate is approved by the FDA;
- the willingness of physicians to refer patients and prescribe new therapies;
- the willingness of the target patient population to try new therapies;



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- the nature, prevalence and severity of any side effects;
- product labeling or product insert requirements imposed by the FDA or other regulatory authorities, including any limitations or warnings contained in a product's approved labeling;
- relative convenience and ease of administration;

- the timing of market introduction of competitive products;
- adverse publicity concerning our product candidates or favorable publicity about competing products and treatmer
- sufficient third-party payor coverage, any limitations in terms of center or personnel training requirement imposed l third parties and adequate reimbursement;
- limitations or warnings contained in the FDA-approved labeling for our product candidates;
- any FDA requirement to undertake a REMS;
- the effectiveness of our sales, marketing and distribution efforts; and
- potential product liability claims.

Even if a product candidate displays a favorable efficacy and safety profile in preclinical studies and clinical trials, market acceptance of the product will not be fully known until after such product is launched. Our product candidates may not achieve broad market acceptance.



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Furthermore, the FDA's and other regulatory authorities' policies may change and additional government regulations may be enacted that could prevent, limit or delay marketing approval of a product. 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.

***The 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 such products and to generate product revenue.***

We expect the cost of a single administration of one of our cell therapy product candidates to be substantial, when and if they achieve regulatory approval. We expect that there is likely to be a significant copay associated with our cell therapy products given the overall cost and that coverage and reimbursement by government and private payors will be essential for most patients to be able to afford these treatments. Accordingly, sales of our products, if approved, will depend substantially, both domestically and internationally, on the extent to which the costs of our product candidates will be reimbursed by government authorities, private health coverage insurers and other third- party payors. Coverage and reimbursement by a third-party payor could depend upon several factors, including the third-party payor's determination that use of a product is (i) a covered benefit under its health plan, (ii) safe, effective and medically necessary, (iii) appropriate for the specific patient, (iv) cost-effective and (v) neither experimental nor investigational.

Obtaining coverage and reimbursement for a product from third-party payors is a time-consuming and costly process that could require us to provide to the payor supporting scientific, clinical and cost-effectiveness data. We may not be able to provide data sufficient to gain acceptance with respect to coverage and reimbursement. If coverage and reimbursement

are not available, or are available only at limited levels, we may not be able to successfully commercialize our product candidates. Even if coverage is provided, the approved reimbursement amount may not be adequate to realize a sufficient return on our investment.



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There is significant uncertainty related to third-party coverage and reimbursement of newly approved drug products. In the United States, third-party payors, including government payors such as Medicare and Medicaid, play an important role in determining the extent to which new drugs and biologics will be covered and reimbursed. Medicare and Medicaid are increasingly used as models for the development of private payors' and government payors' coverage and reimbursement policies. Currently, few cell therapy products have been approved for coverage and reimbursement by the Centers for Medicare and Medicaid Services ("CMS"), the agency responsible for administering Medicare. It is difficult to predict what third payors, including CMS, will decide with respect to coverage and reimbursement for fundamentally novel products such as ours, since there is no body of established protocols and precedents for these types of drug products. Moreover, reimbursement agencies in other countries, such as those in Europe, may be more conservative than CMS.

Third-party patient assistance programs, including copay assistance programs, that receive financial support from companies have become the subject of enhanced government and regulatory scrutiny. Government enforcement agencies have shown increased interest in pharmaceutical companies' product and patient assistance programs, including reimbursement support services, and a number of investigations into these programs related to allegations regarding their use to promote branded pharmaceutical products over other less costly alternatives have resulted in significant civil and criminal settlements. While copay assistance programs are common within the industry, the Office of Inspector General at the U.S. Department of Health and Human Services has taken the position that such programs may violate the Anti-Kickback Statute. It is difficult to predict whether new legislation or regulatory action will restrict copay assistance programs and there is a risk that if these copay assistance programs are curtailed, higher cost treatments will be less accessible to patients and less likely to gain market acceptance.

Outside the United States, international operations vary significantly by country and are subject to extensive government price controls and other market regulations, and increasing emphasis on cost-containment initiatives in the European countries, Canada and other countries could place pricing pressure on us. In many countries, the prices of medical products are subject to varying price control mechanisms as part of national health systems. It can also take a significant amount of time after approval of a product to secure pricing and reimbursement for such product in many

counties outside the United States. In general, the prices of medicines under such systems are substantially lower than in the United States. Other countries allow companies to fix their own prices for medical products, but monitor and control company profits. Additional foreign price controls or other changes in pricing regulation could restrict the amount that we are able to charge for our product candidates. Accordingly, in markets outside the United States, the reimbursement for our products may be reduced compared with the United States and may be insufficient to generate commercially reasonable product revenues.

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Moreover, increasing efforts by government and third-party payors in the United States and abroad to cap or reduce healthcare costs could limit coverage and the level of reimbursement for our product candidates. Payors are increasingly considering new metrics as the basis for reimbursement rates, such as average sales price, average manufacturer price, and Actual Acquisition Cost. The existing data for reimbursement based on some of these metrics is relatively limited, although certain states have begun to survey acquisition cost data for the purpose of setting Medicaid reimbursement rates, and CMS has begun making pharmacy National Average Drug Acquisition Cost and National Average Retail Price data publicly available on at least a monthly basis. Therefore, it may be difficult to project the impact of these evolving reimbursement metrics on the willingness of payors to cover candidate products that we or our partners are able to commercialize. Furthermore, most third-party payors currently require additional accreditation for approved cell therapy drugs, which limits the centers that can administer the drugs, and similar limitations may also be imposed on the product candidates that we are developing. We expect to experience pricing pressures in connection with the sale of our product candidates, if any, due to the trend toward managed healthcare, the increasing influence of health maintenance organizations and additional legislative changes. The downward pressure on healthcare costs in general, and on prescription drugs and surgical procedures in particular, has become intense. As a result, increasingly high barriers to entry are developing for new drug products such as ours.

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***Healthcare reform initiatives and other administrative and legislative proposals may harm our business.***

In the United States, the European Union and other jurisdictions, there have been, and we expect there will continue to be, a number of legislative and regulatory changes and proposed changes to the healthcare system that could affect our results of operations. In particular, there have been and continue to be a number of initiatives at the United States federal

and state levels that seek to reduce healthcare costs. For example, in March 2010, the Patient Protection and Affordable Care Act, as amended by the Health Care and Education Reconciliation Act (the "ACA") was enacted, which includes measures that have significantly changed the way healthcare is financed by both governmental and private payors. The provisions of the ACA of importance to the pharmaceutical and biotechnology industry are, among others, the following:

- an annual, nondeductible fee on any entity that manufactures or imports certain branded prescription drug agents biologic agents, which is apportioned among these entities according to their market share in certain government healthcare programs;
- 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;
- expansion of eligibility criteria for Medicaid programs by, among other things, allowing states to offer Medicaid coverage to certain individuals with income at or below 133% of the federal poverty level, thereby potentially increasing manufacturers' Medicaid rebate liability;
- a Patient-Centered Outcomes Research Institute to oversee, identify priorities in, and conduct, comparative clinica effectiveness research, along with funding for such research; and
- establishment of a Center for Medicare and Medicaid Innovation at CMS to test innovative payment and service delivery models to lower Medicare and Medicaid spending, potentially including prescription drug spending.

Since its enactment, there have been legislative, judicial, and executive challenges to certain aspects of the ACA, including efforts to repeal or replace all or part of the ACA. While Congress has not passed comprehensive repeal legislation, two bills affecting the implementation of the ACA have been signed into law. The Tax Cuts and Jobs Act of 2017 includes a provision repealing, effective January 1, 2019, the tax-based shared responsibility payment imposed by the ACA on certain individuals who fail to maintain qualifying health coverage for all or part of a year that is commonly referred to as the "individual mandates," and the Bipartisan Budget Act of 2018 (the "BBA") among other things, amends the ACA to increase from 50 percent to 70 percent the point-of-sale discount that is owed by pharmaceutical manufacturers who participate in Medicare Part D and to close the coverage gap in most Medicare drug plans, commonly referred to as the "donut hole." Further, the 2020 federal spending package eliminated, effective January 1, 2020, the ACA-mandated "Cadillac" tax on high-cost employer-sponsored health coverage and medical device tax and, effective January 1, 2021, also eliminated the health insurer. Congress could continue to consider other legislation to repeal or replace certain elements of the ACA, and it is unclear how other efforts, if any, to challenge, repeal or replace the ACA, and other healthcare reform measures, will impact our business.

On December 14, 2018, a U.S. District Court judge in the Northern District of Texas ruled that the individual mandate portion of the ACA is an essential and inseverable feature of the ACA, and therefore because the mandate was repealed as part of the Tax Cuts and Jobs Act, the remaining provisions of the ACA are invalid as well. On December 18, 2019, the Court of Appeals for the Fifth Circuit court affirmed the lower court's ruling that the individual mandate portion of the ACA is unconstitutional and it remanded the case to the district court for reconsideration of the severability question and additional analysis of the provisions of the ACA. Thereafter, on March 2, 2020, the U.S. Supreme Court agreed to hear this case. Oral argument in the case took place on November 10, 2020. On June 17, 2021, the U.S. Supreme Court dismissed the case without specifically ruling on the constitutionality of the ACA, finding that the plaintiffs lacked standing to bring the action.

Prior to the Supreme Court's decision, an executive order was issued to initiate a special enrollment period from February 15, 2021 through May 15, 2021 for purposes of obtaining health insurance coverage through the ACA marketplace. The executive order also instructs certain governmental agencies to review and reconsider their existing policies and rules that limit access to healthcare, including among others, reexamining Medicaid



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demonstration projects and waiver programs that include work requirements, and policies that create unnecessary barriers to obtaining access to health insurance coverage through Medicaid or the ACA.

Other federal health reform measures have been proposed and adopted in the United States since the ACA was enacted. For example, as a result of the Budget Control Act of 2011, among other things, providers are subject to Medicare payment reductions of 2% per fiscal year which went into effect on April 1, 2013 and, due to subsequent legislative amendments to the statute, will remain in effect through 2030 pursuant to the Coronavirus Aid, Relief and Economic Security Act (the "CARES Act"). Further, the American Taxpayer Relief Act of 2012, among other things, reduced Medicare payments to several types of providers, including hospitals, imaging centers and cancer treatment center, and increased the statute of limitations period for the government to recover overpayments from providers from three to five years. The Medicare Access and CHIP Reauthorization Act of 2015 also introduced a quality payment program under which certain individual Medicare providers will be subject to certain incentives or penalties based on new program quality standards. Payment adjustments for the Medicare quality payment began in 2019. These new laws or any other similar laws introduced in the future may result in additional reductions in Medicare and other health care funding, which could negatively affect our customers and accordingly, our financial operations.

There have also been a number of proposals in the United States, at both the federal and state level, to control the escalating cost of healthcare, including the cost of drug treatments, patient reimbursement constraints, discounts, restrictions on certain product access and marketing cost disclosure and transparency measures, and we expect that coverage and reimbursement for new therapies will be increasingly restricted. For example, certain states, including California, have implemented state-level cost containment strategies, which could adversely impact adoption of higher-cost medicines that are new to the market. Further, there has been heightened governmental scrutiny over the manner in which manufacturers set prices for their marketed products, which have resulted in several recent Congressional inquiries and proposed and enacted federal and state legislation designed to, among other things, bring more transparency to drug product pricing, review the relationship between pricing and manufacturer patient programs, and reform government

program reimbursement methodologies for products. Most significantly, on August 16, 2022, the Inflation Reduction Act of 2022 ("IRA") was signed into law. The IRA includes provisions that will, among others: (i) direct CMS to negotiate the price of certain single-source prescription drugs reimbursed under Medicare, and subject drug manufacturers to civil monetary penalties and a potential excise tax by offering a price that is not equal to or less than the negotiated “maximum fair price” under the law; (ii) impose requirements on drug manufacturers to provide rebates to CMS under Medicare Part B and Medicare Part D as a penalty for price increases that outpace inflation; (iii) cap Medicare Part D beneficiaries’ annual out-of-pocket drug expenses to $2,000 starting in 2025, effectively eliminating the “donut hole” for Medicare Part D; and (iv) delay the rebate rule that would limit the fees that pharmacy benefit managers can charge. The IRA also extends enhanced subsidies for individuals purchasing coverage in a health insurance marketplace through plan year 2025. The effect of the IRA on our business and the healthcare industry in general is not yet known, but we continue to evaluate its potential impact. At the state level, individual states in the United States have also become increasingly aggressive in passing legislation and implementing regulations designed to control pharmaceutical and biological product pricing, including price or patient reimbursement constraints, discounts, restrictions on certain product access and marketing cost disclosure and transparency measures, and, in some cases, designed to encourage importation from other countries and bulk purchasing. In December 2020, the U.S. Supreme Court held unanimously that federal law does not preempt the states’ ability to regulate pharmaceutical benefit managers ("PBMs") and other members of the health care and pharmaceutical supply chain, an important decision that may lead to further and more aggressive efforts by states in this area. In addition, regional healthcare authorities and individual hospitals are increasingly using bidding procedures to determine what pharmaceutical products and which suppliers will be included in their prescription drug and other healthcare programs. These measures could reduce the ultimate demand for our products, once approved, or put pressure on our product pricing.

We cannot predict the likelihood, nature or extent of government regulation that may arise from future legislation or administrative action in the United States, the European Union or any other jurisdiction. If we or any third parties we may engage are slow or unable to adapt to changes in existing requirements or the adoption of new requirements or policies, or if we or such third parties are not able to maintain regulatory compliance, our product candidates may lose any regulatory approval that may have been obtained and we may not achieve or sustain profitability. Furthermore, future price controls or other changes in pricing regulation or negative publicity related to the pricing of pharmaceutical drugs could restrict the amount that we are able to charge for our drug products, which

could render our product candidates, if approved, commercially unviable and materially adversely affect our ability to raise additional capital on acceptable terms. For further details on how healthcare reform may impact our business, see "*Healthcare Reform*" in the section titled "Government Regulation" in Part I, Item 1 in this Annual Report on Form 10-K.

***Obtaining and maintaining marketing approval or commercialization of our product candidates in one jurisdiction does not mean that we will be successful in obtaining marketing approval of our product candidates in other jurisdictions.***

Approval procedures vary among jurisdictions and can involve requirements and administrative review periods different from, and greater than, those in the United States, including additional preclinical studies or clinical trials as clinical trials conducted in one jurisdiction may not be accepted by regulatory authorities in other jurisdictions. In many jurisdictions outside the United States, a product candidate must be approved for reimbursement before it can be approved for sale in that jurisdiction. In some cases, the price that we intend to charge for our products is also subject to approval.

If we market approved products outside the United States, we expect that we will be subject to additional risks in commercialization, including:

- different regulatory requirements for approval of therapies in foreign countries;
- reduced protection for intellectual property rights;
- unexpected changes in tariffs, trade barriers and regulatory requirements;



- economic weakness, including inflation, or political instability in particular foreign economies and markets;
- compliance with tax, employment, immigration and labor laws for employees living or traveling abroad;
- foreign currency fluctuations, which could result in increased operating expenses and reduced revenues, and othe obligations incident to doing business in another country;
- foreign reimbursement, pricing and insurance regimes;
- workforce uncertainty in countries where labor unrest is more common than in the United States;
- production shortages resulting from any events affecting raw material supply or manufacturing capabilities abroad; and
- business interruptions resulting from geopolitical actions, including war and terrorism, natural disasters including earthquakes, typhoons, floods and fires, and other public health crises, illnesses, epidemics or pandemics, such a the potential impact of the COVID-19 outbreak. pandemics.

We have no prior experience in these areas. In addition, there are complex regulatory, tax, labor and other legal requirements imposed by many of the individual countries in which we may operate, with which we will need to comply. Any of the foregoing difficulties, if encountered, could materially adversely affect our business, financial condition, results of operations and growth prospects.

***Our business operations and relationships with investigators, healthcare professionals, consultants, third-party payors, patient organizations and customers will be subject to applicable fraud and abuse and other healthcare laws and regulations, which could expose us to penalties.***

These laws may constrain the business or financial arrangements and relationships through which we conduct our operations, including how we research, market, sell and distribute our product candidates, if approved. Such laws include, the U.S. federal Anti-Kickback Statute, the U.S. federal civil and criminal false claims and civil monetary penalties laws, including the civil False Claims Act, the Health Information Technology for Economic and Clinical Health Act, the U.S. Physician Payments Sunshine Act and its implementing regulations, U.S. state laws and regulations, including, state anti-kickback and false claims laws, laws that require pharmaceutical companies to comply with the pharmaceutical industry's voluntary compliance guidelines and the relevant compliance guidance promulgated by the U.S. federal government, or otherwise restrict payments that may be made to healthcare providers and other potential referral sources, laws and regulations that require drug manufacturers to file reports relating to pricing and marketing information, laws requiring the registration of pharmaceutical sales representatives, laws governing the privacy and security of health information in certain circumstances, and similar healthcare laws and regulations in other jurisdictions, including reporting requirements detailing interactions with and payments to healthcare providers.

It is not always possible to identify and deter 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 government investigations or other actions or lawsuits stemming from a failure to comply with these laws or regulations. Ensuring that our internal operations and future business arrangements with third parties comply with applicable healthcare laws and regulations will also involve substantial costs. If our operations are found to be in violation of any of the laws described above or any other governmental laws and regulations that may apply to us, we may be subject to significant penalties, including civil, criminal and administrative penalties, damages, fines, exclusion from government-funded healthcare programs, such as Medicare and Medicaid or similar programs in other countries or jurisdictions, integrity oversight and reporting obligations to resolve allegations of non-compliance, disgorgement, individual imprisonment, contractual damages, reputational harm, diminished profits and the curtailment or restructuring of our operations. If any of the physicians or other providers or entities with whom we expect to do business are found to not be in compliance with applicable laws, they may be subject to criminal, civil or administrative sanctions, including exclusions from government funded healthcare programs and imprisonment, which could affect our ability to operate our business. Further, defending

against any such actions can be costly, time-consuming and may require significant personnel resources. Any of the foregoing could significantly harm our business, financial condition, results of operations and growth prospects.

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***We may fail to comply with evolving global privacy laws.***

In the ordinary course of business, we collect, receive, store, process, generate, use, transfer, disclose, make accessible, protect, secure, dispose of, transmit, and share sensitive information, including personal data, proprietary and confidential business data, trade secrets, intellectual property, data we collect about trial participants in connection with clinical trials, and sensitive third-party data. Our data processing activities may subject us to numerous data privacy and security obligations, such as various laws, regulations, guidance, industry standards, external and internal privacy and security policies, contracts, and other obligations that govern the processing of personal data by us and on our behalf.

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In the United States, there are a broad variety of data protection and security laws and regulations that have been enacted by federal, state, and local governments, including personal data privacy laws, health information privacy laws, data breach notification laws, and consumer protection laws, For example, the Health Insurance Portability and Accountability Act of 1996 ("HIPAA"), as amended by the Health Information Technology for Economic and Clinical Health Act of 2009 ("HITECH"), imposes specific requirements relating to the privacy, security, and transmission of individually identifiable health information. We may obtain health information from third parties, including research institutions from which we obtain clinical trial data, that are subject to privacy and security requirements under HIPAA, as amended by HITECH, and its implementing rules and regulations. Depending on the facts and circumstances, we could be subject to significant penalties if we obtain, use, or disclose individually identifiable health information maintained by a HIPAA-covered entity in a manner that is not authorized or permitted by HIPAA. There are a wide range of enforcement agencies at both the state and federal levels that can review companies for privacy and data security concerns based on general consumer protection laws. The Federal Trade Commission and state Attorneys General may all review privacy and data security protections for consumers.

If New laws also are being enacted and considered at both the state and federal levels. For example, the California Consumer Privacy Act (the "CCPA"), which went into effect on January 1, 2020, imposes obligations on covered

businesses. These obligations include, but are not limited to, providing specific disclosures in privacy notices and affording California residents certain rights related to their personal data. The CCPA also allows for statutory fines for noncompliance (up to $7,500 per violation) and includes a private right of action for certain data breaches. Although there are some exemptions for clinical trial data and health information, the CCPA may impact our business activities and increase our compliance costs and potential liability. In addition, the California Privacy Rights Act (the "CPRA"), which became operative on January 1, 2023, expanded the CCPA, including by expanding consumers' rights with respect to certain sensitive personal data. The CPRA also created the new California Privacy Protection Agency to implement and enforce the CCPA and the CPRA, which could increase compliance costs. Similar laws have passed in Virginia, Utah, Connecticut and Colorado, and have been proposed in other states and at the federal level, reflecting a trend toward more stringent privacy legislation in the United States. The enactment of such laws could have potentially conflicting requirements that would make compliance challenging. Additionally, failure to comply with federal and state laws (both those currently in effect and future legislation) regarding privacy and security of personal information could expose us to fines and penalties under such laws. There also is the threat of consumer class actions related to these laws and the overall protection of personal data.

Outside the United States, an increasing number of laws, regulations, and industry standards apply to data privacy and security. For example, if we conduct clinical trials in the European Economic Area ("EEA"), we may be subject to additional privacy laws. The General Data Protection Regulation, (EU) 2016/679 ("GDPR") imposes a broad range of strict requirements on companies subject to the GDPR, including requirements relating to having legal bases for processing personal information relating to identifiable individuals and transferring such information outside the EEA, including to the United States, providing details to those individuals regarding the processing of their personal information, keeping personal information secure, having data processing agreements with third parties who process personal information, responding to individuals' requests to exercise their rights in respect of their personal information, reporting security breaches involving personal data to the competent national data protection authority and affected individuals, appointing privacy and data protection officers, conducting data protection impact assessments, and record-keeping. The GDPR increases substantially the penalties to which we could be subject in the event of any non-compliance, including fines of up to 10,000,000 Euros or up to 2% of our total worldwide annual turnover for certain comparatively minor offenses, or up to 20,000,000 Euros or up to 4% of our total worldwide annual turnover for more serious offenses. Given the limited enforcement of the GDPR to date, we face uncertainty as to the exact interpretation of the new requirements on our trials and we may be unsuccessful in implementing all measures required by data protection authorities or courts in interpretation of the new law.

In particular, national laws of member states of the European Union are in the process of being adapted to the requirements under the GDPR, thereby implementing national laws which may partially deviate from the GDPR and impose different obligations from country to country, so we do not expect to operate in a uniform legal landscape in the EU. Also, as it relates to processing and transfer of genetic data, the GDPR specifically allows national laws to impose additional and more specific requirements or restrictions, and European laws have historically differed quite substantially in this field, leading to additional uncertainty.

In the event we conduct clinical trials in the EEA, we must also ensure that we implement and maintain adequate safeguards to enable the transfer of personal data outside of the EEA, in particular to the United States, in compliance with European data protection laws. We expect that we will continue to face uncertainty as to whether our efforts to comply with our obligations under European privacy laws will be sufficient. If we are investigated by a European data protection authority, we may face fines and other penalties. Any such investigation or charges by European data protection authorities could have a negative effect on our existing business and on our ability to attract and retain new clients or pharmaceutical partners. We may also experience hesitancy, reluctance, or refusal by European or multi-national clients or pharmaceutical partners to continue to use our products and solutions due to the potential risk exposure as a result of the current and, in particular, future data protection obligations imposed on them by certain data protection authorities in interpretation of current law, including the GDPR. Such clients or pharmaceutical partners may also view any alternative approaches to compliance as being too costly, too burdensome, too legally uncertain, or otherwise objectionable and therefore decide not to do business with us. Any of the foregoing could materially harm our business, prospects, financial condition and results of operations.

Similar actions are either in place or under way in the United States. There are a broad variety of data protection laws that are applicable to our activities, and a wide range of enforcement agencies at both the state and federal levels that can review companies for privacy and data security concerns based on general consumer protection laws. The Federal Trade Commission and state Attorneys General all are aggressive in reviewing privacy and data security protections for consumers. New laws also are being considered at both the state and federal levels. For example, the California Consumer Privacy Act (the "CCPA"), which went into effect on January 1, 2020, is creating similar risks and obligations as those created by the GDPR, though the California Consumer Privacy Act does exempt certain clinical trial data. Many other states are considering similar legislation. A broad range of legislative measures also have been introduced at the federal level. Accordingly, failure to comply with federal and state laws (both those currently in effect and future legislation) regarding privacy and security of personal information could expose us to fines and penalties under such laws. There also is the threat of consumer class actions related to these laws and the overall protection of personal data.



**Risks Related to Our Common Stock**

***The market price for our common stock may be volatile, which could contribute to the loss of all or part of your investment.***

The trading price of our common stock is likely to be highly volatile and subject to wide fluctuations in response to various factors, some of which are beyond our control.

Factors affecting the trading price of our common stock may include, but are not limited to:

- our decision to initiate a clinical study, not to initiate a clinical study or to terminate an existing clinical study;
- delays in the announcement of initial data or clinical results from our clinical trials or expectations that such delays may occur;
- data or clinical results from our clinical trials;
- adverse regulatory decisions, including failure to receive regulatory approval for our products;
- success or failure of competitive products, immunotherapy drugs or cellular therapies more generally;
- adverse developments concerning our manufacturers or our strategic partnerships;
- adverse safety or other clinical results, such as those that have occurred in the past or that may occur in the future related to cellular therapies being developed by other companies that are or may be perceived to be similar to our cellular therapies;
- operating and stock price performance of other companies that investors deem comparable to us;
- sales of substantial amounts of common stock by our directors, executive officers or significant stockholders or the perception that such sales could occur;
- the ongoing conflicts in the Middle East and Ukraine;
- general economic and political conditions such as recessions, inflationary pressures, interest rates, fuel prices, elections, drug pricing policies, international currency fluctuations, acts of war or terrorism, and other public health crises, illnesses, epidemics or pandemics, such as the potential impact of the COVID-19 outbreak; pandemics; and
- other factors discussed in these risk factors.

Any of the factors listed above could materially adversely affect your investment in our common stock, and our common stock may trade at prices significantly below the initial public offering price or the price at which you purchased the stock, which could contribute to a loss of all or part of your investment. In such circumstances the trading price of our common stock may not recover and may experience a further decline.

In addition, broad market and industry factors could materially adversely affect the market price of our common stock, irrespective of our operating performance. The stock market in general, and Nasdaq and the market for biotechnology companies in particular, have experienced extreme price and volume fluctuations that have often been unrelated or disproportionate to the operating performance of the particular companies affected. The trading prices and valuations of these stocks, and of ours, may not be predictable. For instance, technical factors in the public trading market for our common stock may produce price movements that may or may not comport with macro, industry or company-specific fundamentals, including, without limitation, the sentiment of retail investors (including as may be expressed on financial trading and other social media sites), the amount and status of short interest in our common stock, access to margin debt, and trading in options and other derivatives on our common stock. In addition, the trading prices for common stock of other biopharmaceutical and biotechnology companies have been may be highly volatile in the event of a pandemic, epidemic, or outbreak of infectious disease, such as an outbreak of a result of the COVID-19 pandemic. The COVID-19 outbreak continues to rapidly evolve. The full extent to which the outbreak may impact our business, preclinical studies and clinical trials will depend on future developments, which are highly uncertain and cannot be predicted with confidence. variant. A loss of investor confidence in the market for biotechnology or pharmaceutical stocks or the stocks of other companies which investors perceive to be similar to us, the opportunities in the biotechnology and pharmaceutical market or the stock market in general, could depress our stock price regardless of our business, financial condition, results of operations or growth prospects.



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***Concentration of ownership of our shares of common stock among our existing executive officers, directors and principal stockholders may prevent new investors from influencing significant corporate decisions.***

As of March 13, 2023 March 18, 2024, our directors and executive officers, and entities affiliated with them, as well as holders of more than 5% of our outstanding shares of common stock, in the aggregate beneficially own 63% 78% of our common stock. These stockholders, acting together, are able to control or significantly influence all matters requiring stockholder approval, including the election and removal of directors and approval of any merger, consolidation or sale of all or substantially all of our assets.

Some of these persons or entities may have interests different from yours. For example, because many of these stockholders purchased their shares at prices substantially below the price at which shares were sold in the IPO and have held their shares for a longer period, they may be more interested in selling our company to an acquirer than other investors, or they may want us to pursue strategies that deviate from the interests of other stockholders.

***A significant portion of our total outstanding shares are eligible to be sold into the market, which could cause the market price of our common stock to drop significantly.***

Sales of a substantial number of shares of our common stock in the public market, or the perception in the market that the holders of a large number of stockholders intend to sell shares of our common stock, could reduce the market price of

our common stock. As of March 13, 2023 March 18, 2024, we had 48,928,670 49,416,186 shares of common stock outstanding.

Holders of an aggregate of 13,200,076 9,837,634 shares of common stock, including with respect to shares of our convertible preferred stock that converted into shares of our common stock upon the completion of the IPO, have rights, subject to specified conditions, to require us to file registration statements covering their shares or to include their shares in registration statements that we may file for ourselves or other stockholders, until such shares can otherwise be sold without restriction under Rule 144 under the Securities Act, or until the rights terminate pursuant to the terms of the stockholders agreement between us and such holders. We have also registered all shares of common stock subject to equity awards issued or reserved for future issuance under our equity compensation plans on registration statements on Form S-8, and these shares can be freely sold in the public market upon issuance, subject to volume limitations applicable to affiliates under Rule 144 under the Securities Act. Any sales of securities by these stockholders could have a negative impact on the trading price of our common stock.



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***We are an "emerging growth company" under the JOBS Act and a "smaller reporting company" and we rely on exemptions from certain disclosure and governance requirements applicable to emerging growth companies and smaller reporting companies, as a result of which our common stock may be less attractive to investors.***

We take advantage and may continue to take advantage of certain exemptions from various reporting requirements that are applicable to other public companies that are not emerging growth companies, including: not being required to comply with the auditor attestation requirements of Section 404 of the Sarbanes-Oxley Act, reduced disclosure obligations regarding executive compensation in our periodic reports and proxy statements, and exemptions from the requirements of holding a nonbinding advisory vote on executive compensation and stockholder approval of any golden parachute payments not previously approved. As a result, our stockholders may not have access to certain information they may deem important.

We may take advantage of these reporting exemptions until we are no longer an emerging growth company. We will remain an emerging growth company until the earlier to occur of (1) the last day of the fiscal year (a) following the fifth anniversary of our IPO, (b) in which we have total annual gross revenue of at least $1.235 billion or (c) in which we are deemed to be a "large accelerated filer" under the rules of the SEC, which means the market value of our common stock

that is held by non-affiliates exceeds $700 million as of the prior June 30; and (2) the date on which we have issued more than $1.0 billion in non-convertible debt during the prior three-year period.

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We are also a “smaller reporting company” as defined by applicable rules of the SEC. Even after we no longer qualify as an emerging growth company, we may still qualify as a smaller reporting company and would be permitted to continue to take advantage of many of the same reporting exemptions, including exemption from compliance with the auditor attestation requirements of Section 404(b) of the Sarbanes-Oxley Act as long as we do not otherwise also qualify as an “accelerated filer” or “large accelerated filer” for SEC reporting purposes and reduced disclosure obligations regarding executive compensation in our periodic reports and proxy statements. We cannot predict if investors will find our common stock less attractive if we rely on emerging growth company or smaller reporting company exemptions. If some investors find our common stock less attractive as a result, there may be a less active trading market for our common stock and our stock price may be more volatile.

***Our severance and change in control agreements with our executive officers may require us to pay severance benefits to any of those persons who are terminated, which could materially adversely affect our financial condition or results of operations.***

Our executive officers are parties to agreements that contain certain change in control and severance provisions. The agreements provide for cash payments for severance and other benefits in the event of a termination of employment that is not in connection with a change in control of us. They also provide for cash payments for severance and other benefits and acceleration of stock options vesting in the event of a termination of employment in connection with a change in control of us. The accelerated vesting of options could result in dilution to our existing stockholders and could materially adversely affect the market price of our common stock. The payment of these severance benefits, and in particular, pursuant to multiple agreements at the same time, could materially adversely affect our financial condition and results of operations. In addition, these potential severance payments may discourage or prevent third parties from seeking a business combination with us.

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***Our ability to use our net operating loss carryovers and certain other tax attributes may be limited.***

As described above under “*We have incurred significant losses since our inception, and we expect to continue to incur significant losses for the foreseeable future*,” we have incurred net losses since our inception and anticipate that we will continue to incur significant losses for the foreseeable future. Under the Internal Revenue Code of 1986 (the "Code"), a corporation is generally allowed a deduction for net operating losses ("NOLs") carried over from a prior taxable year. Under that provision, we can carry forward our NOLs to offset our future taxable income, if any, until such NOLs are used or expire, in the case of NOLs generated prior to 2018. The same is true of other unused tax attributes, such as tax credits. The amounts of our unused carryovers of NOLs and tax credits as of December 31, 2017, and a description of the valuation allowance we have recorded with respect to those items, are set forth below under “Management’s Discussion and Analysis of Financial Condition and Results of Operations.” In addition, under the Tax Act, the amount of post-2017 NOLs that we are permitted to deduct in any taxable year is limited to 80% of our taxable income in such year, where taxable income is determined without regard to the NOL deduction itself. The Tax Act generally eliminates the ability to carry back any NOL to prior taxable years, while allowing post-2017 unused NOLs to be carried forward indefinitely. Recently enacted legislation, the Coronavirus Aid, Relief and Economic Security Act (the "CARES Act") temporarily reverses the limitations imposed by the Tax Act by suspending the 80% taxable income limitation to permit a corporation to offset without limitation its taxable income in 2019 or 2020 with NOL carryforwards generated in prior years. The CARES Act also allows NOLs generated in tax years 2018-2020 to be carried back up to five years.



Furthermore, if a corporation undergoes an “ownership change,” generally defined as a greater than 50% change (by value) in its equity ownership over a three-year period, Sections 382 and 383 of the Code limit the corporation’s ability to use carryovers of its pre-change NOLs, credits and certain other tax attributes to reduce its tax liability for periods after the ownership change. Our issuance of common stock pursuant to our IPO may result in a limitation under Sections 382 and 383 of the Code, either separately or in combination with certain prior or subsequent shifts in the ownership of our common stock. As a result, our ability to use carryovers of our pre-change NOLs and credits to reduce our future U.S. federal income tax liability may be subject to limitations. This could result in increased U.S. federal income tax liability for us if we generate taxable income in a future period. Limitations on the use of NOLs and other tax attributes could also increase our state tax liability. The use of our tax attributes will also be limited to the extent that we do not generate positive taxable income in future tax periods. To the extent our ability to utilize our NOLs and other tax assets going forward is limited, in part or altogether, our tax liability for future periods may be greater than expected, and our business, financial condition, results of operations and growth prospects may be materially adversely affected.

Under the Tax Act’s amendment to Section 174 of the Code, beginning with tax years that start after December 31, 2021, research and development expenses must be capitalized and amortized over five or fifteen years, as applicable. This tax law change has increased our effective tax rate and our cash tax payable in the taxable year 2022. If the requirement to capitalize Section 174 expenditures is not repealed or otherwise modified, it may also impact our effective tax rate and our cash tax liability in future years.

***We do not expect to pay any cash dividends to the holders of our common stock for the foreseeable future.***

We currently intend to invest our future earnings, if any, to fund our growth. In addition, the terms of any future debt agreements may preclude us from paying dividends. As a result, capital appreciation, if any, of our common stock will be your sole source of gain for the foreseeable future. There is no guarantee that our common stock will appreciate in value or even maintain the price at which our stockholders have purchased our common stock. Investors seeking cash dividends should not purchase our common stock.

***Provisions in our certificate of incorporation, our bylaws and Delaware law may have anti-takeover effects that could discourage an acquisition of us by others, even if an acquisition would be beneficial to our stockholders, and may prevent attempts by our stockholders to replace or remove our current management.***

Our certificate of incorporation, bylaws and Delaware law contain provisions that may have the effect of delaying or preventing a change in control of us or changes in our management. Our certificate of incorporation and bylaws include provisions that:

- authorize “blank check” preferred stock, which could be issued by our board of directors without stockholder appro and may contain voting, liquidation, dividend and other rights superior to our common stock;



- establish a classified board of directors such that not all members of the board are elected at one time, which may delay the ability of our stockholders to change the membership of a majority of our board of directors;
- specify that only our board of directors, the Chairperson of our board of directors, our Chief Executive Officer or th President, or holders of greater than 10% of our common stock can call special meetings of our stockholders;
- establish an advance notice procedure for stockholder approvals to be brought before an annual meeting of our stockholders, including proposed nominations of persons for election to our board of directors;
- provide that a majority of directors then in office, even though less than a quorum, may fill vacancies on our board directors;
- specify that no stockholder is permitted to cumulate votes at any election of directors;
- expressly authorize our board of directors to modify, alter or repeal our bylaws; and



- require supermajority votes of the holders of our common stock to amend specified provisions of our Certificate of Incorporation and bylaws.

These provisions, alone or together, could delay or prevent hostile takeovers and changes in control or changes in our management.

In addition, because we are incorporated in the State of Delaware, we are governed by the provisions of Section 203 of the Delaware General Corporation Law, which limits the ability of stockholders owning in excess of 15% of our outstanding voting stock to merge or combine with us.

Any provision of our certificate of incorporation or bylaws or Delaware law that has the effect of delaying or deterring a change in control could limit your opportunity to receive a premium for your shares of our common stock, and could also affect the price that some investors are willing to pay for our common stock.

***Our certificate of incorporation includes a forum selection clause, which could limit our stockholders' ability to obtain a favorable judicial forum for disputes with us.***

Our Certificate of Incorporation provides that, subject to limited exceptions, the Court of Chancery of the State of Delaware (or, if no state court located within the State of Delaware has jurisdiction, the federal district court for the District of Delaware) will be the exclusive forum for any:

- derivative action or proceeding brought on our behalf;
- action asserting a claim of breach of a fiduciary duty owed by any of our directors, officers or other employees to u our stockholders;
- action asserting a claim against us arising pursuant to any provision of the Delaware General Corporation Law, ou certificate of incorporation or our bylaws; or
- other action asserting a claim against us that is governed by the internal affairs doctrine.

This exclusive forum provision is intended to apply to claims arising under Delaware state law and is not intended to apply to claims brought pursuant to the Securities Exchange Act of 1934, as amended (the "Exchange Act") or the Securities Act of 1933, as amended (the "Securities Act"), or any other claim for which the federal courts have exclusive jurisdiction. This exclusive forum provision will not relieve us of our duties to comply with the federal securities laws and the rules and regulations thereunder, and our stockholders will not be deemed to have waived our compliance with these laws, rules and regulations.

Our certificate of incorporation further provides that the federal district courts of the United States of America will be the exclusive forum for resolving any complaint asserting a cause of action arising under the Securities Act. Section 22 of the Securities Act creates concurrent jurisdiction for federal and state courts over all suits brought to enforce any duty or liability created by the Securities Act or the rules and regulations thereunder. The Delaware Supreme Court recently determined that the exclusive forum provision of federal district courts of the United States of America for resolving any complaint asserting a cause of action arising under the Securities Act is permissible and enforceable under Delaware law, reversing an earlier decision from the Court of Chancery of the State of Delaware that had ruled that such provisions were not enforceable. Nevertheless, there is uncertainty as to whether a federal district court would enforce any exclusive forum provision with respect to claims under the Securities Act.

Any person or entity purchasing or otherwise acquiring any interest in shares of our capital stock shall be deemed to have notice of and to have consented to the provisions of our bylaws described above. This choice of forum provision may limit a stockholder's ability to bring a claim in a judicial forum that it finds favorable for disputes with us or our directors, officers or other employees, which may discourage such lawsuits against us and our directors, officers and employees. Alternatively, if a court were to find these provisions of our Certificate of Incorporation inapplicable to, or unenforceable in respect of, one or more of the specified types of actions or proceedings, we may incur additional costs associated with resolving such matters in other jurisdictions, which could materially adversely affect our business, financial condition, results of operation and growth prospects.



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**General Risk Factors**

***Computer system interruptions or security breaches of our information systems could significantly disrupt our product development programs and our ability to operate our business.***

Our internal computer systems, cloud-based computing services and those of our current and future collaborators, third party service providers, and other contractors or consultants (collectively, our "information systems") are vulnerable to damage or interruption from computer viruses, ransomware, malware, data corruption, cyber-based attacks, phishing attacks, unauthorized access, natural disasters, terrorism, war and telecommunication and electrical failures. While we have taken steps to protect the security of our information systems and the data maintained in those systems, we have, from time to time, experienced cyber incidents of varying degrees, although none of these cyber incidents have had a material adverse impact on our business, financial condition or results of operations. Our business is becoming increasingly dependent upon these information systems, including as a result of remote working policies following the COVID-19 pandemic. It is possible that in the future our safety and security measures will not prevent the improper functioning or damaging of our systems, or the improper access or disclosure of personally identifiable information, in particular as cyber-based attacks become increasingly sophisticated, and any such event could materially and adversely impact our business, financial condition or results of operations. If a significant system failure, accident, security breach or other cyber incident were to occur and cause interruptions in our operations, it could result in a disruption of our development programs and our

business operations, whether due to a loss of our trade secrets or other proprietary information, the disclosure of protected personally identifiable patient information or other similar disruptions. For example, the loss of clinical trial data from completed or future clinical trials could result in delays in our regulatory approval efforts and significantly increase our costs to recover or reproduce the data. In addition, our software systems include cloud-based applications that are hosted by third-party service providers with security and information technology systems subject to similar risks. To the extent that any disruption, security breach or other cyber incident were to result in a loss of, or damage to, our data or applications, or inappropriate disclosure of confidential or proprietary information, we could incur liability, our competitive position could be harmed and the further development and commercialization of our product candidates could be delayed, any of which could materially adversely affect our business, financial condition, results of operations and growth prospects.



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Furthermore, federal, state and international laws and regulations, such as the GDPR, which took effect in May 2018, and the CCPA which took effect on January 1, 2020, as well as the CPRA, which took effect on January 1, 2023 and made a number of significant amendments to the CCPA, can expose us to enforcement actions and investigations by regulatory authorities, and potentially result in regulatory penalties and significant legal liability, if our information systems security efforts fail or if our privacy practices do not meet the requirements of such laws. Other states are considering similar laws that could impact our use of research data with respect to individuals in those states. There are extensive documentation obligations and transparency requirements, which may impose significant costs on us.

Any computer system interruptions or security breaches of our information systems could result in a disruption of our operations, damage to our reputation, investigations, claims or lawsuits and we may also be subject to liability under relevant contractual obligations and laws and regulations protecting personal data and may be required to expend significant resources to defend, remedy and/or address any cybersecurity incidents and claims, investigations, penalties, fines, damages or settlements arising from cybersecurity incidents. We may not have adequate insurance coverage to compensate it for any losses that may occur.

***Our business is affected by macroeconomic conditions, including rising inflation, interest rates and supply chain constraints.***

Various macroeconomic factors could adversely affect our business, results of operations and financial condition, including changes in inflation, interest rates and overall economic conditions and uncertainties, such as those resulting from the current and future conditions in the banking system aand and the global financial markets. For instance, inflation has

negatively impacted us and could continue to negatively impact us by increasing our cost of labor (through higher wages), commercial support, construction, manufacturing and clinical supply expenditures. See above under "— *Our manufacturing process is novel and complex, and we may encounter difficulties in production, or difficulties with internal manufacturing, which would delay or prevent our ability to provide a sufficient supply of our product candidates for clinical trials or our products for patients, if approved*" for the risks related to the impact of inflation on the construction of our commercial-scale manufacturing facility. Current inflationary pressures, if sustained, could have a negative impact on our operations. In addition, interest rates, the liquidity of the credit markets and the volatility of the capital markets could also affect our ability to raise capital in order to fund our operations, if needed. Financial conditions affecting the banking system and financial markets may threaten our ability to access our cash, as well as our access to letters of credit or other funding necessary to support our business, which may require us to find additional sources of cash or funding on short notice. Similarly, these macroeconomic factors could affect the ability of our third-party manufacturers, contractors or suppliers to manufacture materials required for our product candidates on a cost effective basis, if at all.

***Any acquisitions or strategic collaborations may increase our capital requirements, dilute our stockholders, cause us to incur debt or assume contingent liabilities or subject us to other risks.***

From time to time, we may evaluate various acquisitions and strategic collaborations, including licensing or acquiring complementary drugs, intellectual property rights, technologies or businesses. Any potential acquisition or strategic partnership may entail numerous risks, including, but not limited to:

- scrutiny by the Federal Trade Commission ("FTC") and the Department of Justice ("DOJ"), including the potential challenge of a proposed merger or acquisition by the FTC or DOJ;
- increased operating expenses and cash requirements;
- the assumption of indebtedness or contingent or unknown liabilities;
- assimilation of operations, intellectual property and drugs of an acquired company, including difficulties associated with integrating new personnel;
- adequately prosecuting and maintaining protection of any acquired intellectual property rights;
- the diversion of our management's attention from our existing drug programs and initiatives in pursuing such a strategic partnership, merger or acquisition;



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- retention of key employees, the loss of key personnel, and uncertainties about our ability to maintain key business

relationships;

- risks and uncertainties associated with the other party to such a transaction, including the prospects of that party a their existing drugs or product candidates and regulatory approvals; and
- our inability to generate revenue from acquired drugs, intellectual property rights, technologies, and/or businesses sufficient to meet our objectives in undertaking the acquisition or even to offset the associated acquisition and maintenance costs.

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



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

In the past, securities class action litigation has often been brought against a company following a period of volatility or decline in the market price of its securities. This risk is especially relevant for us because biotechnology companies have experienced significant stock price volatility in recent years. If we face such litigation, it could result in substantial costs and a diversion of management's attention and resources, which could materially adversely affect our business, financial condition, results of operation and growth prospects.

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

The trading market for our common stock relies in part on the research and reports that industry or financial analysts publish about us, our business, our markets and our competitors. We do not control these analysts. If securities analysts do not cover our common stock, the lack of research coverage may materially adversely affect the market price of our common stock. Furthermore, if one or more of the analysts who do cover us downgrade our stock or if those analysts issue other unfavorable commentary about us or our business, our stock price would likely decline. If one or more of these analysts cease coverage of us or fails to regularly publish reports on us, we could lose visibility in the market and interest in our stock could decrease, which in turn could cause our stock price or trading volume to decline and may also impair our ability to expand our business with existing customers and attract new customers.

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

As a public company, we incur significant legal, accounting and other expenses that we did not incur as a private company. In addition, the Sarbanes-Oxley Act and rules of the SEC and those of Nasdaq have imposed various requirements on public companies including that we establish and maintain effective disclosure and financial controls. Our

management and other personnel have devoted and will continue to devote a substantial amount of time to these compliance initiatives. Moreover, these rules and regulations have increased and will continue to increase our legal and financial compliance costs and will make some activities more time-consuming and costly. We may, as a result of regulatory changes, be subject to additional requirements, which may require us to incur significant additional costs to comply, including the implementation of significant additional internal controls processes and procedures regarding matters that have not been subject to such controls in the past, and impose increased oversight obligations on our management and board of directors.



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The Sarbanes-Oxley Act requires, among other things, that we maintain effective internal control over financial reporting and disclosure controls and procedures following an initial transition period available to public companies. In particular, we must evaluate our systems and procedures, and test our internal control over financial reporting to allow management to report on the effectiveness of our internal control over financial reporting, as required by Section 404 of the Sarbanes-Oxley Act. In addition, we will be required to have our independent registered public accounting firm attest to the effectiveness of our internal control over financial reporting in the later of our second Annual Report on Form 10-K or the first Annual Report on Form 10-K following the date on which we are no longer an emerging growth company unless we are a smaller reporting company and do not otherwise also qualify as an “accelerated filer” or “large accelerated filer” for SEC reporting purposes. Our compliance with Section 404 of the Sarbanes-Oxley Act will require that we incur substantial accounting expense and expend significant management efforts. We currently do not have an internal audit group, and we will need to hire additional accounting and financial staff with appropriate public company experience and technical accounting knowledge. If we do not comply with the requirements of Section 404 in a timely manner, or if we or our independent registered public accounting firm identify deficiencies in our internal control over financial reporting that are deemed to be material weaknesses, the market price of our stock could decline and we could be subject to sanctions or investigations by Nasdaq, the SEC or other regulatory authorities, which would require additional financial and management resources.



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To successfully implement our business plan and comply with Section 404, we must prepare timely and accurate financial statements. We expect that we will need to continue to improve existing procedures and controls, and implement new operational and financial systems, to manage our business effectively. Any delay in the implementation of, or

disruption in the transition to, new or enhanced systems, procedures or controls, may cause our operations to suffer, and we may be unable to conclude that our internal control over financial reporting is effective and to obtain an unqualified report on internal controls from our auditors as required under Section 404 of the Sarbanes-Oxley Act. This, in turn, could materially adversely affect the trading prices for our common stock and our ability to access the capital markets.

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

Effective internal controls over financial reporting are necessary for us to provide reliable financial reports and are designed to prevent fraud. Any failure to implement required new or improved controls, or difficulties encountered in their implementation could cause us to fail to meet our reporting obligations. Pursuant to Section 404 of the Sarbanes-Oxley Act, our management is required to report upon the effectiveness of our internal control over financial reporting. When we lose our status both as an emerging growth company and a smaller reporting company, our independent registered public accounting firm will be required to attest to the effectiveness of our internal control over financial reporting. The rules governing the standards that must be met for management to assess our internal control over financial reporting are complex and require significant documentation, testing and possible remediation. Any testing by us conducted in connection with Section 404 of the Sarbanes-Oxley Act, or any subsequent testing by our independent registered public accounting firm, may reveal deficiencies in our internal controls over financial reporting that are deemed to be material weaknesses or that may require prospective or retroactive changes to our financial statements or identify other areas for further attention or improvement. Inadequate internal controls could also cause investors to lose confidence in our reported financial information, which could materially adversely affect the trading price of our common stock.

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

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

These inherent limitations include the realities that judgments in decision-making can be faulty, and that breakdowns can occur because of simple error or mistake. For example, our directors or executive officers could inadvertently fail to disclose a new relationship or arrangement causing us to fail to make any related party transaction disclosures. Additionally, controls can be circumvented by the individual acts of some persons, by collusion of two or more people or by an unauthorized override of the controls. Accordingly, because of the inherent limitations in our control system, misstatements due to error or fraud may occur and not be detected.

***Changes to, or interpretations of, financial accounting standards may affect our results of operations and could cause us to change our business practices.***

We prepare our financial statements in accordance with U.S. GAAP. These accounting principles are subject to interpretation by the Financial Accounting Standards Board, the SEC and various bodies formed to interpret and create accounting rules and regulations. Changes in accounting rules can have a significant effect on our reported financial results and may affect our reporting of transactions completed before a change is announced. Changes to those rules or the questioning of current practices may materially adversely affect our financial results, including those contained in this filing, or the way we conduct our business.





**Item 1B. Unresolved Staff Comments.**

Not applicable.

**Item 1C. Cybersecurity.**

**Risk Management and Strategy**

We continuously monitor our information systems to assess, identify, and manage risks from vulnerabilities and assess cybersecurity threats. Our process for identifying and assessing material risks from cybersecurity threats operates alongside our broader overall risk assessment process. We monitor risks through routine security assessments and implementation of enhancements to security measures used to protect our systems and data. We address system alerts on an ongoing basis. We maintain an Incident Response Plan Policy ("IRP"), which sets forth processes we will follow to address incidents as defined in the IRP, which include an actual or reasonably suspected cyber incident. Our information technology team promptly responds to system alerts and reported incidents that indicate the suspected presence of an incident and escalates in accordance with the IRP. The IRP, among other things, provides for a cross-functional team consisting of representatives from informational technology, risk management, legal, and communications, an Incident Response Team ("IRT"), that collaborates to quickly assess the impact, mitigate risks to information systems, and resolve incidents while improving information systems. Depending on the incident, we may utilize third-parties for assistance in investigating and addressing cybersecurity incidents.i

We also utilize certain third-party service providers to perform a variety of critical business functions and recognize that we are exposed to cybersecurity threats associated with our use of third-party service providers. We have certain vendor management processes designed to help manage cybersecurity risks associated with our use of certain of these providers. Additionally, we strive to minimize cybersecurity risks when we first select or renew a vendor by including cybersecurity risk as part of our overall vendor evaluation and due diligence process.

We have not had cyber incidents that have materially affected our business or financial condition. For details about our risks associated with cybersecurity threats, see “— *Computer system interruptions or security breaches of our information systems could significantly disrupt our product development programs and our ability to operate our business.*” in the section titled “Risk Factors” in Part I, Item 1A in this Annual Report on Form 10-K.

**Governance**

Management is responsible for identifying and assessing material risks for the business on an ongoing basis, including in relation to cybersecurity. As part of this process, our IRT is tasked with implementing and maintaining our cybersecurity programs, including establishing processes to ensure that potential cybersecurity risk exposures are monitored and putting in place appropriate mitigation measures. Our Chief Financial and Business Officer oversees our information technology department which monitors the prevention, detection, mitigation, and remediation of cyber incidents, if any, and reports all potential incidents and an initial assessment of such incident to the IRT. Our Chief Financial and Business Officer has over 6 years of experience with overseeing risk, compliance, and information technology functions.

Our internal computer systems, cloud-based computing services Board of Directors (the "Board") oversees our risk management program as part of its general oversight function. The Board’s Audit Committee is delegated the responsibility for reviewing and those discussing with management our program to identify, assess, manage, and monitor significant business risks, including financial, operational, privacy, business continuity, legal and regulatory, reputation risks, and security, including cybersecurity. The Audit Committee receives quarterly updates from management regarding investigated

incidents and periodic updates from management regarding cybersecurity matters (including the current threat landscape and cybersecurity risks). The Audit Committee may provide updates to the Board on the substance of our current these reports and any future collaborators and other contractors or consultants are vulnerable to damage or interruption from computer viruses, ransomware, malware, data corruption, cyber-based attacks, phishing attacks, unauthorized access, natural disasters, terrorism, war and telecommunication and electrical failures. While we have taken steps to protect recommendations for improvements that the security of our information systems and the data maintained in those systems, we have, from time to time, experienced cyber incidents of varying degrees, although none of these cyber incidents have had a material adverse impact on our business, financial condition or results of operations. It is possible that in the future our safety and security measures will not prevent the improper functioning or damaging of our systems, or the improper access or disclosure of personally identifiable information, and any such event could materially and adversely impact our business, financial condition or results of operations. In addition, if a significant system failure, accident, security breach or other cyber incident were to occur and cause interruptions in our operations, it could result in a disruption of our development programs and our business operations, whether due to a loss of our trade secrets or other proprietary information, the disclosure of protected personally identifiable patient information or other similar disruptions. For example, the loss of clinical trial data from completed or future clinical trials could result in delays in our regulatory approval efforts and significantly increase our costs to recover or reproduce the data. Furthermore, federal, state and international laws and regulations, such as the GDPR, which took effect in May 2018, and the CCPA which took effect on January 1, 2020, as well as the California Consumer Privacy Act, which was passed in November 2020 and makes a number of significant amendments to the CCPA, can expose us to enforcement actions and investigations by regulatory authorities, and potentially result in regulatory penalties and significant legal liability, if our information technology security efforts fail or if our privacy practices do not meet the requirements of such laws. Other states are considering similar laws that could impact our use of research data with respect to individuals in those states. There are extensive documentation obligations and transparency requirements, which may impose significant costs on us. In addition, our software systems include cloud-based applications that are hosted by third-party service providers with security and information technology systems subject to similar risks. To the extent that any disruption, security breach or other cyber incident were to result in a loss of, or damage to, our data or applications, or inappropriate disclosure of confidential or proprietary information, we could incur liability, our competitive position could be harmed and the further development and commercialization of our product candidates could be delayed, any of which could materially adversely affect our business, financial condition, results of operations and growth prospects.Audit Committee deems appropriate.

**Item 1B. Unresolved Staff Comments.**

Not applicable.

**Item 2. Properties.**

Our facilities are located at two adjacent three leased sites. The first site, located at 6000 Shoreline Court, Suites 102, 104, 201, 203, 204 and 325, South San Francisco, California, consists of approximately 42,145 square feet of office and laboratory space and is primarily used for research, clinical, manufacturing and corporate activities. Our lease covering Suites 102, 104, 204, and 325 multiple suites at this site expires in July 2030. Our lease covering Suites 201 and 203 expires 2030, with certain suites expiring in March 2024. The second site, located at 7000 Shoreline Court, South San Francisco, California, consists of 340 square feet of vivarium space and an additional 215 square feet of shared laboratory space, and is primarily used for preclinical research. Our agreement that provides for our use of these vivarium and laboratory spaces expires in June 2023. Our lease for an 88,000 square foot facility in 2024. The third site, located at 1150 Veterans Boulevard, South San Francisco, to support California, consists of 88,000 square feet of office and laboratory space and is primarily used for research, clinical, manufacturing and development and future manufacturing of Nkarta's cell therapy products and product candidates commenced in 2022 and corporate activities. This lease expires in 2034. This new facility will also serve as As a result of moving our future headquarters with office space main offices and research facilities.

activities to the Veterans location last year, we vacated certain suites at the 6000 Shoreline Court location. We are seeking to sublease these certain suites while still maintaining sufficient office and laboratory space to allow our team to continue to develop our proprietary programs. We believe that these facilities are sufficient to meet our current needs. We also believe we will be able to obtain additional space, as needed, on commercially reasonable terms.

**Item 3. Legal Proceedings.**

From time to time, we may become involved in litigation or other legal proceedings relating to claims arising from the ordinary course of business. There are currently no claims or actions pending against us that, in the opinion of our management, are likely to have a material adverse effect on our business, results of operations, financial condition or growth prospects.

Ex parte reexaminations have been filed by one or more third parties against certain licensed patents in our portfolio. Ex parte reexaminations of U.S. Patent Nos. 9,511,092 (the "'092 Patent"), 10,774,309 (the "'309 Patent"), and 10,829,737 (the "'737 Patent") were recently concluded, resulting in the claims of each Patent being maintained in amended form. None of the claims of the '092, '309, and '737 Patents as maintained in amended form relate to any of our current product candidates. Additional ex parte reexaminations could be filed in the future and although we plan to vigorously protect our intellectual property rights, as with all legal proceedings, there can be no guarantee as to the outcome, and, regardless of the merits of third-party challenges, such proceedings are time-consuming and costly. As a result of such reexaminations, our rights under the relevant patents could be narrowed or lost, and in the course of such proceedings, we may incur

substantial costs and the time and attention of our management may be diverted from the development and commercialization of our product candidates.

**Item 4. Mine Safety Disclosures.**

Not applicable.



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## PART II

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

**Market Information**

Our common stock has been listed on The Nasdaq Global Select Market under the symbol "NKTX" and has been publicly traded since July 10, 2020. Prior to that date, there was no public trading market for our common stock.

**Holders of Common Stock**

As of March 13, 2023 March 18, 2024, there were approximately 15 17 holders of record of our common stock. The actual number of stockholders is greater than this number of record holders, and includes stockholders who are beneficial owners, but whose shares are held in street name by brokers and other nominees. This number of holders of record also does not include stockholders whose shares may be held in trust by other entities.

**Dividend Policy**

We have never declared or paid cash dividends on our capital stock. We intend to retain all available funds and any future earnings, if any, to fund the development and expansion of our business and we do not anticipate paying any cash dividends in the foreseeable future. Any future determination related to dividend policy will be made at the discretion of our board of directors and will depend on then-existing conditions, including our financial condition, operating results, contractual restrictions, capital requirements, business prospects and other factors our board of directors may deem

relevant. In addition, we may enter into agreements in the future that could contain restrictions on payments of cash dividends.

**Use of Proceeds**

On July 14, 2020, we completed our IPO. Our registration statement on Form S-1 (File No. 333-239301) relating to the IPO was declared effective by the SEC on July 9, 2020.

There has been no material change in the planned use of proceeds from our IPO as described in our final prospectus filed with the SEC on July 13, 2020 pursuant to Rule 424(b)(4) under the Securities Act. As of December 31, 2022 December 31, 2023, we estimate that we have used $167.6 million from all of the $265.1 million net proceeds from the IPO primarily to advance our product candidates through preclinical studies and clinical trial programs, the construction of our manufacturing facility, and for working capital and general corporate purposes. We invested the remaining funds received in cash equivalents and other marketable securities in accordance with our investment policy.

**Recent Sales of Unregistered Securities**

There were no unregistered sales of equity securities during the period covered by this report.

**Issuer Purchases of Equity Securities**

None.



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**Securities Authorized for Issuance Under Equity Compensation Plans**

The information required by this Item regarding equity compensation plans is incorporated by reference to the information set forth in Part III, Item 12 of this Annual Report on Form 10 K. 10-K.



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**Item 6. [Reserved]**



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

*The following discussion and analysis of our financial condition and results of operations should be read in conjunction with our financial statements and related notes appearing elsewhere in this Annual Report. Report on Form 10-K. This discussion contains forward-looking statements that reflect our plans, estimates and beliefs, and involve risks and uncertainties. Our actual results and the timing of certain events could differ materially from those anticipated in these forward-looking statements as a result of several factors, including those discussed in the section titled "Risk Factors" included under Part I, Item 1A and elsewhere in this Annual Report. Report on Form 10-K. See "Cautionary Note Regarding Forward-Looking Statements" in this Annual Report.Report on Form 10-K.*

**Overview**

We are a clinical-stage biopharmaceutical company focused on pioneering the discovery, development and commercialization of allogeneic, off-the-shelf engineered NKcell therapies to treat cancer. for the treatment of patients with autoimmune diseases or hematologic malignancies. We are currently have two developing NKX019, a CAR NK cell product candidate targeting the CD19 antigen, as our lead product candidates, candidate. We have also been developing NKX101, a CAR NK cell product candidate targeting cells that display NKG2D ligands, and NKX019, a CAR NK product candidate targeting the CD19 antigen, in ongoing Phase 1 clinical trials. ligands. Both product candidates enable an on-demand, off-the-shelf approach involving scaled manufacturing to broaden patient access. NKX019 and NKX101 incorporate proprietary technologies that enable us to generate an abundant supply of NK cells, improve the persistence of these cells for sustained activity in the body, engineer enhanced increase NK cell recognition of tumor targets, target antigens, enhance NK cell fitness and tumor microenvironment evasion, and freeze, store, and thaw our engineered NK cells for the treatment of cancer. off-the-shelf administration. Our product candidates are designed to be allogeneic, and off-the-shelf, which means they are produced using cells from a different person than the patient(s) being treated, and they are produced in quantity, then frozen and therefore available for treating patients without delay, unlike autologous cell therapies, which are derived from a patient's own cells. cells and must be manufactured as needed for each patient. We believe that engineered NK cells have the potential to be an effective and accessible therapies for autoimmune diseases and cancer, therapy, be well tolerated, and avoid some of the toxicities observed with other cell therapies. NKX019 is currently being studied in an

ongoing Phase 1 clinical trial for certain B-cell malignancies, and preparations for a planned Phase 1 clinical trial of NKX019 for LN are underway.NKX101 has been studied in a Phase 1 clinical trial for certain hematologic malignancies, although we have closed patient enrollment and deprioritized the program as part of a pipeline realignment to direct primary resources to our lead pipeline program, NKX019, for the treatment of autoimmune disease.

Our modular NK cell engineering platform is designed to address builds on the limitations and challenges distinctive biology of current technologies for engineering T cells and NK cells and is their role in eradicating aberrant and pathologically transformed cells. Our process starts with differentiated, mature NK cells derived from healthy donors. We build on the intrinsic ability of these immune cells to identify and kill transformed cells with cell engineering to further enhance their activity. This engineering involves a result chimeric antigen receptor ("CAR") on the surface of our internal expertise and deep understanding of an NK cell biology. to enable the cell to recognize specific proteins or antigens that are present on the surface of tumor cells. Our platform includes proprietary technologies for engineered CAR NK cells generally consist of an NK cell expansion, persistence, engineered with a targeting receptor, OX40 costimulatory domain, CD3ζ(zeta) signaling moiety, and cryopreservation. All of our product candidates incorporate each a membrane-bound form of the four components of our technology platform, which we believe provides the best opportunity for achieving clinically meaningful results in our development program.cytokine IL(interleukin)-15 ("mbIL-15").

NKX101 In October 2023, we announced that we had received clearance of an IND application by the United States FDA to evaluate NKX019 for the treatment of LN. The planned multi-center, open label, dose escalation Phase 1 clinical trial will evaluate the safety and clinical activity of NKX019 in patients with refractory LN. We are on track to dose the first patient in the first half of 2024. We also plan to evaluate additional autoimmune diseases for potential clinical investigation with NKX019.

NKX019 is currently being studied in a multi-center Phase 1 clinical trial for the treatment of a variety of B-cell malignancies. This ongoing first-in-human study evaluates the safety, pharmacology, and preliminary anti-tumor activity of NKX019, at multiple centers in the United States and Australia.

NKX101 has been evaluated in a multi-center Phase 1 clinical trial in the U.S. for the treatment of r/r AML and MDS. This ongoing first-in-human study evaluates the safety, pharmacology, and preliminary anti-tumor activity of NKX101. The clinical trial consists We have deprioritized the development of dose-finding followed by dose-expansion and is designed NKX101 as part of a realignment of our pipeline to identify the recommended Phase 2 dose.

direct primary resources to our lead pipeline program, NKX019, is currently being studied in a multi-center Phase 1 clinical trial in the U.S. and Australia for the treatment of a variety of B-cell malignancies by targeting the CD19 antigen that is found on these types of cancerous cells and where CD19-targeted engineered NK cells, T cells and monoclonal antibodies have demonstrated clinical activity. This ongoing first-in-human study evaluates the safety, pharmacology, and preliminary anti-tumor activity of NKX019. The clinical trial consists of dose-finding followed by dose-expansion and is designed to identify the recommended Phase 2 dose. autoimmune disease.

Under the CRISPR Agreement entered into in May 2021, we are agreed with CRISPR to collaboratively designing design and advancing advance (a) up to two allogeneic, gene-edited NK cell therapies, one of which is the engineered CAR NK product candidate targeting the CD70 tumor antigen, and (b) one allogeneic, gene-edited NK+T cell therapy.

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In October 2023 we announced cost containment measures designed to create a more streamlined organization to support our operations through multiple clinical data updates during 2024 and extend our projected cash runway into 2026. These cost containment measures included a reduction in and re-allocation of headcount combined with a cap on future headcount growth, as well as planned centralization of operations to a single location. We plan to continue to carefully manage our discretionary expenses and headcount growth in the near term to ensure we have sufficient capital to achieve these milestones. We have prioritized the development of NKX019, including hiring personnel with the requisite education and experience, to support our expansion into autoimmune disease.

Since the commencement of our operations in 2015, we have devoted substantially all of our resources in support of our product development efforts, hiring personnel, raising capital to support and expand such activities and providing general and administrative support for these operations. We have incurred net operating losses since inception and have not generated any revenue from product sales and have funded our operations primarily from our initial public offering completed in July 2020, sales. In the issuance of convertible promissory notes, private placements of our preferred stock, the secondary offering of our common stock completed in April 2022, the proceeds from the sale of our common stock pursuant to the ATM Offering Program, and with proceeds from our previous collaboration. We have incurred a net loss of $113.8 million and $86.1 million during the years ended December 31, 2022 and 2021, respectively, and future, we expect to continue to incur significant losses for the foreseeable future. As of December 31, 2022, we had an accumulated deficit of $317.9 million. At December 31, 2022, we had cash, cash equivalents, restricted cash and short-term investments of $354.9 million.

We expect that our operating expenses to will significantly increase as we continue to develop and seek regulatory approvals for our product candidates, continue to engage in other research and development activities to expand our pipeline of product candidates, maintain and expand our intellectual property portfolio, maintain and expand our product manufacturing capabilities, and ultimately establish a commercial organization. We have funded our operations primarily through the issuance of Company stock and intend to raise additional capital to fund operations until such time that we are

able to generate sufficient revenues to cover our operating expenses. We may seek additional funding through the issuance of common stock, including through our ATM Offering Program, other equity or debt financing or collaborations or partnerships with other companies. The amount and timing of our future funding requirements will depend on many factors, including, among other things, the pace and results of our clinical development efforts for our product candidates. We may not be able to raise additional capital on terms acceptable to us, or at all. Any failure to raise capital as and when needed would compromise our ability to execute our business plan and may cause us to undertake further cost containment measures and/or significantly delay, scale back or discontinue the development of some of our programs. We have also incurred increased operating expenses since becoming a public company, which we expect will further increase when we are no longer able to rely on certain “emerging growth company” exemptions we are afforded under the Jumpstart Our Business Startups Act (the "JOBS Act") as further described under “*—JOBS Act Act*” below. Our net losses may fluctuate significantly from quarter-to-quarter and year-to-year, depending on the timing of our clinical trials, and our expenditures on other research and development activities.

In April 2022, we issued and sold 15,333,334 shares of our common stock in an underwritten public offering, including 2,000,000 shares associated with the full exercise of the underwriters’ option to purchase additional shares, at a price to the public of $15.00 per share. The total net proceeds from the offering were approximately $215.3 million, after deducting underwriting discounts and commissions and offering expenses.

In the third quarter of 2022, we issued and sold 113,213 shares of our common stock pursuant to the ATM Offering Program, resulting in net proceeds of approximately $1.6 million, after deducting offering expenses.

We will need substantial additional funding to support our continuing operations and pursue our long-term development strategy. We may seek additional funding through the issuance of our common stock, including through our ATM Offering Program, other equity or debt financing or collaborations or partnerships with other companies. The amount and timing of our future funding requirements will depend on many factors, including the pace and results of our clinical development efforts for our product candidates and other research, development and manufacturing activities. We may not be able to raise additional capital on terms acceptable to us, or at all. Any failure to raise capital as and when needed would compromise our ability to execute on our business plan and may cause us to significantly delay, scale back or discontinue the development of some of our programs or curtail any efforts to expand our product pipeline.

***Update on COVID-19, Macroeconomic Conditions, and Supply Disruptions***

Our operations have been and may in the future be impacted by the COVID-19 pandemic, as well as by global and national economic and market conditions generally.

The COVID-19 pandemic has caused and may in the future cause disruptions in the conduct and enrollment of current and future clinical trials due to, among other things, bed shortages and staffing challenges at our treating hospitals. Hospitals may experience staffing challenges as a result of employee turnover and attrition, the current labor shortage, and/or personnel being pulled off clinical trials to care for patients with COVID-19. In addition, the COVID-19 pandemic has

resulted in a significant increase in FDA workload, as well as the need to reprioritize the projects under review, and may do so again in the future. As a result, we may experience delays in FDA timelines along the course of the regulatory process.



The continuing disruptions in the global supply chain due to COVID-19 outbreaks or other factors have also resulted in limited disruptions in the supply of our product candidates, as well as global supply shortages of certain materials that we and our CDMO partners use for research and cGMP manufacturing, such as certain raw materials, cell culture media, disposable plastics, and equipment. To the extent there is a subsequent outbreak of COVID-19, or if such an outbreak begins to significantly impact essential distribution systems or our third-party manufacturers, contractors or suppliers, we may experience further disruptions in our supply chain and operations with associated delays in the manufacturing and supply of our product candidates.

In addition, we could experience delays in the construction of our commercial-scale cGMP manufacturing facility and future headquarters due to the COVID-19 pandemic or current macroeconomic conditions. We saw significant inflation in construction costs in 2022, which has negatively affected the costs of constructing our new facility, and inflation may continue to impact our future construction and maintenance costs. In addition, global supply chain disruptions, including procurement delays and long lead times on certain materials, have impacted and could in the future further adversely impact the scheduled completion and/or costs of constructing our new facility.

A shortage of fludarabine, an agent commonly used in oncology, including in LD, was initially reported in 2022 and is ongoing. Fludarabine is used in our NKX101 and NKX019 clinical trials prior to treatment with our product candidates. Certain of our clinical trial sites have indicated that they are experiencing a shortage of fludarabine. Although we and our clinical sites are taking steps to try to mitigate any impact of the shortage on our clinical trials, enrollment has been delayed at certain of our clinical trial sites, and we could continue to experience enrollment delays due to the fludarabine shortage in the future.

We continuously monitor the effects of domestic and global events, including but not limited to the current and expected impact of the COVID-19 pandemic, inflation, labor shortages, and supply chain matters on our operations, including continued enrollment in the NKX101 and NKX019 clinical trials, as well as on our CROs, CDMOs, and clinical trial sites, to ensure that we remain responsive and adaptable to the dynamic changes in our operating environment. year-to-year.

**Financial Operations Overview**

***Operating Expenses***

*Research and Development*

Research and development costs consist primarily of costs incurred for the discovery and clinical development of our drug candidates, which include:

- employee-related expenses, including salaries, related benefits, travel and share-based compensation expenses f employees engaged in research and development functions;
- expenses incurred in connection with research, laboratory consumables, sponsored research, and preclinical stud
- expenses incurred in connection with conducting clinical trials including investigator grants, and site payments for and pass-through expenses and expenses incurred under agreements with CROs, other vendors, or central laboratories and service providers engaged to conduct our trials;
- the cost of consultants engaged in research and development related services;
- the cost to manufacture drug product candidates for use in our preclinical studies and clinical trials;
- facilities, depreciation and other expenses, which include allocated expenses for rent and maintenance of facilities insurance and supplies;



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- costs related to regulatory compliance; and
- the cost of annual license fees. fees under our third-party licensing agreements.



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We typically have various early-stage research and drug discovery projects as well as various product candidates undergoing clinical trials. Our internal resources, employees and infrastructure are not directly tied to any one research or drug discovery project and are typically deployed across multiple projects. As such, we do not maintain information regarding the costs incurred for these early-stage research and drug discovery programs on a project-specific basis. As part of our October 2023 announcement of cost containment measures, early discovery and preclinical programs have been deprioritized with less personnel and funding allocated to advancing these programs.

We expense research and development costs as they are incurred. Nonrefundable advance payments for goods or services to be received in the future for use in research and development activities are recorded as prepaid expenses. The prepaid amounts are expensed as the related goods are delivered or the services are performed.

The following table summarizes our research and development expenses for the years ended December 31, 2022 December 31, 2023 and 2021. 2022. The direct external development program expenses reflect external costs attributable to our clinical development candidates and preclinical candidates selected for further development. Such expenses include third-party contract costs relating to manufacturing, clinical trial activities, translational medicine and

toxicology activities. The partner cost sharing represents reimbursable research and development expenses from the CRISPR Agreement. The unallocated internal research and development costs include personnel, facility costs, laboratory consumables and discovery and research related activities associated with our pipeline. The partner cost sharing represents reimbursable research and development expenses from the CRISPR Agreement.

| | Year Ended December 31, | | Year Ended December 31, | |
|---|---|---|---|---|
| | 2022 | 2021 | 2023 | 2022 |
| Direct external development program expenses: | | | (in thousands) | |
| NKX101 | $ 19,708 | $ 12,456 | $ 18,659 | $ 19,654 |
| NKX019 | 12,527 | 7,466 | 11,410 | 12,632 |
| CD70 | 1,839 | 645 | | |
| NKX070 | | | 896 | 2,720 |
| NK+T | 179 | 520 | 108 | 499 |
| Program 5 | 241 | — | — | 235 |
| Partner cost sharing | (4,163) | (2,310) | | |
| Unallocated internal research and development costs: | | | | |
| Personnel related (including share-based compensation) | 34,637 | 29,919 | 40,052 | 34,636 |
| Others | 25,929 | 14,716 | 27,203 | 24,684 |
| Partner cost sharing | | | (1,555) | (4,163) |
| Total research and development costs | $ 90,897 | $ 63,412 | $ 96,773 | $ 90,897 |

Research and development activities are central to our business model. There are numerous factors associated with the successful commercialization of any of our drug candidates, including future trial design and various regulatory requirements, many of which cannot be determined with accuracy at this time based on our stage of development. In addition, future regulatory factors beyond our control may impact our clinical development programs. Drug candidates in later stages of clinical development generally have higher development costs than those in earlier stages of clinical development, primarily due to the increased size and duration of later-stage clinical trials. At this time, we cannot reasonably estimate or know the nature, timing and costs of the efforts that will be necessary to complete the preclinical and clinical development of any of our drug candidates. However, we expect that our research and development expenses will increase substantially in connection with our planned preclinical and clinical development activities in the near term and in future, including as a result of our planned clinical trial of NKX019 for the future.treatment of LN.

The successful development of our drug candidates is highly uncertain. A change in the outcome of any of a number of variables with respect to the development of our drug candidates may significantly impact the costs and timing associated with the development of our drug candidates. A discussion of the risks and uncertainties that we face in the development and commercialization of our drug candidates can be found under Part I, Item 1A, “Risk Factors” in this Annual Report on Form 10-K. We may never succeed in obtaining regulatory approval for any of our drug candidates.

*General and Administrative*

General and administrative expenses consist primarily of salaries and employee-related costs, including share-based compensation, for personnel in executive, finance, human resources, and other administrative functions. Other significant costs include legal fees relating to intellectual property and corporate matters, professional fees for accounting, tax and consulting services and facility-related costs.

We While we continue to pursue cost containment measures, we still expect our general and administrative expenses will increase for in the foreseeable future to in support our of any increased research and development activities and to reflect increased costs associated with operating as a public company. These increased costs will likely include increased expenses related to audit, legal, regulatory and tax-related services associated with maintaining compliance with exchange listing and SEC requirements, director and officer insurance premiums and investor relations costs.

***Other Income (Expense), net***

*Interest Income*

Interest income consists of interest earned on our cash, cash equivalents and short-term and long-term investments and adjustments related to amortization of purchase premiums and accretion of discounts of short-term and long-term investments.

***Income Taxes***

We are subject to corporate U.S. federal and state income taxation. As of December 31, 2022, we had federal and state net operating loss carryforwards of approximately $153.3 million and $65.1 million, respectively. Of the $153.3 million federal net operating loss carryforwards, $3.2 million will begin expiring in 2035, if not utilized, while $150.1 million can be carried forward indefinitely. The state tax loss carryforwards will begin expiring in 2036, if not utilized. As of December 31,

2022, we had federal and state research and development tax credits of approximately $9.9 million and $5.6 million, respectively. If not utilized, the federal research tax credit will begin to expire in 2035. The California research tax credit can be carried forward indefinitely.

Utilization of the net operating loss carryforwards may be subject to a substantial annual limitation due to the ownership change limitations provided by the Internal Revenue Code of 1986, as amended, and similar state provisions. This annual limitation may result in the expiration of net operating losses and credits before utilization. We have not performed an analysis to determine the limitation of our net operating loss carryforwards.

We estimate our income tax provision, including deferred tax assets and liabilities, based on management's judgment. We record a valuation allowance to reduce our deferred tax assets to the amounts that are more likely than not to be realized. We consider future taxable income, ongoing tax planning strategies and our historical financial performance in assessing the need for a valuation allowance. If we expect to realize deferred tax assets for which we have previously recorded a valuation allowance, we will reduce the valuation allowance in the period in which such determination is first made.



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We record liabilities related to uncertain tax positions in accordance with the guidance that clarifies the accounting for uncertainty in income taxes recognized in an enterprise's financial statements by prescribing a minimum recognition threshold and measurement attribute for the financial statement recognition and measurement of a tax position taken or expected to be taken in a tax return. As of December 31, 2022 and 2021, we had gross unrecognized tax benefits of $2.3 million and $1.4 million, respectively, all of which would affect our income tax expense if recognized, before consideration of our valuation allowance. As of December 31, 2022, we do not expect our unrecognized tax benefits will significantly change over the next 12 months.



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**Results of Operations**

The following table summarizes our results of operations for the periods indicated (in thousands):

| | Year Ended December 31, | | | Year Ended December 31, | | |
|---|---|---|---|---|---|---|
| | 2022 | 2021 | Change | 2023 | 2022 | Change |
| Operating expenses: | | | | | | |
| Research and development | 90,897 | 63,412 | 27,485 | 96,773 | 90,897 | 5,876 |
| General and administrative | 28,058 | 23,017 | 5,041 | 34,877 | 28,058 | 6,819 |
| Total operating expenses | 118,955 | 86,429 | 32,526 | 131,650 | 118,955 | 12,695 |
| Loss from operations | (118,955) | (86,429) | (32,526) | (131,650) | (118,955) | (12,695) |
| Other income (expense), net: | | | | | | |
| Interest income | 5,588 | 370 | 5,218 | 14,107 | 5,588 | 8,519 |
| Other expense, net | (470) | (16) | (454) | | | |
| Other income (expense), net | | | | 42 | (470) | 512 |
| Total other income (expense), net | 5,118 | 354 | 4,764 | 14,149 | 5,118 | 9,031 |
| Net loss | $ (113,837) | $ (86,075) | $ (27,762) | $ (117,501) | $ (113,837) | $ (3,664) |

***Research and development expenses***

Research and development expenses were $90.9 million $96.8 million and $63.4 million $90.9 million for the years ended December 31, 2022 December 31, 2023 and 2021, 2022, respectively. The increase of $27.5 million $5.9 million was attributable primarily due to increases of $4.7 million the following:

- a $5.4 million increase in personnel costs, related expense, including an a $0.7 million increase in share-based compensation expense of $0.6 million as expense;
- a result of continued growth in headcount, and increases of $13.4 million in our external program costs primarily related to NKX101 and NKX019, and $11.2 million $2.5 million increase in other internal research costs, primarily consisting of research and laboratory supplies and facilities expenses, offset by an increase of $1.9 million expens
- a $2.6 million decrease in partner cost sharing reimbursable expenses. The expenses related to activities performe under our collaboration with CRISPR; and
- a $4.7 million decrease in external program expenses primarily related to a $4.5 million decrease in manufacturing expense and a $1.0 million decrease in preclinical program expense, which was offset by a $0.8 million increase ir

program costs relating to NKX101 and NKX019 is primarily due to additional clinical development activities compa to the prior year period. We expect our research and development expenses will continue to increase in future per as we progress our product candidates and conduct our clinical trials and development activities.

trial related expense.

***General and administrative expenses***

General and administrative expenses were $28.1 million $34.9 million and $23.0 million $28.1 million for the years ended December 31, 2022 December 31, 2023 and 2021, 2022, respectively. The increase of $5.1 million $6.8 million was primarily due to an the following:

- a $0.6 million increase in personnel costs of $3.4 million, related expense, including an increase of $1.8 million a $ million decrease in share-based compensation expense as expense;
- a result of continued growth in headcount. The increases in general and administrative expense were also $1.2 mi increase due to severance and other termination expenses related to the reduction in force completed in October 2023;
- a $1.0 million $4.1 million increase due to an impairment of right-of-use assets;
- a $1.3 million increase in insurance, rent, depreciation and other facilities expense; and
- a $0.4 million decrease in professional services related to accounting services, corporate legal fees, other consulti and patent legal fees, and a $0.7 million increase in other general and administrative expenses that included insurance, rent, depreciation expense and other facilities expense. We have incurred and expect to continue to inc additional expenses as a result of being a public company following the completion of our IPO in July 2020, which expect will further increase when we no longer qualify as an “emerging growth company” under the JOBS Act. In addition, we have incurred and expect to continue to incur increased expenses related to additional insurance, investor relations and other increases related to needs for additional human resources and professional services associated with being a public company. fees.



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***Interest income***

Interest income was $5.6 million $14.1 million and $0.4 million $5.6 million for the years ended December 31, 2022 December 31, 2023 and 2021, 2022, respectively. The increase in Interest income consisted of interest earned on

cash and cash equivalents and interest income was from investments (including the amortization of discounts and premiums) and increased primarily due to higher increases in market interest earned from short-term investments, partially offset by amortization of purchase premiums and accretion of discounts of short-term investments.rates.

**Liquidity and Capital Resources**

***Sources of Liquidity***

As of December 31, 2022 December 31, 2023, we had cash, cash equivalents, restricted cash and short-term investments of $354.9 million $250.9 million. In connection with our IPO which closed on July 14, 2020 As of December 31, 2023, we received estimate that we have used all of the $265.1 million in net proceeds after deducting underwriting discounts and commissions and other offering expenses.received from our IPO.

On August 12, 2021, we filed a Our Registration Statement on Form S-3, which became effective in September 2021 (the "Shelf "2021 Shelf Registration Statement"), covering the offer and sale from time to time, pursuant to Rule 415 of the Securities Act of 1933, as amended (the "Securities Act"), of up to $500.0 million in aggregate offering price of shares of our common stock, shares of our preferred stock, debt securities, warrants, and rights and units. The Shelf Registration Statement was declared effective by the SEC on September 2, 2021. The Shelf Registration Statement included a prospectus covering the offer and sale from time to time of up to $150.0 million in aggregate offering price of shares of the Company's our common stock through an "at-the-market" equity offering program under the Securities Act (the "ATM Offering Program") with Cowen and Company, LLC, as sales agent. agent (the "ATM Offering Program"). In 2022, we issued and sold 113,213 shares of our common stock pursuant to the ATM Offering Program, resulting in net proceeds of approximately $1.6 million, after deducting offering expenses. In 2023, we did not sell any shares under the ATM Offering Program.

On April 28, 2022, we issued and sold 15,333,334 shares of our common stock in an underwritten public offering, including 2,000,000 shares associated with the full exercise of the underwriters' option to purchase additional shares, at a price to the public of $15.00 per share. The total net proceeds from the offering were approximately $215.3 million, after deducting underwriting discounts, and commissions and offering expenses. See Note 10 to our financial statements included in Part II, Item 8 of this Annual Report on Form 10-K for additional detail.

We have incurred net losses and negative cash flows from operations since our inception inception. As of December 31, 2023, we had an accumulated deficit of $435.4 million and anticipate that we will continue to incur net losses for the foreseeable future. We expect to incur substantial expenditures as we develop our product pipeline and advance our drug candidates through clinical development, undergo the regulatory approval process and, if approved, launch commercial activities. Specifically, in the near term we expect to incur substantial expenses relating to initiating and completing our clinical trials, the development and validation of our manufacturing processes, and other development activities. Furthermore, we expect to incur additional costs associated with operating as a public company, including significant legal, accounting, investor relations and other expenses that we did not incur as a private company.

We will need substantial additional funding to support our continuing operations and pursue our long-term development strategy. strategy, including the potential initiation of a pivotal stage clinical trial for any or all of our current development programs. Until such time as we can generate significant revenue from sales of our drug candidates, if ever, we may seek additional funding through the issuance of our common stock, including through our ATM Offering Program, other equity or debt financing or collaborations or partnerships with other companies. The amount and timing of our future funding requirements will depend on many factors, including the pace and results of our clinical development efforts for our product candidates and other research, development and manufacturing activities. activities, market conditions, and the success of our planned cost-containment measures. We may not be able to raise additional capital on terms acceptable to us, or at all. If we fail to raise capital or enter into such agreements as, and when, needed, we may have to significantly delay, scale back, or discontinue the development and commercialization of our drug candidates or delay our efforts to expand our product pipeline. We may also be required to sell or license to other parties' rights to develop or commercialize our drug candidates that we would prefer to retain.

In May 2023, our Registration Statement on Form S-3 became effective (the "2023 Shelf Registration Statement"), covering the offer and sale from time to time of up to $350.0 million in aggregate offering price of securities, including shares of our common stock, shares of our preferred stock, debt securities, warrants, rights and/or units (including up to $120.0 million in securities registered on the 2021 Shelf Registration Statement). The specifics of any future offerings, along with the use of proceeds of any securities offered, will be described in detail in a prospectus supplement, or other offering materials, at the time of any offering.



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We believe that our current cash, cash equivalents, restricted cash and short-term investments as of December 31, 2022 December 31, 2023 will be sufficient to meet our cash needs for at least 12 months following the issuance date of this Annual Report on Form 10-K.



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***Cash Flows***

The following table sets forth a summary of our cash flows for the periods indicated (in thousands):

| | Year Ended December 31, | | Year Ended December 31, | |
|---|---|---|---|---|
| | 2022 | 2021 | 2023 | 2022 |
| Net cash used in operating activities | $ (57,000) | $ (67,927) | $ (86,160) | $ (57,000) |
| Net cash provided by (used in) investing activities | (184,689) | 32,534 | 79,015 | (184,689) |
| Net cash provided by financing activities | 219,012 | 1,202 | 691 | 219,012 |
| Net decrease in cash and cash equivalents | $ (22,677) | $ (34,191) | $ (6,454) | $ (22,677) |

*Operating Activities*

Cash used in operating activities for the year ended December 31, 2023 of $86.2 million was primarily due to our net loss of $117.5 million, adjusted for net non-cash charges of $20.4 million and a change in operating assets and liabilities of $10.9 million. The net non-cash charges of $20.4 million consisted primarily of share-based compensation of $17.2 million, depreciation and amortization of $5.9 million, impairment of right-of-use assets of $4.1 million, and non-cash lease expense of $2.2 million, offset by investment accretion and amortization of $8.9 million. The net change in operating assets and liabilities of $10.9 million was related to the decrease in prepaid and other current assets of $1.7 million, an increase in accounts payable and accrued and other liabilities of $4.2 million as we continued to increase our research and development related activities and an increase in operating lease liabilities of $5.0 million.

The net cash Cash used in operating activities for the year ended December 31, 2022 of $57.0 million was primarily due to our net loss of $113.8 million, adjusted for net non-cash charges of $23.1 million and a change in operating assets and liabilities of $33.7 million. The net non-cash charges of $23.1 million consisted primarily of share-based compensation of $16.9 million, depreciation and amortization of $2.6 million, investment accretion and amortization of $0.8 million and non-cash lease expense of $3.9 million. The net change in operating assets and liabilities of $33.7 million was related to the increase in prepaid and other current assets of $1.5 million, offset by an increase in accounts payable and accrued and other liabilities of $2.8 million as we continued to increase our research and development related activities and an increase in operating lease liabilities of $32.5 million.

*The net cash used in operating Investing Activities*

Cash provided by investing activities was $79.0 million for the year ended December 31, 2021 December 31, 2023 comprised of $67.9 million was proceeds from sales and maturities of investments of $367.4 million, offset by purchases of investments of $260.2 million and purchases of property and equipment of $28.1 million, primarily due to our net loss of $86.1 million, adjusted for net non-cash charges of $19.8 million and a change in operating assets and liabilities of $1.6 million. The net non-cash charges of $19.8 million consisted primarily of share-based compensation of $14.5 million, depreciation and amortization of $1.8 million, investment accretion and amortization of $3.2 million and non-cash lease expense of $0.4 million. The net change in operating assets and liabilities of $1.6 million was related to the increase in prepaid and other current assets construction of $4.4 million primarily due to the cost sharing receivable, higher our

manufacturing and clinical deposits and other current assets, offset by an increase in accounts payable and accrued and other liabilities of $2.8 million as we continued to increase our research and development related activities. facility.

Investing Activities

The net cash Cash used in investing activities was $184.7 million for the year ended December 31, 2022 of $184.7 million was comprised of purchases of property and equipment of $47.1 million primarily related to the construction of our manufacturing facility and purchases of short-term investments of $385.9 million, partially offset by proceeds from sales and maturities of short-term investments of $248.3 million.

*Financing Activities*

The net cash Cash provided by investing financing activities of $0.7 million for the year ended December 31, 2021 of $32.5 million December 31, 2023 was comprised of mainly due to the proceeds from maturities of short-term investments of $264.8 million, partially offset by ESPP purchases of property $0.5 million and equipment exercise of $5.0 million primarily related to the construction stock options of our manufacturing facility and purchases of short-term investments of $227.3 million $0.2 million.

Financing Activities

Net cash Cash provided by financing activities of $219.0 million for the year ended December 31, 2022 of $219.0 million was mainly due to the net proceeds of $215.6 million from the secondary offering, after deducting underwriting discounts and



commissions and other offering costs, net proceeds of $1.6 million from the ATM Offering Program after deducting issuance costs, proceeds from ESPP purchases of $0.4 million, and proceeds of $1.4 million from the exercise of stock options.

Net cash provided by financing activities for the year ended December 31, 2021 of $1.2 million was mainly due to proceeds from the exercise of stock options, partially offset by payment of deferred offering costs of $0.3



million associated with the filing of our Shelf Registration Statement and the establishment of our ATM Offering Program.

***Funding Requirements***

Based upon our current operating plans, we believe that our existing cash, cash equivalents, restricted cash and short-term investments will be sufficient to fund our operations for at least the next 12 months from the date of issuing this Annual Report on Form 10-K. However, our forecast of the period of time through which our financial resources will be adequate to support our operations is a forward-looking statement that involves risks and uncertainties, and actual results could vary materially. We have based this estimate on assumptions that may prove to be wrong, and we could deplete our capital resources sooner than we expect. Additionally, the process of testing therapeutic product candidates in clinical trials is costly, and the timing of progress and expenses in these trials is uncertain.

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

- the type, number, scope, progress, expansions, results, costs and timing of, our clinical trials and preclinical studie for our product candidates or other potential product candidates or indications which we are pursuing or may choo to pursue in the future;
- the outcome, timing and costs of regulatory review of our product candidates;
- the costs and timing of manufacturing for our product candidates, including commercial manufacturing and the cos associated with building our manufacturing facility; manufacturing;
- our efforts to enhance operational systems and hire additional personnel to satisfy our obligations as a public company, including enhanced internal controls over financial reporting;
- the costs associated with hiring additional personnel and consultants as our preclinical and clinical activities increa
- the costs and timing of establishing or securing sales and marketing capabilities if any product candidate is approv
- our ability to achieve sufficient market acceptance, coverage and adequate reimbursement from third-party payors and adequate market share and revenue for any approved products;
- patients' willingness or ability to pay out-of-pocket for any approved products in the absence of coverage and/or adequate reimbursement from third-party payors;
- the terms and timing of establishing and maintaining collaborations, licenses and other similar arrangements, including payments required for meeting regulatory and commercial milestones or sales based royalties;
- the costs of obtaining, maintaining and enforcing our patent and other intellectual property rights; and
- costs associated with any product candidates, products or technologies that we may in-license or acquire. acquire; and
- our ability to implement cost containment measures, including subleasing portions of our leased corporate office space in South San Francisco.

Until such time as we can generate significant revenue from sales of our therapeutic product candidates, if ever, we expect to finance our cash needs through public or private equity, including pursuant to the ATM Offering Program, or debt financings or other capital sources, including potential collaborations, licenses and other similar arrangements. We may be unable to raise additional funds or enter into such other arrangements when needed on favorable terms or at all. There may also be instances where our ability to access a portion of our existing cash, cash equivalents and investments may be threatened due to financial conditions affecting the banking system and financial markets. To the extent that we raise

additional capital through the sale of equity or convertible debt 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



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relinquish valuable rights to our product candidates, future revenue streams or research programs or may have to



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grant licenses on terms that may not be favorable to us and may reduce the value of our common stock. If we are unable to raise additional funds through equity or debt financings when needed, we may be required to undertake additional cost-containment measures and/or delay, limit, reduce or terminate our product development or future commercialization efforts or grant rights to develop and market our product candidates even if we would otherwise prefer to develop and market such product candidates ourselves.

**Contractual Obligations and Commitments**

In May 2018, we entered into a We lease agreement for our corporate certain office, and laboratory space located in South San Francisco, California with an expiration date in May 2025 (the "Initial Lease Agreement"). In April 2019, we executed the first amendment to the Initial Lease Agreement for additional corporate space, laboratory space and manufacturing capabilities and an extension to the lease term through April 2026. The terms of the lease amendment contain a rent abatement for the first month and rent escalation provisions. space under non-cancelable operating leases. In addition to the base rent, payments, we will be obligated our leases are subject to pay certain customary amounts additional variable charges for common area maintenance, property taxes, property insurance and other variable costs. See Note 6 to our share financial statements included in Part II, Item 8 of operating expenses and tax obligations related to the facilities. this Annual Report on Form 10-K for additional detail.

In May 2020, we executed the second amendment to the Initial Lease Agreement for an eight-year non-cancelable Total undiscounted aggregate future operating lease for additional office and laboratory space obligations under all of our operating leases as of December 31, 2023 are $140.5 million.

We enter into contracts in the same building. The lease amendment normal course of business for the additional space provided for abatement of rent during the first three months of the lease and contained rent escalations during the term of the lease. The lease amendment for this additional space commenced in January 2021 and expires in January 2029. The lease amendment also included an extension of the lease term of our existing office and laboratory space through January 2029, with an option to extend the lease for an additional seven-year term.

In January 2021, we executed the third amendment to the Initial Lease Agreement for a three-year non-cancelable lease for additional office space in the same building. The lease amendment for this additional space commenced in the second quarter of 2021 and expires in March 2024.

In October 2021, we executed the fourth amendment to the Initial Lease Agreement for a seven-year non-cancelable lease for additional office and laboratory space in the same building. The lease amendment for additional space provided for abatement of rent during the first two months of the lease and contained rent escalations during the term of the lease. The lease amendment for this additional space is anticipated to commence in April 2022 and expires in January 2029. The Company expects to pay base rent of approximately $4.6 million over the lease term. The lease amendment also includes this additional space in our option to extend the lease for an additional seven-year term. The other terms of the Initial Lease Agreement, as amended, remain unchanged.

In July 2021, we entered into a lease agreement for corporate office, clinical trials, preclinical studies, manufacturing and laboratory space located in South San Francisco, California with an expiration date approximately twelve years after the lease's legal commencement date (the "Additional Lease Agreement"). We will become responsible other services and products for paying rent on the lease's legal commencement date. The Company expects to pay base rent of approximately $99.6 million over the lease term. In addition to the base rent payments, we will be obligated to pay certain customary amounts for our share of operating expenses and tax obligations related to the facilities. The Additional Lease Agreement also provides for certain tenant improvement allowances for tenant improvements and certain infrastructure upgrades in connection with the initial buildout of the premises, a portion of which, if utilized, would need to be repaid by us over the lease term.

In November 2021, we executed the first amendment to the Additional Lease Agreement for our corporate office, manufacturing and laboratory space. The amendment expressly includes manufacturing as a permitted use at the facility, clarifies that Silicon Valley Bank is an acceptable bank for purposes of issuing a letter of credit under the lease, revises the letter of credit transferability terms and replaces the form of letter of credit attached to the lease. The other terms of the Additional Lease Agreement remain unchanged.

In August 2022, we executed the fifth amendment to the Initial Lease Agreement and the second amendment to the Additional Lease Agreement. The amendments purposes. These contracts generally provide for approximately $15 million

of additional tenant improvement allowances for the future facility, increase the rent for the future facility, termination following a certain period after notice and increase the rent and



term of the lease for some of our existing facilities. These allowances therefore we believe that non-cancelable obligations under these agreements are in addition to the tenant improvement allowances of $25.2 million included in the original lease agreement for the future facility.

**Off-Balance Sheet Arrangements**

During the periods presented, we did not have, nor do we currently have, any off-balance sheet arrangements as defined under the rules and regulations of the SEC.material.

**Critical Accounting Policies and Significant Judgments and Estimates**

Our management's discussion and analysis of our financial condition and results of operations are based on our financial statements, which have been prepared in accordance with U.S. GAAP. The preparation of these financial statements requires us to make estimates and judgments that affect the reported amounts of assets, liabilities and expenses and the disclosure of contingent assets and liabilities in our financial statements and accompanying notes. On an ongoing basis, we evaluate our estimates and judgments, including those related to preclinical studies and clinical trial accruals, and share-based compensation. compensation, impairment of long-live assets. We base our estimates and assumptions on historical experience, known trends and events, and various other factors that are believed to be reasonable and appropriate 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. Actual results may differ from these estimates under different assumptions or conditions. See Note 2 to our financial statements included in Part II, Item 8 of this Annual Report on Form 10-K for a summary of significant accounting policies and the effect on our financial statements.

**Recently Issued Accounting Pronouncements**

See Recent Accounting Pronouncements in Note 2 to our financial statements included in Part II, Item 8 of this Annual Report on Form 10-K.

**Indemnification**

As permitted under Delaware law and in accordance with our bylaws, we indemnify our officers and directors for certain events or occurrences while the officer or director is or was serving in such capacity. We are also a party to indemnification agreements with our officers and directors. We believe the fair value of the indemnification rights and agreements is minimal. Accordingly, we have not recorded any liabilities for these indemnification rights and agreements as of December 31, 2022 December 31, 2023 and 2021. 2022.

**Segment Information**

We have one business activity and operate in one reportable segment.



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**JOBS Act**

We are an “emerging growth company” as described under the JOBS Act, and we could have taken advantage of an extended transition period for complying with new or revised accounting standards. This would have allowed us to delay the adoption of certain accounting standards until those standards would otherwise apply to private companies. We have chosen irrevocably to “opt out” of such extended transition period, and as a result, we will comply with new or revised accounting standards on the relevant dates on which adoption of such standards is required for non-emerging growth companies. We intend to rely on other exemptions provided by the JOBS Act, including without limitation, not being required to comply with the auditor attestation requirements of Section 404(b) of The Sarbanes-Oxley Act of 2002 (the "Sarbanes-Oxley Act").

We will remain an emerging growth company until the earliest of (i) the last day of the fiscal year following the fifth anniversary of the consummation of our IPO, (ii) the last day of the fiscal year in which we have total annual gross revenue of at least $1.07 billion $1.235 billion, (iii) the last day of the fiscal year in which we are deemed to be a “large accelerated filer” as defined in Rule 12b-2 under the Securities Exchange Act, of 1934, as amended (the



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"Exchange Act"), which would occur if the market value of our common stock held by non-affiliates exceeded $700.0 million as of the last business day of the second fiscal quarter of such year, or (iv) the date on which we have issued more than $1.0 billion in non-convertible debt securities during the prior three-year period. Even after we no longer qualify as an emerging growth company, we may still qualify as a smaller reporting company or a non-accelerated filer, which would 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 prospectuses and in our periodic reports and proxy statements.

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

We hold certain financial instruments for which a change in prevailing interest rates may cause the principal amount of the marketable securities to fluctuate. Financial instruments that potentially subject us to significant concentrations of credit risk consist primarily of cash, cash equivalents, restricted cash, and short-term investments. We invest our excess cash primarily in money market funds, commercial paper and debt instruments of financial institutions, corporations, U.S. government-sponsored agencies and the U.S. Treasury. The primary objectives of our investment activities are to ensure liquidity and to preserve principal while at the same time maximizing the income we receive from our marketable securities without significantly increasing risk. Additionally, we established guidelines regarding approved investments and maturities of investments, which are designed to maintain safety and liquidity. For marketable investment securities with short-term maturities, we do not believe that an increase or decrease in market rates would have a significant impact on the realized values or the statements of operations and comprehensive loss. As such, we believe that if a 10.0% change in interest rates were to have occurred on December 31, 2022 December 31, 2023, this change would not have had a material effect on the fair value of our investment portfolio as of that date.

We are exposed to market risk related to changes in foreign currency exchange rates. We contract with vendors that are located outside the United States and certain invoices are denominated in foreign currencies. We are subject to fluctuations in foreign currency rates in connection with such arrangements. We do not currently hedge our foreign currency exchange risk. Inflation generally affects us by increasing our cost of labor and research and development contract costs. We do not believe inflation has had a material effect on our results of operations during the periods presented.

We do not believe that inflation, interest rate changes, or exchange rate fluctuations had a significant impact on our results of operations for any periods presented herein.



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**Item 8. Financial Statements and Supplementary Data.**

**Nkarta, Inc.**

**Index to Financial Statements**

**For the years ended December 31, 2022 December 31, 2023 and 2021 2022**

Audited Financial Statements





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**Report of Independent Registered Public Accounting Firm**

To the Stockholders and the Board of Directors of Nkarta, Inc.

**Opinion on the Financial Statements**

We have audited the accompanying balance sheets of Nkarta, Inc. (the "Company") Company) as of December 31, 2022 December 31, 2023 and 2021, 2022, the related statements of operations and comprehensive loss, stockholders' equity and cash flows, for each of the two years in the period ended December 31, 2022 December 31, 2023, and the related notes (collectively referred to as the "financial statements"). In our opinion, the financial statements present fairly, in all material respects, the financial position of the Company as of December 31, 2022 at December 31, 2023 and 2021, 2022, and the results of its operations and its cash flows for each of the two years in the period ended December 31, 2022 December 31, 2023, in conformity with U.S. generally accepted accounting principles.

**Basis for Opinion**

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

We conducted our audits in accordance with the standards of the PCAOB. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements are free of material misstatement,

whether due to error or fraud. The Company is not required to have, nor were we engaged to perform, an audit of its internal control over financial reporting. As part of our audits we are required to obtain an understanding of internal control over financial reporting but not for the purpose of expressing an opinion on the effectiveness of the Company's internal control over financial reporting. Accordingly, we express no such opinion.

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

/s/ Ernst & Young LLP

We have served as the Company's auditor since 2019.

San Mateo, California
March 16, 2023 21, 2024



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**NKARTA, INC.**

**Balance Sheets**

(In thousands, except share par value and per share data)

| | December 31, | | December 31, | |
|---|---|---|---|---|
| | 2022 | 2021 | 2023 | 2022 |
| **Assets** | | | | |
| Current assets: | | | | |
| Cash and cash equivalents | $ 37,494 | $ 60,816 | $ 31,040 | $ 37,494 |
| Short-term investments, available-for-sale | 314,649 | 177,272 | | |
| Short-term investments | | | 217,149 | 314,649 |

| | | | | |
|---|---|---|---|---|
| Prepaid expenses and other current assets | 8,545 | 7,692 | 4,882 | 8,545 |
| Total current assets | 360,688 | 245,780 | 253,071 | 360,688 |
| Restricted cash | 2,743 | 2,098 | 2,743 | 2,743 |
| Property and equipment, net | 61,908 | 12,856 | 79,326 | 61,908 |
| Operating lease right-of-use assets | 45,749 | 11,678 | 39,949 | 45,749 |
| Other long-term assets | 1,850 | 1,491 | 3,796 | 1,850 |
| Total assets | $ 472,938 | $ 273,903 | $ 378,885 | $ 472,938 |
| **Liabilities and stockholders' equity** | | | | |
| Current liabilities: | | | | |
| Accounts payable | $ 1,761 | $ 1,112 | $ 3,665 | $ 1,761 |
| Operating lease liabilities, current portion | 4,249 | 2,484 | 6,069 | 4,249 |
| Accrued and other current liabilities | 16,036 | 9,347 | 13,596 | 16,036 |
| Total current liabilities | 22,046 | 12,943 | 23,330 | 22,046 |
| Operating lease liabilities, net of current portion | 78,685 | 9,975 | 82,270 | 78,685 |
| Other long-term liabilities | — | 18 | | |
| Total liabilities | 100,731 | 22,936 | 105,600 | 100,731 |
| Commitments and contingencies (Note 7) | | | | |
| Stockholders' equity: | | | | |
| Preferred stock, $0.0001 par value; 54,350,179 shares authorized at December 31, 2022; no shares issued and outstanding at December 31, 2022 and 2021 | — | — | | |
| Common stock, $0.0001 par value; 100,000,000 shares authorized at December 31, 2022; 48,877,806 and 32,971,107 shares issued and outstanding at December 31, 2022 and 2021, respectively | 5 | 3 | | |
| Preferred stock, $0.0001 par value; 54,350,179 shares authorized; no shares issued and outstanding at December 31, 2023 and 2022 | | | — | — |

| | | | | |
|---|---|---|---|---|
| Common stock, $0.0001 par value; 100,000,000 shares authorized; 49,181,295 and 48,877,806 shares issued and outstanding at December 31, 2023 and 2022, respectively | | | 5 | 5 |
| Additional paid-in capital | 690,814 | 455,210 | 708,706 | 690,814 |
| Accumulated other comprehensive loss | (679) | (150) | | |
| Accumulated other comprehensive income (loss) | | | 8 | (679) |
| Accumulated deficit | (317,933) | (204,096) | (435,434) | (317,933) |
| Total stockholders' equity | 372,207 | 250,967 | 273,285 | 372,207 |
| Total liabilities and stockholders' equity | 472,938 | 273,903 | $ 378,885 | $ 472,938 |

See accompanying notes to the financial statements.



**NKARTA, INC.**

**Statements of Operations and Comprehensive Loss**

(In thousands, except share and per share data)

| | Year Ended December 31, | | Year Ended December 31, | |
|---|---|---|---|---|
| | 2022 | 2021 | 2023 | 2022 |
| Operating expenses: | | | | |
| Research and development | 90,897 | 63,412 | 96,773 | 90,897 |
| General and administrative | 28,058 | 23,017 | 34,877 | 28,058 |
| Total operating expenses | 118,955 | 86,429 | 131,650 | 118,955 |
| Loss from operations | (118,955) | (86,429) | (131,650) | (118,955) |

| | | | | |
|---|---|---|---|---|
| Other income (expense), net: | | | | |
| Other income, net: | | | | |
| Interest income | 5,588 | 370 | 14,107 | 5,588 |
| Other expense, net | (470) | (16) | | |
| Total other income (expense), net | 5,118 | 354 | | |
| Other income (expense), net | | | 42 | (470) |
| Total other income, net | | | 14,149 | 5,118 |
| Net loss | $ (113,837) | $ (86,075) | $ (117,501) | $ (113,837) |
| Comprehensive loss: | | | | |
| Net loss | (113,837) | (86,075) | (117,501) | (113,837) |
| Other comprehensive loss: | | | | |
| Unrealized loss on securities | (529) | (153) | | |
| Net unrealized gain (loss) on investments | | | 687 | (529) |
| Comprehensive loss | $ (114,366) | $ (86,228) | $ (116,814) | $ (114,366) |
| Net loss per share, basic and diluted | $ (2.61) | $ (2.62) | $ (2.40) | $ (2.61) |
| Weighted-average number of common shares used in net loss per share, basic and diluted | 43,631,722 | 32,856,883 | | |
| Weighted-average shares outstanding used in computing basic and diluted net loss per share | | | 49,014,300 | 43,631,722 |

See accompanying notes to the financial statements.



**NKARTA, INC.**

**Statements of Stockholders' Equity**

(In thousands, except share data)

| | Common Stock | | Additional Paid-In Capital | Accumulated Deficit | Accumulated Other Comprehensive Income (Loss) | Total Stockholders' Equity | Common Stock | | Additional Paid-In Capital | Accumulated Deficit | Accumulated Other Comprehensive Income (Loss) | Total Stockholders' Equity |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Shares | Amount | | | | | Shares | Amount | | | | |
| Balance at January 1, 2021 | 32,627,963 | $ 3 | $ 459,238 | $ (118,021) | $ 3 | $ 340,223 | | | | | | |
| Vesting of shares of common stock subject to repurchase | 62,045 | — | 35 | — | — | 35 | | | | | | |
| Issuance of common stock upon exercise of stock option | 281,099 | — | 1,479 | — | — | 1,479 | | | | | | |
| Share-based compensation expense | — | — | 14,461 | — | — | 14,461 | | | | | | |
| Unrealized loss on short-term investments | — | — | — | — | (153) | (153) | | | | | | |
| Net loss | — | — | — | (86,075) | — | (86,075) | | | | | | |
| Balance at December 31, 2021 | 32,971,107 | $ 3 | $ 455,210 | $ (204,096) | $ (150) | $ 250,967 | | | | | | |

| | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Vesting of shares of common stock subject to repurchase | 15,278 | — | 15 | — | — | 15 | 15,278 | — | 15 | — | — | 15 |
| Issuance of common stock upon exercise of stock option, net of repurchase | 383,120 | — | 1,397 | — | — | 1,397 | 383,120 | — | 1,397 | — | — | 1,397 |
| Issuance of common stock upon employee stock purchase plan | 61,754 | — | 445 | — | — | 445 | 61,754 | — | 445 | — | — | 445 |
| Issuance of common stock upon secondary offering, net of issuance costs | 15,333,334 | 2 | 215,332 | — | — | 215,334 | 15,333,334 | 2 | 215,332 | — | — | 215,334 |
| Issuance of common stock upon at-the-market offering, net of issuance costs | 113,213 | — | 1,559 | — | — | 1,559 | 113,213 | — | 1,559 | — | — | 1,559 |
| Share-based compensation expense | — | — | 16,856 | — | — | 16,856 | — | — | 16,856 | — | — | 16,856 |
| Unrealized loss on short-term investments | — | — | — | — | (529) | (529) | | | | | | |
| Unrealized loss on investments | | | | | | | — | — | — | — | (529) | (529) |
| Net loss | — | — | — | (113,837) | — | (113,837) | — | — | — | (113,837) | — | (113,837) |

| | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Balance at December 31, 2022 | 48,877,806 | $ 5 | $ 690,814 | $ (317,933) | $ (679) | $ 372,207 | | | | | | |
| Vesting of shares of common stock subject to repurchase | 508 | — | 2 | — | — | 2 | | | | | | |
| Issuance of common stock upon exercise of stock option | 49,871 | — | 161 | — | — | 161 | | | | | | |
| Issuance of common stock upon vesting of restricted stock units | 88,543 | — | — | — | — | — | | | | | | |
| Issuance of common stock upon employee stock purchase plan | 164,567 | — | 530 | — | — | 530 | | | | | | |
| Share-based compensation expense | — | — | 17,199 | — | — | 17,199 | | | | | | |
| Unrealized gain on investments | — | — | — | — | 687 | 687 | | | | | | |
| Net loss | — | — | — | (117,501) | — | (117,501) | | | | | | |
| Balance at December 31, 2023 | 49,181,295 | $ 5 | $ 708,706 | $ (435,434) | $ 8 | $ 273,285 | | | | | | |

See accompanying notes to the financial statements.

**NKARTA, INC.**

**Statements of Cash Flows**

(In thousands)

| | Year Ended December 31, | | Year Ended December 31, | |
|---|---|---|---|---|
| | 2022 | 2021 | 2023 | 2022 |
| **Cash flows from operating activities:** | | | | |
| Net loss | $ (113,837) | $ (86,075) | $ (117,501) | $ (113,837) |
| Adjustments to reconcile net loss to net cash used in operating activities: | | | | |
| Share-based compensation expense | 16,856 | 14,461 | 17,199 | 16,856 |
| Depreciation and amortization expense | 2,637 | 1,756 | 5,869 | 2,637 |
| Accretion of discount and amortization of premium on investments, net | (818) | 3,237 | (8,940) | (818) |
| Non-cash lease expense | 3,935 | 367 | 2,222 | 3,935 |
| Realized loss on investments | 490 | — | | |
| Others | — | (30) | | |
| Realized (gain) loss on investments | | | (34) | 490 |
| Impairment of right-of-use assets | | | 4,100 | — |
| Changes in operating assets and liabilities: | | | | |
| Prepaid expenses and other assets | (1,489) | (4,435) | 1,716 | (1,489) |
| Operating lease liabilities | 32,469 | | 4,986 | 32,469 |
| Accounts payable and accrued and other liabilities | 2,757 | 2,792 | 4,223 | 2,757 |

| | | | | |
|---|---|---|---|---|
| Net cash used in operating activities | (57,000) | (67,927) | (86,160) | (57,000) |
| **Cash flows from investing activities:** | | | | |
| Purchases of available-for-sale securities | (385,887) | (227,282) | | |
| Proceeds from maturities of available-for-sale securities | 248,309 | 264,841 | | |
| Purchases of investments | | | (260,233) | (385,887) |
| Proceeds from sales and maturities of investments | | | 367,395 | 248,309 |
| Purchase of property and equipment | (47,111) | (5,025) | (28,147) | (47,111) |
| Net cash provided by (used in) investing activities | (184,689) | 32,534 | 79,015 | (184,689) |
| **Cash flows from financing activities:** | | | | |
| Proceeds from secondary offering, net of issuance costs | 215,611 | — | — | 215,611 |
| Proceeds from ATM offering, net of issuance costs | 1,559 | — | — | 1,559 |
| Proceeds from ESPP purchases | 445 | | 530 | 445 |
| Proceeds from stock option exercises | 1,397 | 1,479 | 161 | 1,397 |
| Payments of deferred offering costs | — | (277) | | |
| Net cash provided by financing activities | 219,012 | 1,202 | 691 | 219,012 |
| Net decrease in cash and cash equivalents | (22,677) | (34,191) | (6,454) | (22,677) |
| Cash, cash equivalents and restricted cash at beginning of year | 62,914 | 97,105 | 40,237 | 62,914 |
| Cash, cash equivalents and restricted cash at end of year | 40,237 | 62,914 | | |
| | $ 37 | $ 14 | $ 33,783 | $ 40,237 |
| Reconciliation of cash, cash equivalents and restricted cash to the balance sheets: | | | | |
| Cash and cash equivalents | 37,494 | 60,816 | | |
| | $ 94 | $ 16 | $ 31,040 | $ 37,494 |
| Restricted cash | 2,743 | 2,098 | 2,743 | 2,743 |

| | | | | |
|---|---|---|---|---|
| Total cash, cash equivalents and restricted cash | 40,2 | 62,9 | | |
| | $ 37 | $ 14 | $ 33,783 | $ 40,237 |
| **Supplemental disclosures of non-cash investing and financing activities:** | | | | |
| Acquisitions of property and equipment in accounts payable | 4,57 | | | |
| | $ 9 | $ 238 | | |
| **Supplemental disclosures of non-cash investing activities:** | | | | |
| Acquisitions of property and equipment recorded in accounts payable and accrued and other current liabilities | | | $ 268 | $ 4,579 |

See accompanying notes to the financial statements.

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**NKARTA, INC.**

**Notes to the Financial Statements**

## 1. Description of Business

### *Description of the Business*

Nkarta, Inc. ("Nkarta" or the "Company") was incorporated in the State of Delaware in July 2015. The Company is a biopharmaceutical company developing engineered natural killer ("NK") cells to treat cancer. cancer and autoimmune disease. The Company is focused on leveraging the natural potent power of NK cells to identify and kill abnormal cells and recruit adaptive immune effectors to generate responses that are specific and durable. Nkarta is combining its NK expansion platform technology with proprietary cell engineering technologies to generate an abundant supply of NK cells, engineer enhanced NK cell recognition of tumor therapeutic targets, and improve persistence for sustained activity in the body for the treatment of cancer. body. Nkarta's goal is to develop off-the-shelf NK cell therapy product candidates to improve outcomes for patients. The Company's operations are based in South San Francisco, California, and it operates in one segment.

### *Liquidity and Management Plans*

The accompanying financial statements have been prepared assuming that the Company will continue as a going concern. Since inception, the Company has devoted substantially all of its efforts to organizing and staffing, business planning, raising capital, conducting preclinical studies and initiating clinical studies, and has not realized substantial revenues from its planned principal operations. In addition, the Company has a limited operating history, has incurred operating losses since inception and expects that it will continue to incur net losses into the foreseeable future as it continues its research and development activities. As of December 31, 2022 December 31, 2023, the Company had an accumulated deficit of $317.9 435.4 million and cash, cash equivalents, restricted cash and short-term investments of $354.9 250.9 million.

Management plans to continue to incur substantial costs in order to conduct research and development activities and for which additional capital will be needed to undertake these activities. needed. The Company intends to raise such capital through debt or equity financings or other arrangements to fund operations. Management believes that the Company's current cash, cash equivalents, restricted cash and short-term investments will provide sufficient funds to enable the Company to meet its obligations for at least twelve months from the filing date of this report.

**2. Basis of Presentation and Significant Accounting Policies**

***Basis of Presentation***

The accompanying financial statements have been prepared in accordance with U.S. generally accepted accounting principle ("U.S. GAAP").

***COVID-19 Pandemic***

The COVID-19 pandemic has caused disruptions in the global economy and has affected and may in the future affect the Company's business and operations in the future. In response to the pandemic, the Coronavirus Aid, Relief and Economic Security Act (the "CARES Act") was signed into law on March 27, 2020. The CARES Act, among other things, includes tax provisions relating to refundable payroll tax credits, deferment of employer's social security payments, net operating loss utilization and carryback periods, modifications to the net interest deduction limitations and technical corrections to tax depreciation methods for qualified improvement property. The CARES Act had no impact on the Company's income tax provision for the year ended December 31, 2022. The Company continues to evaluate the impact of the CARES Act on its financial position, results of operations and cash flows.

***Use of Estimates***

The preparation of financial statements in conformity with U.S. GAAP requires management to make estimates and assumptions that affect the amounts reported in the Company's financial statements and



accompanying notes. On an ongoing basis, management evaluates its estimates, including those related to preclinical studies and clinical trial accruals, fair value of assets and liabilities, impairment of assets, leases, share-based

compensation and income taxes. Management bases its estimates on historical experience, knowledge of current events and actions it may undertake in the future that management believes to be reasonable under the circumstances. Actual results may differ from these estimates and assumptions.

***Concentration of Credit Risk***

Financial instruments, which potentially subject the Company to concentration of credit risk, consist primarily of cash, cash equivalents and short-term investments. The Company maintains cash, cash equivalents and short-term investments with various high credit quality and are invested through banks and other financial institutions in the United States. Such deposits may be in excess of federally insured limits. Management believes that the Company is not exposed to



significant credit risk due to the financial position of the depository institutions in which those deposits are held. The Company has not experienced any losses on deposits since inception.

***Comprehensive Loss***

Comprehensive loss consists of net loss and unrealized gains or losses on available-for-sale investments. The Company displays comprehensive loss and its components as part of the statements of operations and comprehensive loss.

***Fair Value of Financial Instruments***

The accounting guidance defines fair value, establishes a consistent framework for measuring fair value, and expands disclosure for each major asset and liability category measured at fair value on either a recurring or nonrecurring basis. Fair value is defined as an 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 such, fair value is a market-based measurement that should be determined based on assumptions that market participants would use in pricing an asset or liability. As a basis for considering such assumptions, the accounting guidance establishes a three-tier fair value hierarchy, which prioritizes the inputs used in measuring fair value as follows:

*Level 1:* Observable inputs such as quoted prices in active markets;

*Level 2:* Inputs, other than the quoted prices in active markets, that are observable either directly or indirectly; and

*Level 3:* Unobservable inputs in which there is little or no market data, which require the reporting entity to develop its own assumptions.

The carrying amounts of prepaid expenses and other current assets, accounts payable, accrued liabilities and other current liabilities are reasonable estimates of their fair value due to the short-term nature of these accounts.

***Cash, Cash Equivalents, Short-term Investments and Restricted Cash***

***Cash and Cash Equivalents***

The Company considers all highly liquid investments with insignificant interest rate risk and an original maturity of three months or less at the date of purchase to be cash equivalents. Cash includes demand deposits held in readily available checking accounts at a federally insured financial institution. Cash equivalents consist of money market funds.

***Short-term Investments***

Short-term investments consist of commercial corporate debt securities, commercial paper and Government securities, classified as available-for-sale securities and have maturities of greater than three months but less than one year. The Company has classified most of its available-for-sale investment securities as current assets on the balance sheets because these are considered highly liquid securities and are available for use in current operations. The Company



carries these securities at fair value, and reports unrealized gains and losses as a separate component of accumulated other comprehensive loss. income (loss). The cost of debt securities is adjusted for amortization of purchase premiums and accretion of discounts to maturity. Such amortization and accretion is included in interest income in the statements of operations and comprehensive loss. Realized gains and losses on sales of securities are determined using the specific identification method and recorded in other income, (expense), net in the statement of operations and comprehensive loss. We review our portfolio of available-for-sale securities, using both quantitative and qualitative factors, to determine if declines in fair value below amortized cost have resulted from a credit-related loss or other factors. If the decline in fair value is due to credit-related factors, we recognize a loss in the statement of operations, whereas if the decline in fair value is not due to credit-related factors, we recognize the loss in comprehensive loss.

***Restricted Cash***

The Company is required to maintain letters of credit related to its office and lab space lease and the additional facility leases in South San Francisco that the Company plans to use for corporate offices, laboratories and manufacturing. Francisco. This cash is the collateral for those letters of credit and per the terms of the leases, must remain in place

until one to two months after the termination of the leases. As the remaining terms of the leases as of December 31, 2022 December 31, 2023 is greater than one year, the related restricted cash has been classified as non-current.

***Property and Equipment, Net***

Property and equipment, which consist of leasehold improvements, furniture and fixtures, research equipment, computers and software and construction-in-progress are stated at cost less accumulated depreciation. Depreciation and amortization is calculated using the straight-line method over the estimated useful lives of the assets, which ranges from three to five years. Leasehold improvements are amortized over the remaining life of the lease for leasehold improvements at the time the asset is placed into service.

***Impairment of Long-Lived Assets***

The carrying value of long-lived assets, including property and equipment, are reviewed for impairment whenever events or changes in circumstances indicate that the asset may not be recoverable. An impairment loss is recognized when the total of estimated future undiscounted cash flows, expected to result from the use of the asset and its eventual disposition, are less than its carrying amount. Impairment, if any, would be assessed using discounted cash flows or other appropriate measures of fair value. Through December 31, 2022 See Note 6 for additional information on the long-lived asset impairment expense recognized for the year ended December 31, 2023.

***Collaborative Arrangements***

The Company analyzes its collaboration arrangements to assess whether they are within the scope of Accounting Standards Codification ("ASC") Topic 808, Collaborative Arrangements ("ASC 808"), there has been noto determine whether such impairment losses recorded arrangements involve joint operating activities performed by parties that are both active participants in the Company. activities and exposed to significant risks and rewards that are dependent on the commercial success of such activities. To the extent the arrangement is within the scope of ASC 808, the Company assesses whether aspects of the arrangement between the Company and its collaboration partner are within the scope of other accounting literature, including ASC Topic 606, Revenue from Contracts with Customers ("ASC 606"). If it is concluded that some or all aspects of the arrangement represent a transaction with a customer, the Company will account for those aspects of the arrangement within the scope of ASC 606.

ASC 808 provides guidance for the presentation and disclosure of transactions in collaborative arrangements, but it does not provide recognition or measurement guidance. Therefore, if the Company concludes a counterparty to a

transaction is not a customer or otherwise not within the scope of ASC 606, the Company considers the guidance in other accounting literature as applicable or by analogy to account for such transaction. The classification of transactions under the Company's arrangements is determined based on the nature and contractual terms of the arrangement along with the nature of the operations of the participants.

***Research and Development Costs***

Research and development costs are expensed as incurred. Research and development costs consist primarily of salaries and other benefits of research and development personnel, including associated share-based compensation, costs related to research activities, preclinical studies, clinical trial, drug manufacturing and allocated overhead and facility-related expenses. The Company accounts for non-refundable advance payments for goods or services that will be used in future research and development activities as expenses when the goods have been received or when the service has been performed rather than when the payment is made.

Clinical trial costs are a component of research and development expenses. The Company expenses costs for its clinical trial activities performed by third parties, including clinical research organizations and other service providers, as they are incurred, based upon estimates of the work completed over the life of the individual study in accordance with associated agreements. The Company uses information it receives from internal personnel and outside service providers to estimate the clinical trial costs incurred.



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***Commitments***

The Company recognizes a liability with regard to loss contingencies when it believes it is probable a liability has occurred and the amount can be reasonably estimated. If some amount within a range of loss appears at the time to be a better estimate than any other amount within the range, the Company accrues that amount. When no amount within the range is a better estimate than any other amount the Company accrues the minimum amount in the range. There has have been no such liabilities recorded by the Company as of December 31, 2022. December 31, 2023 and 2022.



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***Leases***

At the commencement date of a lease, the Company recognizes lease liabilities which represent its obligation to make lease payments, and right-of-use assets ("ROU assets") which represent its right to use the underlying asset during the lease term. The lease liability is measured at the present value of lease payments over the lease term. As the Company's leases typically do not provide an implicit rate, the Company uses an incremental borrowing rate based on the information available at the lease commencement date. The ROU asset is measured at cost, which includes the initial measurement of the lease liability and initial direct costs incurred by the Company and excludes lease incentives. ROU assets are recorded in operating lease ROU assets and lease liabilities are recorded in operating lease liabilities, current and noncurrent in the balance sheets. We have elected the practical expedient to account for the lease and non-lease components, such as common area maintenance charges, as a single lease component for our facilities leases, and elected the short-term lease recognition exemption for our short-term leases, under which we do not recognize lease liabilities and right-of-use assets for leases with an original term of twelve months or less.

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 does not recognize lease liabilities and ROU assets for short-term leases with terms of twelve months or less.

***Share-Based Compensation***

Share-based compensation expense represents the cost of the grant-date fair value of employee, officer, director, and non-employee stock option, employee stock purchase plan, and restricted stock unit grants, estimated in accordance with the applicable accounting guidance, recognized using the straight-line method over the vesting period for service-based options, employee stock purchase plan rights and restricted stock units and using the graded vesting method for performance-based options. The vesting period generally approximates the expected service period of the awards. Forfeitures are recognized and accounted for as they occur.

The fair value of stock options and employee stock purchase plan rights are estimated using a Black-Scholes option pricing model on the date of grant. This method requires certain assumptions be used as inputs, such as the fair value of the underlying common stock, expected term of the option before exercise, expected volatility of the Company's common stock, expected dividend yield, and a risk-free interest rate. Options granted during the year have a maximum contractual term of ten years. The Company has limited historical stock option activity and therefore estimates the expected term of stock options granted using the simplified method, which represents the average of the contractual term of the stock option and its weighted-average vesting period. The expected term of the employee stock purchase plan rights equals the six-month look-back period. The Since inception and prior to 2023, the expected volatility is was based upon the historical volatility of a number of publicly traded companies in similar stages of clinical development. For grants during 2023, the expected volatility was determined by using a blended approach of the Company's historical stock price volatility and the historical stock price volatility for a select group of other publicly traded companies in the same industry. The Company has historically not declared or paid any dividends and does not currently expect to do so in the foreseeable future. The risk-free interest rates used are based on the U.S. Department of Treasury ("U.S. Treasury") yield in effect at the time of grant for zero-coupon U.S. Treasury notes with maturities approximately equal to the expected term of the stock options. The fair

value of restricted stock units is based on the closing price of the Company's common stock as reported on The Nasdaq Global Select Market on the date of grant.



***Income Taxes***

Income taxes have been accounted for using the asset and liability method. Under the asset and liability method, deferred tax assets and liabilities are recognized for the future tax consequences attributable to differences between the financial carrying amounts of existing assets and liabilities and their respective tax bases and operating loss and tax credit carryforwards. Deferred tax assets and liabilities are measured using enacted tax rates applicable to taxable income in the years in which those temporary differences are expected to be recovered or settled. The effect on deferred tax assets and liabilities of a change in tax rates is recognized in income in the period that includes the enactment date. A valuation allowance against deferred tax assets is recorded if, based upon the weight of all available evidence, it is more likely than not that some or all of the deferred tax assets will not be realized.

***Segment Reporting***

The Company’s chief operating decision maker, its President and Chief Executive Officer, manages its operations and business as one operating segment for the purposes of allocating resources, makes operating



decisions and evaluates financial performance. No product revenue has been generated since inception and all assets are held in the United States.

***Net Loss Per Share***

Basic net loss per share is calculated by dividing the net loss by the weighted-average number of common shares outstanding for the period, without consideration of potential dilutive securities. Diluted net loss per share is computed by dividing the net loss by the sum of the weighted average number of common shares plus the potential dilutive effects of potential dilutive securities outstanding during the period. Potential dilutive securities are excluded from diluted earnings or loss per share if the effect of such inclusion is antidilutive. The Company’s potentially dilutive securities, which include unvested common stock, unvested restricted stock options, and outstanding stock options under the Company’s equity

incentive plan, plans, have been excluded from the computation of diluted net loss per share as they would be anti-dilutive to the net loss per share. For all periods presented, there is no difference in the number of shares used to calculate basic and diluted shares outstanding due to the Company's net loss position.

***Recent Accounting Pronouncements***

In November 2023, the Financial Accounting Standard Board ("FASB") issued Accounting Standards Update ("ASU") No. 2023-07, Segment Reporting (Topic 280): Improvements to Reportable Segment Disclosures, which requires disclosure of incremental segment information on an interim and annual basis. This ASU is effective for fiscal years beginning after December 15, 2023, and interim periods within fiscal periods beginning after December 15, 2024, and requires retrospective application to all prior periods presented in the financial statements. The Company is currently evaluating the impact of the guidance on the financial statements and disclosures.

In December 2023, the FASB issued ASU No. 2023-09, Income Taxes (Topic 740): Improvements to Income Tax Disclosures ("ASU 2023-09"). ASU 2023-09 is intended to enhance the transparency and decision usefulness of income tax disclosures. The amendments in ASU 2023-09 address investor requests for enhanced income tax information primarily through changes to the rate reconciliation and income taxes paid information. ASU 2023-09 will be effective for us in the annual period beginning January 1, 2025, though early adoption is permitted. The Company is currently evaluating the presentational effect that ASU 2023-09 will have on its financial statements.

There were no other significant updates to the recently issued accounting standards which may be applicable to the Company. other than as disclosed herewith. Although there are several other new accounting pronouncements issued or proposed by the FASB, the Company does not believe any of those accounting pronouncements have had or will have a material impact on its financial position or operating results.



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**3. Net Loss Per Share**

The following tables summarize the computation of the basic and diluted net loss per share (in thousands except share and per share data):

| | Year Ended December 31, | | Year Ended December 31, | |
|---|---|---|---|---|
| | 2022 | 2021 | 2023 | 2022 |
| **Numerator:** | | | | |
| Net loss | $ (113,837) | $ (86,075) | $ (117,501) | $ (113,837) |
| **Denominator:** | | | | |
| Weighted average common shares outstanding | 43,635,044 | 32,901,002 | 49,014,357 | 43,635,044 |
| Less: weighted average unvested common stock issued upon early exercise of common stock options | (3,322) | (44,119) | (57) | (3,322) |
| Weighted average shares used to compute net loss per share, basic and diluted | 43,631,722 | 32,856,883 | 49,014,300 | 43,631,722 |
| Net loss per share, basic and diluted | $ (2.61) | $ (2.62) | $ (2.40) | $ (2.61) |

The following table summarizes the outstanding potentially dilutive securities that have been excluded in the calculation of diluted net loss per share because their inclusion would be anti-dilutive:

| | December 31, | | December 31, | |
|---|---|---|---|---|
| | 2022 | 2021 | 2023 | 2022 |
| Common stock options | 5,519,275 | 4,204,686 | 6,716,526 | 5,519,275 |
| Restricted stock units | 356,728 | — | 594,768 | 356,728 |
| Unvested common stock upon early exercise of common stock options | 508 | 16,181 | — | 508 |
| | 5,876,511 | 4,220,867 | 7,311,294 | 5,876,511 |



**4. Fair Value of Financial Instruments**

The following tables summarize the fair value of the Company's financial instruments (in thousands):

| | Fair Value Measurements Using | | | | | Fair Value Measurements Using | | |
|---|---|---|---|---|---|---|---|---|
| | December 31, 2022 | Quoted Prices in Active Markets for Identical Assets (Level 1) | Significant Other Observable Inputs (Level 2) | Significant Unobservable Inputs (Level 3) | December 31, 2023 | Quoted Prices in Active Markets for Identical Assets (Level 1) | Significant Other Observable Inputs (Level 2) | Significant Unobservable Inputs (Level 3) |
| **Assets:** | | | | | | | | |
| Cash equivalents: | | | | | | | | |
| Money market funds | $ 36,494 | $ 36,494 | $ — | $ — | $ 30,751 | $ 30,751 | $ — | $ — |
| Short-term investments: | | | | | | | | |
| Corporate debt securities | $ 88,681 | $ — | $ 88,681 | $ — | $ 40,609 | $ — | $ 40,609 | $ — |
| Commercial paper | 65,409 | — | 65,409 | — | 38,197 | — | 38,197 | — |
| Government securities | 160,559 | — | 160,559 | — | 138,343 | — | 138,343 | — |
| Total short-term investments | $ 314,649 | $ — | $ 314,649 | $ — | $ 217,149 | $ — | $ 217,149 | $ — |
| Total | $ 351,143 | $ 36,494 | $ 314,649 | $ — | $ 247,900 | $ 30,751 | $ 217,149 | $ — |

| | Fair Value Measurements Using |
|---|---|

| | December 31, 2021 | Quoted Prices in Active Markets for Identical Assets (Level 1) | Significant Other Observable Inputs (Level 2) | Significant Unobservable Inputs (Level 3) |
|---|---|---|---|---|
| **Assets:** | | | | |
| Cash equivalents: | | | | |
| Money market funds | $ 57,018 | $ 57,018 | $ — | $ — |
| Short-term investments: | | | | |
| Corporate debt securities | $ 111,466 | $ — | $ 111,466 | $ — |
| Commercial paper | 21,272 | — | 21,272 | |
| U.S. Government securities | 44,534 | — | 44,534 | — |
| Total short-term investments | $ 177,272 | $ — | $ 177,272 | $ — |
| Total | $ 234,290 | $ 57,018 | $ 177,272 | $ — |



| | | Fair Value Measurements Using | | |
|---|---|---|---|---|
| | December 31, 2022 | Quoted Prices in Active Markets for Identical Assets (Level 1) | Significant Other Observable Inputs (Level 2) | Significant Unobservable Inputs (Level 3) |
| **Assets:** | | | | |
| Cash equivalents: | | | | |
| Money market funds | $ 36,494 | $ 36,494 | $ — | $ — |
| Short-term investments: | | | | |
| Corporate debt securities | $ 88,681 | $ — | $ 88,681 | $ — |
| Commercial paper | 65,409 | — | 65,409 | |
| U.S. Government securities | 160,559 | — | 160,559 | — |

| | | | | |
|---|---|---|---|---|
| Total short-term investments | $ 314,649 | $ — | $ 314,649 | $ — |
| Total | $ 351,143 | $ 36,494 | $ 314,649 | $ — |

***Cash Equivalents and Short-Term Investments***

Financial assets measured at fair value on a recurring basis consist of the Company's cash equivalents and short-term investments. Cash equivalents consisted of money market funds and short-term investments consisted of commercial paper, corporate debt securities and Government securities. The Company obtains pricing information from its investment manager and generally determines the fair value of investment securities using standard observable inputs, including reported trades, broker/dealer quotes, and bids and/or offers.

Investments are classified as Level 1 within the fair value hierarchy if their quoted prices are available in active markets for identical securities. Investments in money market funds of $36.5 30.8 million and $57.0 36.5 million included in cash equivalents as of December 31, 2022 December 31, 2023 and 2021, 2022, respectively, were classified as Level 1 instruments.

Investments in corporate debt securities, commercial paper and Government securities included in short-term investments are valued using Level 2 inputs. Level 2 securities are initially valued at the transaction price and subsequently valued and reported upon utilizing inputs other than quoted prices that are observable either directly or indirectly, such as quotes from third-party pricing vendors. Fair values determined by Level 2 inputs, which utilize data points that are observable such as quoted prices, interest rates and yield curves, require the exercise of judgment



and use of estimates, that if changed, could significantly affect the Company's financial position and results of operations.

The following tables summarize the Company's short-term investments as of December 31, 2022 December 31, 2023 and 2021 2022 (in thousands):

| | December 31, 2022 | | | | | December 31, 2023 | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | Maturity (in years) | Amortized Cost | Unrealized Losses | Unrealized Gains | Estimated Fair Value | Maturity (in years) | Amortized Cost | Unrealized Losses | Unrealized Gains | Estimated Fair Value |
| Corporate debt securities | 1 year or less | $ 88,599 | $ (20) | $ 6 | $ 88,585 | 1 year or less | $ 40,602 | $ (11) | $ 18 | $ 40,609 |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| Commercial paper | 1 year or less | 65,532 | (123) | — | 65,409 | 1 year or less | 38,198 | (2) | 1 | 38,197 |
| Government securities | 1 year or less | 160,801 | (319) | 77 | 160,559 | 1 year or less | 138,341 | (56) | 58 | 138,343 |
| Total | | 315,328 | (762) | 83 | 314,649 | | $ 217,141 | $ (69) | $ 77 | $ 217,149 |

| | December 31, 2021 | | | | | December 31, 2022 | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | Maturity (in years) | Amortized Cost | Unrealized Losses | Unrealized Gains | Estimated Fair Value | Maturity (in years) | Amortized Cost | Unrealized Losses | Unrealized Gains | Estimated Fair Value |
| Corporate debt securities | 1 year or less | 11,548 | ($ 9) | $ 7 | 11,466 | 1 year or less | $ 88,995 | $ (320) | $ 6 | $ 88,681 |
| Commercial paper | 1 year or less | 21,427 | — | — | 21,427 | 1 year or less | 65,532 | (123) | — | 65,409 |
| U.S. Government securities | 1 year or less | 44,602 | (68) | — | 44,534 | 1 year or less | 160,801 | (319) | 77 | 160,559 |
| Total | | 17,577 | (157) | 7 | 17,427 | | $ 315,328 | $ (762) | $ 83 | $ 314,649 |

The Company considers whether unrealized losses have resulted from a credit loss or other factors. The unrealized losses on the Company's available-for-sale securities as of December 31, 2022 December 31, 2023 and 2021 2022 were caused by fluctuations in market value and interest rates as a result of the economic environment and not credit risk. The Company concluded that an allowance for credit losses was unnecessary as of December 31, 2022 December 31, 2023 and 2021. 2022. It is neither management's intention to sell nor is it more likely than not that the Company will be required to sell these investments prior to recovery of their cost basis or recovery of fair value, except for investments totaling $27.0 million that were sold with a realized loss of $0.2 million in December 2022 and $67.6 million that were sold with a realized loss of $0.3 million in January 2023. The Company recorded this $0.3 million as an impairment loss for the year ended December 31, 2022. Unrealized gains and losses are included in accumulated other comprehensive loss. income (loss). Realized gains and losses on sales of available-for-sale investments are computed based upon specific identification of the initial cost adjusted for any other-than-temporary declines in fair value that were recorded in earnings.

The Company excludes accrued interest from both the fair value and the amortized cost basis of the available-for-sale debt securities for the purposes of identifying and measuring an impairment and to not measure an allowance for expected credit losses for accrued interest receivables. Accrued interest receivable is written off through net realized investment gains (losses) at the time the issuer of the bond defaults or is expected to default on payment. It is the Company's policy to present the accrued interest receivable balance as part of prepaid expenses and other current assets in the balance sheets. Accrued interest receivable related to short-term investments was $0.8 1.2 million and $1.0 0.8 million as of December 31, 2022 December 31, 2023 and 2021, 2022, respectively.

**5. Balance Sheet Components**

***Prepaid Expenses and Other Current Assets***

Prepaid expenses and other current assets are comprised of the following (in thousands):

| | December 31, | | December 31, | |
|---|---|---|---|---|
| | 2022 | 2021 | 2023 | 2022 |
| Prepaid expenses | $ 5,616 | $ 4,538 | $ 3,263 | $ 5,616 |
| Other current assets | 2,929 | 3,154 | 1,619 | 2,929 |
| Total prepaid expenses and other current assets | $ 8,545 | $ 7,692 | $ 4,882 | $ 8,545 |



***Property and Equipment, Net***

Property and equipment, net is comprised of the following (in thousands):

| | December 31, | | December 31, | |
|---|---|---|---|---|
| | 2022 | 2021 | 2023 | 2022 |
| Leasehold improvements | $ 4,402 | $ 3,462 | $ 66,618 | $ 4,402 |
| Furniture and fixtures | 645 | 544 | 745 | 645 |
| Research equipment | 12,900 | 9,633 | 14,298 | 12,900 |
| Computers and software | 130 | 130 | 404 | 130 |
| Construction-in-progress | 49,655 | 2,274 | 8,954 | 49,655 |
| Total property and equipment | 67,732 | 16,043 | | |
| Total property and equipment, gross | | | 91,019 | 67,732 |
| Less accumulated depreciation and amortization | (5,824) | (3,187) | (11,693) | (5,824) |
| Total property and equipment, net | $ 61,908 | $ 12,856 | $ 79,326 | $ 61,908 |

Depreciation and amortization expense were $2.6 5.9 million and $1.8 2.6 million for the years ended December 31, 2022 December 31, 2023 and 2021, 2022, respectively.



***Accrued and Other Current Liabilities***

Accrued and other current liabilities are comprised of the following (in thousands):

| | December 31, | | December 31, | |
|---|---|---|---|---|
| | 2022 | 2021 | 2023 | 2022 |
| Accrued compensation | $ 6,691 | $ 5,453 | $ 6,722 | $ 6,691 |
| Accrued research and development costs | 3,486 | 2,280 | 5,845 | 3,486 |
| Accrued property and equipment | 5,001 | 96 | 174 | 5,001 |
| Other accrued and current liabilities | 858 | 1,518 | 855 | 858 |

| | | | | |
|---|---|---|---|---|
| Total accrued and other liabilities | $ 16,036 | $ 9,347 | $ 13,596 | $ 16,036 |

**6. Leases**

The Company has operating leases for its current corporate offices, laboratory space, manufacturing facility, and dedicated space in a vivarium in South San Francisco, California, as well as for an additional facility in South San Francisco that the Company plans to use for corporate offices, laboratories and manufacturing.California.

The components of lease expense were as follows (in thousands):

| | Year Ended December 31, | | Year Ended December 31, | |
|---|---|---|---|---|
| | 2022 | 2021 | 2023 | 2022 |
| Operating lease expense | $ 11,220 | $ 2,581 | $ 10,900 | $ 11,220 |
| Variable lease expense (1) | 462 | 302 | 1,018 | 462 |
| Short-term lease expense | 45 | 92 | 18 | 45 |
| Total lease expense | $ 11,727 | $ 2,975 | $ 11,936 | $ 11,727 |

(1) Variable lease expense for the periods presented primarily included common area maintenance charges.

Supplemental information related to operating leases were as follows (in thousands):

| | Year Ended December 31, | | Year Ended December 31, | |
|---|---|---|---|---|
| | 2022 | 2021 | 2023 | 2022 |
| **Cash paid for amounts included in the measurement of lease liabilities** | | | | |
| Operating cash flows used for operating leases | $ 6,887 | $ 2,239 | $ 11,540 | $ 6,887 |

The weighted-average remaining lease term was 10.8 9.8 years for the corporate office and laboratory space leases as of December 31, 2022 December 31, 2023. The corporate office lease includes an option to renew for an additional seven years. However, the renewal option was not included in the lease term for calculating the lease liability, as the renewal option allows the Company to maintain operational flexibility, and the Company was not reasonably certain



that it would exercise the renewal option at the time of the lease commencement. The weighted-average discount rate was 9.8% as of December 31, 2022 December 31, 2023.

There were $59.5 none million and $18.7 0.4 million in right-of-use ROU assets obtained in exchange for operating lease liabilities resulting from new leases and from modifications of existing leases, respectively, for the year ended December 31, 2022 December 31, 2023.

Maturities of operating lease liabilities under existing operating leases as of December 31, 2022 December 31, 2023 were as follows (in thousands):

| Year ending December 31, | Amount | Amount |
|---|---|---|
| 2023 | $ 11,206 | |
| 2024 | 12,671 | $ 12,818 |
| 2025 | 13,033 | 13,027 |
| 2026 | 13,467 | 13,462 |
| 2027 | 13,917 | 13,912 |
| 2028 and thereafter | 87,290 | |
| 2028 | | 14,378 |
| 2029 and thereafter | | 72,876 |
| Total undiscounted future minimum lease payments | 151,584 | 140,473 |
| Less imputed interest | (60,813) | (52,134) |
| Less tenant improvement receivable | (7,837) | |
| Total operating lease liabilities | $ 82,934 | $ 88,339 |
| Operating lease liabilities: | | |
| Current | 4,249 | 6,069 |
| Non-current | 78,685 | 82,270 |
| Total lease liability | $ 82,934 | $ 88,339 |

In May 2018, the Company entered into a lease agreement for its corporate office and laboratory space located in South San Francisco, California with an expiration date in May 2025 (the "Initial Lease Agreement"). In April 2019, the Company executed the first amendment to the Initial Lease Agreement for additional corporate space, laboratory space and manufacturing capabilities and an extension to the lease term through April 2026.

In May 2020, the Company signed a second amendment to the Initial Lease Agreement. The amended lease provides for an eight-year non-cancelable lease of additional office and laboratory space in the same building. The lease amendment for additional office and laboratory space provided for abatement of rent during the first three months of the lease and contains rent escalations during the term of the lease. The lease for this additional space commenced in January 2021 and expires in January 2029. The lease amendment also includes an extension of the lease term for the existing office and laboratory space beginning on May 1, 2020 and expiring in January 2029. The amendment to the Initial Lease Agreement also includes an option to extend the lease for an additional seven-year term.

In January 2021, the Company signed a third amendment to the Initial Lease Agreement which provides for the lease of additional space in the same building. The lease amendment for this additional space commenced in April 2021 and expires in March 2024.

In October 2021, the Company signed a fourth amendment to the Initial Lease Agreement which provides for the lease of additional space in the same building. The lease for additional office and laboratory space provides for abatement of rent during the first two months of the lease and contains rent escalations during the term of the lease. The lease amendment of this additional space commenced in April 2022 and expires in January 2029. The lease amendment also includes this additional space in the Company’s option to extend the amended Initial Lease Agreement for an additional seven-year term. The other terms of the Initial Lease Agreement, as amended, remain unchanged.

In July 2021, the Company entered into a lease agreement for corporate office, manufacturing and laboratory space located in South San Francisco, California with an expiration date approximately twelve years after the lease's legal commencement date (the "Additional Lease Agreement"). The lease for this additional space and the



Company's obligation to pay rent commenced in January 2022. In addition to base rent, the Company is responsible for payment of direct expenses, which include operating, insurance and tax expenses. The lease also provides for certain tenant improvement allowances ("TIA") of up to approximately $25.2 million for tenant improvements and certain infrastructure upgrades in connection with the initial buildout of the premises, approximately $4.4 million ("Optional TIA") of which, if utilized, would need to be repaid by the Company over the lease term. In 2021, the Company delivered a security deposit in the form of a letter of credit of $1.6 million to the Landlord in connection with the Additional Lease Agreement.

In November 2021, the Company entered into an amendment to the Additional Lease Agreement. The lease amendment expressly includes manufacturing as a permitted use at the facility, clarifies that Silicon Valley Bank ("SVB") is an acceptable bank for purposes of issuing a letter of credit under the lease, revises the letter of credit transferability terms and replaces the form of letter of credit attached to the lease.

In August 2022, the Company entered into fifth amendment to the Initial Lease Agreement and a second amendment to the Additional Lease Agreement for its existing facilities in South San Francisco, California. The fifth amendment to the Initial Lease Agreement includes an extension of the lease term for certain of the Company's existing facilities through July 31, 2030. The second amendment to the Additional Lease Agreement provides for approximately $15.0 million of additional tenant improvement allowances, in addition to the tenant improvement allowances of $25.2 million included in the original Additional Lease Agreement, and increases the base rent payments over the existing term of the lease.

In March 2023, the Company held $2.7 million in collateral money market accounts supporting letters of credit issued by SVB to the landlord in connection with the Initial Lease Agreement and Additional Lease Agreement. In April 2023, the Company replaced the $2.7 million in letters of credit issued by SVB with letters of credit in the same amount from a different financial institution, and the Company entered into a third amendment to the Additional Lease Agreement. The lease amendment clarifies the form of letter of credit.

In June 2023, the Company entered into a fourth amendment to the Additional Lease Agreement. The lease amendment confirms that the Company utilized the $4.4 million Optional TIA and began repaying the Optional TIA in July 2023. The other terms of the Additional Lease Agreement, as amended, remain unchanged.

The Company tests long-lived assets for recoverability whenever events or changes in circumstances suggest that the carrying value of an asset or group of assets may not be recoverable. Beginning in the second quarter of 2023, the Company started to market for sublease portions of the Company's leased corporate office space in South San Francisco. As a result of these plans, the Company reviewed these spaces for impairment. As part of the impairment evaluation of the spaces being marketed for sublease, the Company compared the estimated undiscounted income for the marketed sublease spaces to the net book value of the related long-term assets, which include ROU assets and certain property, plant and equipment, primarily for leasehold improvements (collectively, "Sublease Asset Group"). The Company estimated potential sublease income using market participant assumptions, which the Company evaluated based on current real estate trends and market conditions. For the Sublease Asset Group, the Company determined that the respective ROU assets had net carrying values that exceeded their estimated undiscounted future cash flows. Accordingly, the Company then estimated the fair value of the Sublease Asset Group based on its discounted cash flows using the estimated borrowing rate of a market participant subtenant which we estimated to be 8%. The carrying value of the Sublease Asset Group exceeded its fair values and, as a result, the Company recorded an ROU asset impairment of $4.1 million for the year ended December 31, 2023. The impairment is recorded within general and administrative expenses in the statements of operations and comprehensive loss.

**7. Commitments and Contingencies**

***Guarantee Agreement***

The Company has agreements whereby it 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 term of the indemnification period is for the officer's or director's lifetime. The maximum potential amount of future payments the Company could be required to make under these indemnification agreements is unlimited; however, the Company has a director and officer insurance policy that limits its exposure and enables the Company to recover a portion of any future amounts under certain circumstances and subject to deductibles and exclusions. The Company had no liabilities recorded for these agreements as of December 31, 2022 December 31, 2023 and 2021. 2022.



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***Letters of Credit***

The Company has $2.7 million in letter of credit agreements with a financial institution that are used as collateral for the Company's corporate headquarters' operating lease and the additional facility in South San Francisco that the Company plans to use for corporate offices, laboratories and manufacturing. leases. The letters of credit automatically renew annually without amendment unless cancelled by the financial institutions within 30 to 60 days of the annual expiration date. The letters of credit are presented as restricted cash in the balance sheet.

***Purchase Commitments***

The Company enters into contracts in the normal course of business for clinical trials, preclinical studies, manufacturing and other services and products for operating purposes. These contracts generally provide for termination following a certain period after notice and therefore the Company believes that non-cancelable obligations under these agreements are not material.

**8. Collaboration and License Agreements**

**CRISPR Collaboration Agreement**

On May 5, 2021, the Company entered into the CRISPR Agreement with CRISPR to co-develop and co-commercialize an engineered allogeneic, off-the-shelf CAR NK product candidate targeting the CD70 tumor antigen and an allogeneic, off-the-shelf product candidate that comprises both engineered NK cells and engineered T cells. In May 2022,

the CRISPR Agreement was amended to revise the transfer of materials and nomination provisions. In March 2023, the CRISPR Agreement was further amended to permit Nkarta's advancement of CRISPR-licensed product candidates targeting a second novel NK plus T cell product candidate. specified tumor antigen (the "Specified TA") and incorporate associated development and regulatory approval milestones and sales based royalties. In addition, the Company has received licenses from CRISPR for three four CRISPR-Cas9 gene editing targets and will receive a license from CRISPR for up to two one more CRISPR-Cas9 gene editing targets target that can be engineered into an unlimited number of its own NK cell products. CRISPR also has an option to co-develop and co-commercialize a future CAR NK program.

Under the terms of the CRISPR Agreement, the Company and CRISPR share equally in all research and development costs and potential profits worldwide related to the NKX070 product candidate, NK+T product candidate, and the potential future CAR NK program. For the NK+T program, CRISPR is responsible for gene-editing activities and T cell related activities, and Nkarta is responsible for NK cell related activities. The related impact of the cost sharing associated with the research and development activities is included in research and



development expense on the condensed statements of operations. operations and comprehensive loss. Expenses related to services performed by the Company are classified as research and development expense. Payments received from CRISPR for partial reimbursement of expenses are recorded as a reduction of research and development expense. Reduction of research and development expense resulting from partial reimbursement from CRISPR was $4.2 1.6 million and $2.3 4.2 million for the years ended December 31, 2022 December 31, 2023 and 2021, 2022, respectively. As of December 31, 2022, December 31, 2023 and 2022, the Company had a $0.2 million receivable and $1.3 million receivable, respectively, under the research cost sharing provision, which is included as part of prepaid expenses and other current assets in the condensed balance sheet.

For each each non-collaboration product candidate incorporating a genome editing target licensed from CRISPR (a "CRISPR-licensed product candidate" "CRISPR-Licensed Product Candidate"), other than those targeting the CompanySpecified TA, the Company would retain worldwide rights and may be required to make potential future payments based on the achievement of development and regulatory approval milestonestotaling less than mid-twenty million dollarsfor each CRISPR-licensed product candidate, , as well as tiered royalties up to the mid-single digits on net product sales of such product. Further, for product candidate. For each CRISPR-licensed product candidate CRISPR-Licensed Product Candidate targeting a specified tumor antigen, the Specified TA, the Company would retain worldwide rights and may be required to make potential future payments based on the achievement of development and regulatory approval milestones totaling less than high-forty million dollars,for each CRISPR-licensed product candidate targeting the specified tumor antigen, as well as tiered royalties up to the mid-single digits on net product sales of such product. product candidate. As of December 31, 2022 December 31, 2023, the Company has not paid any amounts nor are any amounts owed by the Company under the CRISPR Agreement, and no milestones have been achieved.

**MaxCyte License Agreement**

On October 26, 2021, the Company entered into a license agreement (the "MaxCyte Agreement") with MaxCyte, Inc. ("MaxCyte") to obtain non-exclusive clinical and commercial rights to use MaxCyte's cell loading technology to develop and commercialize in up to ten licensed products.

In connection with the MaxCyte Agreement, the Company must pay to MaxCyte annual research license fees and commercialization license fees, ranging from $0.1 million to $0.3 million, for each instrument licensed by the Company. Further, the Company could be required to make milestone payments to MaxCyte upon completion of certain regulatory and commercial milestones related to the clinical development and commercialization of certain of the Company's licensed products. The aggregate potential milestone payments range from $10 million to $13 million per licensed product. Additionally, the Company may be required to make net sales milestone payments totaling between $61.9 million to $116.8 million per licensed product. As of December 31, 2022 December 31, 2023, no milestones have been achieved.

**University of Singapore and St. Jude Children's License Agreement**

In August 2016, the National University of Singapore ("NUS") and St. Jude Children's Research Hospital ("St. Jude") and the Company entered into a license agreement under which NUS and St. Jude (the "Licensors") granted the Company an exclusive, royalty-bearing, worldwide license to its patent rights related to a method for expanding natural killer cells; a chimeric receptor with NKG2D specificity; and a method for supporting autonomous natural killer cell function ("NUS and St. Jude License Agreement"). The NUS and St. Jude License Agreement provides the Company with the rights to grant and authorize sublicenses to make, have made, use, sell, offer for sale and import products and otherwise exploit the patent rights.

As consideration for the license, the Company made an upfront payment of $31,800 and issued NUS 250,000 shares of the Company's common stock. The Company determined that the upfront payment (SGD 42,750) and value of the common stock issued ($2,500 based on fair value at time of issuance) as part of the license agreement would be expensed upon execution of the contract as the license was acquired for research and development purposes which does not have alternative future uses, and the underlying technology has not reached technological feasibility, hence the Company expensed these costs during 2016.

In addition, the Company is required to pay an annual license maintenance fee of SGD 25,000, increasing to SGD 50,000 after year two of the agreement. Further, the Company could be required to make milestone payments to the Licensors upon completion of certain regulatory and commercial milestones related to the clinical development and commercialization of certain of the Company's product candidates. The aggregate potential

milestone payments are approximately SGD 5 million. The Company has also agreed to pay the Licensors royalties of 2.5% of net sales of products sold by the Company or through a sublicense. Additionally, the Company agreed to pay the Licensors a tiered percentage of sublicensing income (ranging from 7.5% to 20%) based on the timing of capital raised and stage of clinical trials. The NUS and St. Jude License Agreement also includes certain performance objectives which obligate the Company to meet various milestones related to the clinical development and commercialization of certain of the Company's product candidates over time for up to 120 months after the effective date of the NUS and St. Jude License Agreement.

The Company recorded $37,000 license maintenance fees included as part of research and development expenses for each of the years ended December 31, 2022 December 31, 2023 and 2021. 2022.

**9. Employee Benefits**

On January 1, 2018, the Company adopted a defined contribution 401(k) plan that is available to eligible employees. Under the terms of the plan, employees may make voluntary contributions as a percent of compensation, limited to the maximum amount allowable under federal tax regulations. As part of the plan, the Company elected to make non-matching contributions via mandatory 3% of compensation safe harbor nonelective contributions. The Company recognized $0.8 1.0 million and $0.6 0.8 million for expense related to the nonelective 401(k) contributions for the years ended December 31, 2022 December 31, 2023 and 2021, 2022, respectively.



**10. Stockholders' Equity**

Under the Amended and Restated Certificate of Incorporation dated July 14, 2020, the Company had a total of 100,000,000 authorized shares of common stock with a par value of $0.0001 per share and 54,350,179 authorized shares of preferred stock with a par value of $0.0001 per share.

***Common Stock***

On August 12, 2021, the Company filed a Registration Statement on Form S-3 (the "Shelf "2021 Shelf Registration Statement"), covering the offer and sale from time to time, pursuant to Rule 415 of the Securities Act of 1933, as amended (the "Securities Act"), of up to $500.0 million in aggregate offering price of shares of the Company's common stock, shares of the Company's preferred stock, debt securities, warrants, and rights and units. The 2021 Shelf Registration Statement was declared effective by the Securities and Exchange Commission (the "SEC") on September 2, 2021. The Shelf Registration Statement and included a prospectus covering the offer and sale from time to time of up to $150.0 million in aggregate offering price of shares of the Company's common stock through an "at-the-market" equity offering program (the "ATM Offering Program") with Cowen and Company, LLC, as sales agent. As of December 31, 2022, the Company has issued and sold 113,213 shares of its common stock pursuant to the ATM Offering Program, resulting in net proceeds of approximately $1.6 million, after deducting offering expenses.

On April 28, 2022, the Company issued and sold 15,333,334 shares of its common stock in an underwritten public offering, including 2,000,000 shares associated with the full exercise of the underwriters' option to purchase additional shares, at a price to the public of $15.00 per share. The total net proceeds to the Company from the offering were approximately $215.3 million, after deducting underwriting discounts and commissions and offering expenses. The shares were issued pursuant to the Company's 2021 Shelf Registration Statement.

On March 17, 2023, the Company filed the Registration Statement on Form S-3, as amended by the Form S-3/A filed on April 24, 2023 (the "2023 Shelf Registration Statement"), covering the offer and sale from time to time, pursuant to Rule 415 of the Securities Act, of up to $350.0 million in aggregate offering price of shares of the Company's common stock, shares of the Company's preferred stock, debt securities, warrants, rights and/or units (including up to $120.0 million in aggregate offering price of shares of its common stock, shares of its preferred stock, debt securities, warrants, rights and/or units registered on the 2021 Registration Statement that have not yet been sold). The 2023 Shelf Registration Statement was declared effective by the SEC on May 5, 2023.

**11. Share-Based Compensation**

***Equity Incentive Plan***

***2015 Equity Incentive Plan***

The Company granted options under its 2015 Equity Incentive Plan (the "2015 Plan"). The 2015 Plan allowed for the grant of incentive stock options, non-statutory stock options, stock appreciation rights, restricted stock unit



awards and other stock awards, although only stock options were awarded under the 2015 Plan. Awards could be made to officers, directors, employees, non-employee directors, and consultants of the Company. In connection with the Board of Directors' and stockholders' approval of the 2020 Plan, the 2015 Plan was terminated as to future awards and any options then outstanding under the 2015 Plan remained outstanding and effective. As of December 31, 2022 December 31, 2023,

there were an aggregate of 1,344,048 1,177,232 shares of common stock issuable upon the exercise of outstanding options issued under the 2015 Plan.

***2020 Performance Incentive Plan***

The Company's 2020 Performance Incentive Plan (the "2020 Plan") which was adopted by the Company's board of directors in June 2020 and approved by the Company's stockholders in July 2020, became effective upon the consummation of the IPO in July 2020. The 2020 Plan allows for the grant of incentive stock options, non-qualified stock options, stock appreciation rights, stock bonuses, restricted stock, stock units and other forms of awards including cash awards to its officers, directors, employees, consultants and advisors.



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As of December 31, 2022 December 31, 2023, a total of 5,945,002 8,388,917 shares of the Company's common stock were authorized for issuance with respect to awards granted under the 2020 Plan (this number of shares gives effect to the annual increases in the 2020 Plan share limit, as described in the next sentence). The share limit will automatically increase on the first trading day in January of each year by an amount equal to the lesser of (1) 5% of the total number of outstanding shares of the Company's common stock on the last trading day in December in the prior year, or (2) such lesser number as determined by the Company's board of directors. Any shares subject to awards granted under the 2020 Plan or the 2015 Plan that are not paid, delivered or exercised before they expire or are canceled or terminated, or otherwise fail to vest, as well as shares used to pay the purchase or exercise price of such awards or related tax withholding obligations, will become available for new award grants under the 2020 Plan. A total of 1,775,102 2,645,312 shares was available for issuance under the 2020 Plan as of December 31, 2022 December 31, 2023.

The following table summarizes the stock option activity during the year ended December 31, 2022 December 31, 2023 (in thousands, except number of shares, exercise prices and contractual term):

| | Number of shares | Weighted-average exercise price | Weighted-average remaining contractual term (in years) | Aggregate Intrinsic Value | Number of shares | Weighted-average exercise price | Weighted-average remaining contractual term (in years) | Aggregate Intrinsic Value |
|---|---|---|---|---|---|---|---|---|
| Outstanding at December 31, 2021 | 4,204,686 | $ 19.19 | 8.2 | | | | | |
| Outstanding at December 31, 2022 | | | | | 5,519,275 | $ 17.17 | 8.1 | $ 2,915 |
| Granted | 2,327,820 | 12.61 | | | 2,412,028 | 4.39 | | |
| Exercised | (383,120) | 3.62 | | | (49,871) | 3.22 | | |
| Forfeited | (630,111) | 21.99 | | | (1,164,906) | 15.44 | | |
| Outstanding at December 31, 2022 | 5,519,275 | $ 17.17 | 8.1 | $ 2,915 | | | | |
| Exercisable at December 31, 2022 | 2,337,753 | $ 17.49 | 7.4 | $ 1,957 | | | | |
| Vested and expected to vest at December 31, 2022 | 5,519,275 | $ 17.17 | 8.1 | $ 2,915 | | | | |
| Outstanding at December 31, 2023 | | | | | 6,716,526 | $ 12.99 | 7.5 | $ 8,279 |
| Exercisable at December 31, 2023 | | | | | 3,550,191 | $ 16.20 | 6.4 | $ 3,361 |

| | | | | |
|---|---|---|---|---|
| Vested and expected to vest at December 31, 2023 | 6,716,526 | $ 12.99 | 7.5 | $ 8,279 |

The aggregate intrinsic value represents the difference between the exercise price of stock options and the quoted closing market price of the Company's common stock on the applicable date for all in-the-money stock options.

Additional information related to the Company's stock options is summarized below (in thousands, except per share amounts):

| | Year Ended December 31, | |
|---|---|---|
| | 2022 | 2021 |
| Weighted-average grant-date fair value of stock option grants per share | $ 8.60 | $ 30.87 |
| Intrinsic value of options exercised | $ 4,268 | $ 9,991 |

| | Year Ended December 31, | |
|---|---|---|
| | 2023 | 2022 |
| Weighted-average grant-date fair value of stock option grants per share | $ 3.36 | $ 8.60 |
| Intrinsic value of options exercised | $ 39 | $ 4,268 |

The following table summarizes the restricted stock unit activity during the year ended December 31, 2022 December 31, 2023:



| | Number of shares | Weighted-average grant date fair value per share | Weighted-average remaining contractual term (in years) | Number of shares | Weighted-average grant date fair value per share | Weighted-average remaining contractual term (in years) |
|---|---|---|---|---|---|---|
| Outstanding at December 31, 2021 | — | $ — | | | | |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Outstanding at December 31, 2022 | | | | 356,728 | $ | 12.66 | 1.7 |
| Granted | 389,388 | 12.62 | | 503,639 | | 5.57 | |
| Forfeited | (32,660) | 12.15 | | (177,056) | | 7.62 | |
| Vested | — | — | | (88,543) | | 12.66 | |
| Outstanding at December 31, 2022 | 356,728 | $ 12.66 | 1.7 | | | | |
| Outstanding at December 31, 2023 | | | | 594,768 | $ | 8.16 | 1.4 |

The weighted-average grant-date fair values of restricted stock units granted during the years ended December 31, 2023 and 2022 were $5.57 and $12.62, respectively. The fair value of restricted stock units that vested in the



year ended December 31, 2023 totaled $0.4 million. There were no RSUs that vested in the year ended December 31, 2022.

***Employee Stock Purchase Plan***

The Company's 2020 Employee Stock Purchase Plan (the "ESPP"), which was adopted by the Company's board of directors in June 2020 and approved by the Company's stockholders in July 2020, became effective upon the consummation of the IPO. A total of 952,524 shares of the Company's common stock were authorized for issuance under the ESPP. The ESPP allows eligible employees to purchase shares of the Company's common stock at a discount through payroll deductions of up to 15% of their eligible compensation, subject to any plan limitations. The ESPP provides for six-month offering periods, and at the end of each offering period, employees are able to purchase shares at 85% of the lower of the fair market value of the Company's common stock on the first trading day of the offering period or on the last trading day of the offering period. During 2023 and 2022,164,567 and 61,754 shares were issued under the ESPP resulting in aggregate cash proceeds of $0.5 million and $0.4 million. There were no ESPP purchases in 2021. million, respectively. As of December 31, 2022 December 31, 2023, 890,770 1,214,986 shares remained available for issuance under the ESPP (after giving effect to share purchases made under the ESPP through and including the ESPP offering period that ended on November 30, 2022 November 30, 2023).

***Liability for Early Exercise of Restricted Stock Options***

Certain individuals were granted the ability to early exercise their stock options. The shares of common stock issued from the early exercise of unvested stock options are restricted and continue to vest in accordance with the original vesting schedule. The Company has the option to repurchase any unvested shares at the original purchase price upon any voluntary or involuntary termination. The shares purchased by the employees and non-employees pursuant to the early exercise of stock options are not deemed, for accounting purposes, to be outstanding until those shares vest. The cash received in exchange for exercised and unvested shares related to stock options granted is recorded as a liability for the early exercise of stock options on the accompanying balance sheets and will be transferred into common stock and additional paid-in capital as the shares vest. Shares subject to repurchase by the Company were 508 shares and 16,181 shares, as of December 31, 2022 and 2021, respectively, and in each case the related liability recorded under other accrued and other current liabilities in the condensed balance sheets was insignificant.

***Common Stock Reserved for Future Issuance***

As of December 31, 2022 December 31, 2023, the Company had reserved the following shares of common stock for future issuance:

| | December 31, | |
|---|---|---|
| | 2022 | 2023 |
| Common stock options and restricted stock units granted and outstanding | 5,876,003 | 7,311,294 |
| Reserved for future equity award grants | 1,775,102 | 2,645,312 |
| Reserved for future ESPP issuances | 890,770 | 1,214,986 |
| | 8,541,875 | 11,171,592 |



***Share-Based Compensation Expense***

Share-based compensation expense for the years ended December 31, 2022 December 31, 2023 and 2021 2022 were as follows (in thousands):

| | Year Ended December 31, | | Year Ended December 31, | |
|---|---|---|---|---|
| | 2022 | 2021 | 2023 | 2022 |
| Research and development | $ 7,326 | $ 6,719 | $ 8,025 | $ 7,326 |

| | | | | |
|---|---|---|---|---|
| General and administrative | 9,530 | 7,742 | 9,174 | 9,530 |
| Total share-based compensation expense | $ 16,856 | $ 14,461 | $ 17,199 | $ 16,856 |

The total unrecognized compensation cost related to stock options was $34.2 19.5 million, which is expected to be recognized over a weighted-average remaining service period of 2.5 2.6 years as of December 31, 2022 December 31, 2023. The total unrecognized compensation cost related to restricted stock units was $3.7 million, which is expected to be recognized over a weighted-average remaining service period of 3.2 2.8 years as of December 31, 2022 December 31, 2023. As of December 31, 2022, there was $

0.1 134

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million of unrecognized compensation cost related to ESPP, which is expected to be recognized over a weighted-average remaining service period of .4 years.

***Fair Value Disclosures***

The fair value of stock options was estimated on the date of grant using the quoted market price for the Company's common stock on the applicable grant date and the Black-Scholes option pricing model with the following range of assumptions:

| | Year Ended December 31, | | Year Ended December 31, | |
|---|---|---|---|---|
| | 2022 | 2021 | 2023 | 2022 |
| ***Options*** | | | | |
| Common stock fair value | $5.99 - $18.44 | $15.35 - $54.89 | | |
| Risk-free interest rate | 1.6% - 4.2% | 0.6% - 1.4% | 3.5% - 4.9% | 1.6% - 4.2% |
| Expected volatility | 75.7% - 78.9% | 77.3% - 79.9% | 90.0% - 101.8% | 75.7% - 78.9% |
| Expected term (in years) | 5.5 - 6.1 | 5.5 - 6.1 | 5.5 - 6.1 | 5.5 - 6.1 |
| Expected dividend yield | — | — | — | — |
| ***ESPP*** | | | | |
| Risk-free interest rate | 1.6% - 4.7% | — | 4.7% - 5.4% | 1.6% - 4.7% |
| Expected volatility | 63.8% - 151.9% | — | 63.8% - 152.7% | 63.8% - 151.9% |
| Expected term (in years) | 0.5 | — | 0.5 | 0.5 |
| Expected dividend yield | — | — | — | — |

The Company recognizes compensation costs related to stock options granted to employees and nonemployees based on the estimated fair value of the awards on the date of grant, net of forfeitures. The Company generally recognizes grant-date fair value of stock options granted to employees and non-employee service providers on a straight-line basis over the requisite service period, which is generally the vesting term of the respective awards. The Company determines the fair value of stock options with a service and performance condition, or performance-based options based on the fair value of the Company's common stock on the date of grant. as described above. The Company accounts for the impact of forfeitures as they occur. For purposes of calculating share-based compensation, the Company estimates the fair value of stock options issued using a Black-Scholes option-pricing model. The determination of the fair value of share-based payment awards utilizing the Black-Scholes option-pricing model is affected by the Company's stock price and a number of assumptions, including expected volatility, expected life, risk-free interest rate and expected dividends.

*Expected term.* The Company opted to use the "simplified method" for estimating the expected term of employee options, whereby the expected term equals the average of the vesting term and the original contractual term of the option (generally 10 years). The expected term of the employee stock purchase plan rights equals the six-month look-back period.

*Expected volatility.* Due to the Company's limited operating history and a lack of company specific historical and implied volatility data, since inception and prior to 2023, the Company based its estimate of expected volatility on an average of the historical volatilities of the common stock of comparable publicly traded biopharmaceutical companies over a period equal to the expected term



of the stock option grants. For the grants during 2023, the expected volatility was determined by using a blended approach of the Company's historical stock price volatility and the historical stock price volatility for a select group of other publicly traded companies in the same industry. The comparable companies were chosen based on their similar size, stage in the life cycle, and financial leverage to the Company.

*Risk-free interest rate.* The risk-free rate assumption is based on the U.S. Treasury instruments with maturities similar to the expected term of the stock options.

*Expected dividend yield.* The Company has not issued any dividends and do not expect to issue dividends over the life of the options, as a result the estimated dividend yield is zero.

**12. Income Taxes**

Due to the Company's net losses for the years ended December 31, 2022 December 31, 2023 and 2021, 2022, and since the Company has a full valuation allowance against deferred tax assets, there was no tax provision or benefit for income taxes recorded in the years presented other than minimum amounts required for state tax purposes.

A reconciliation on income taxes to the amount computed by applying the statutory federal income tax rate to the net loss is summarized as follows (in thousands):

| | Year Ended December 31, | | Year Ended December 31, | |
|---|---|---|---|---|
| | 2022 | 2021 | 2023 | 2022 |
| Income tax benefit at statutory rates | $ (23,906) | $ (18,076) | $ (24,675) | $ (23,906) |
| State income tax, net of federal benefit | (1,566) | (1,005) | (1,438) | (1,566) |
| Permanent items | 1,891 | 592 | 1,656 | 1,891 |
| Research and development credits | (3,426) | (1,661) | (6,170) | (3,426) |
| Other | — | (515) | | |
| Change in valuation allowance | 27,007 | 20,665 | 30,627 | 27,007 |
| Income tax expense | $ — | $ — | $ — | $ — |

Significant components of the Company's deferred tax assets are shown below (in thousands):

| | December 31, | | December 31, | |
|---|---|---|---|---|
| | 2022 | 2021 | 2023 | 2022 |
| Deferred tax assets: | | | | |
| Net operating loss carry forwards | $ 36,732 | $ 33,767 | $ 43,491 | $ 36,732 |
| Depreciation and amortization | 316 | 268 | 334 | 316 |
| Research and development credits | 11,999 | 6,984 | 19,782 | 11,999 |
| Share-based compensation | 3,552 | 2,245 | 4,668 | 3,552 |
| Accrued expenses | 1,367 | 1,189 | 1,402 | 1,367 |
| Lease liability | 19,062 | 2,616 | 18,551 | 19,062 |
| Other, net | 35 | 34 | 49 | 35 |
| Section 174 Capitalized R&D | 17,352 | — | 30,147 | 17,352 |
| Total deferred tax assets | 90,415 | 47,103 | 118,424 | 90,415 |
| Valuation allowance for deferred tax assets | (71,368) | (44,361) | (102,169) | (71,368) |

| | | | | |
|---|---|---|---|---|
| Deferred tax assets, net of valuation allowance | 19,047 | 2,742 | 16,255 | 19,047 |
| Deferred tax liabilities: | | | | |
| Right-of-use asset | (18,089) | (2,471) | | |
| ROU asset | | | (8,404) | (18,089) |
| Depreciation and amortization | (958) | (271) | (7,851) | (958) |
| Net deferred tax assets | $ — | $ — | $ — | $ — |

The Company has a net operating loss and has provided a valuation allowance against net deferred tax assets due to uncertainties regarding the Company's ability to realize these assets. The valuation allowance increased by $27.0 30.6 million and $20.7 27.0 million as of December 31, 2022 December 31, 2023 and 2021, 2022, respectively.

In assessing the realizability of deferred tax assets, the Company considers whether it is more likely than not that some portion or all of the deferred tax assets will not be realized. The ultimate realization of deferred tax assets is dependent upon the generation of future taxable income during the periods in which the temporary differences



representing net future deductible amounts become deductible. Due to the Company's history of losses, and lack of other positive evidence, the Company has determined that it is more likely than not that its net deferred tax assets will not be realized, and therefore, the net deferred tax assets are substantially offset by a valuation allowance at December 31, 2022 as of December 31, 2023 and 2021. 2022. The deferred tax assets were primarily comprised of federal and state tax net operating losses and tax credit carryforwards.

As of December 31, 2022 December 31, 2023, the Company had net operating loss ("NOL") carryforwards of approximately $153.3 185.5 million and $65.1 million, available to reduce future taxable income, if any, for federal and California state income tax purposes, respectively. Of the $153.3 185.5 million federal NOL carryforwards, $0.2 million, $1.7 million, and $3.0 1.3 million will begin expiring in 2035, 2036, and 2036 2037, respectively, if not utilized, while $150.1 182.2 million can be carried forward indefinitely. The state NOL carryforwards will begin expiring in 2036, if not utilized.

The Company also had federal and state research and development credit carry forwards of approximately $9.9 17.4 million and $5.6 7.4 million, respectively, at December 31, 2022 as of December 31, 2023. The federal credits will begin expiring in 2035 if not utilized. The California credits have no expiration date.

Utilization of the NOL and research and development credit carryforwards may be subject to a substantial annual limitation due to ownership change limitations that may have occurred or that could occur in the future, as required by Section 382 of the Internal Revenue Code of 1986, as amended (the "Code"), as well as similar state provisions. The future utilization of the Company's NOL and tax credit carryforwards to offset future taxable income may be subject to a substantial annual limitation as a result of changes in ownership by stockholders that hold 5% or more of the Company's common stock. An assessment of such ownership changes under Section 382 was not completed through December 31, 2019. To the extent that an assessment is completed in the future, the Company's ability to utilize tax attributes could be restricted on a year-by-year basis and certain attributes could expire before they are utilized. The Company will examine the impact of any potential ownership changes in the future.

The Company has not been audited by the Internal Revenue Service or any state income or franchise tax agency. As of December 31, 2022 December 31, 2023, its federal and state returns for the years ended 2015 through the current period are still open to examination. In addition, all of the net operating losses and research and development credit carryforwards that may be used in future years are still subject to inquiry given that the statute of limitation for these items would begin in the year of the utilization. The balance of gross unrecognized tax benefits as of December 31, 2022 December 31, 2023 and 2021 2022 was approximately $2.3 3.7 million and $1.4 2.3 million, respectively, all of which would affect the Company's income tax expense if recognized, before consideration of the Company's valuation allowance. The Company does not expect its unrecognized tax benefits to change significantly over the next 12 months. The Company recognizes interest and penalties accrued on any unrecognized tax benefits as a component of income tax expense. There was no interest and penalties for the years ended December 31, 2022 December 31, 2023 and 2021. 2022. The Company files income tax returns in the United States federal jurisdiction and the State of California various state jurisdictions and is not currently under examination by any taxing authority for any open tax year. Due to net operating loss carryforwards, all years remain open for income tax examination. 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 IRS or state tax authorities to the extent utilized in a future period. No federal or state tax audits are currently in process.

The following table summarizes the changes in the Company's gross unrecognized tax benefits (in thousands):

| | December 31, | | December 31, | |
|---|---|---|---|---|
| | 2022 | 2021 | 2023 | 2022 |
| Balance at the beginning of the year | 1,35 $ 9 | $ 777 | $ 2,339 | $ 1,359 |
| Increases (decreases) related to tax positions taken in prior years | (43) | (281) | 102 | (43) |
| Increases related to tax positions taken in current year | 1,02 3 | 863 | 1,297 | 1,023 |

| | | | | |
|---|---|---|---|---|
| Balance at the end of the year | 2,33<br>$ 9 | 1,35<br>$ 9 | $ 3,738 | $ 2,339 |



**13. Subsequent Events Reduction in Force**

On March 10, 2023, Silicon Valley Bank ("SVB") in the United States was closed by the California Department of Financial Protection and Innovation, which appointed the Federal Deposit Insurance Corporation ("FDIC") as receiver. On March 12, 2023October 16, 2023, the U.S. Department Company committed to cost saving measures, including a reduction in force (the "Reduction") that resulted in a reduction of 18 positions, representing approximately 10% of the Treasury, Federal Reserve, Company's workforce. The Company undertook the Reduction to decrease its costs and FDIC jointly announced that create a more streamlined organization to support its operations through multiple clinical data updates.

In connection with the FDIC will complete its resolution of SVB in a manner that fully protects all depositors. As of March 10, 2023, we held Reduction, the Company incurred $2.7 1.2 million in collateral money market accounts supporting letters costs, consisting primarily of credit issued by SVB to cash severance costs and transition support services for impacted employees, which the Landlord Company recognized in connection with the Initial Lease Agreement fourth quarter of 2023 in general and Additional Lease Agreement. We are working with administrative operating expenses in the Landlord to replace the letters statement of credit issued by SVB with letters operations. As of credit from a different financial institution. December 31, 2023, $0.8 million was paid out and $0.4 million was recorded under other accrued and other current liabilities.





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

None.

**Item 9A. Controls and Procedures.**

**Evaluation of Disclosure Controls and Procedures**

We maintain “disclosure controls and procedures,” as defined in Rules 13a-15(e) and 15d-15(e) under the Exchange Act, that are designed to provide reasonable assurance that information required to be disclosed by a company in the reports that it files or submits under the Exchange Act is recorded, processed, summarized and reported within the time periods specified in the SEC’s rules and forms and is accumulated and communicated to our management, including our Chief Executive Officer and Chief Financial Officer, as appropriate to allow timely decisions regarding required disclosure. Disclosure controls and procedures include, without limitation, controls and procedures designed to ensure that information required to be disclosed by a company in the reports that it files or submits under the Exchange Act is accumulated and communicated to the company’s management, including its principal executive and principal financial officers, as appropriate to allow timely decisions regarding required disclosure.

Our management, with the participation of our Chief Executive Officer and Chief Financial and Business Officer, evaluated the effectiveness of our disclosure controls and procedures as of December 31, 2022 December 31, 2023. Based on this evaluation, our Chief Executive Officer and Chief Financial and Business Officer concluded that, as of December 31, 2022 December 31, 2023, our disclosure controls and procedures were effective at the reasonable assurance level.

**Management’s Report on Internal Control Over Financial Reporting**

Our management is responsible for establishing and maintaining adequate internal control over financial reporting (as defined in Rules 13a-15(f) and 15d-15(f) of the Exchange Act) to provide reasonable assurance regarding the reliability of our financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles. Internal control over financial reporting includes those policies and procedures that (i) pertain to the maintenance of records that in reasonable detail accurately and fairly reflect the transactions and dispositions of our assets; (ii) provide reasonable assurance that the transactions are recorded as necessary to permit preparation of financial statements in accordance with generally accepted accounting principles, and that our receipts and expenditures are being made only in accordance with authorizations of our management and our directors; and (iii) provide reasonable assurance regarding prevention or timely detection of unauthorized acquisition, use or disposition of our assets that could have a material effect on the financial statements.

We carried out an evaluation, under the supervision and with the participation of our management, including our Chief Executive Officer and Chief Financial and Business Officer, regarding the effectiveness of our internal control over financial reporting using the criteria set forth by the Committee of Sponsoring Organizations of the Treadway Commission (COSO) in Internal Control - Integrated Framework (2013). Based on this evaluation, our management concluded that our internal control over financial reporting was effective as of December 31, 2022 December 31, 2023.

**Changes in Internal Control Over Financial Reporting**

There were no changes in our internal control over financial reporting during the quarter ended December 31, 2022 December 31, 2023 that have materially affected, or are reasonably likely to materially affect, our internal control over financial reporting.

**Inherent Limitations on Effectiveness of Controls**

Our management, including our Chief Executive Officer and our Chief Financial and Business Officer, believes that our disclosure controls and procedures and internal control over financial reporting are designed to provide reasonable assurance of achieving their objectives and are effective at the reasonable assurance level.



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However, our management does not expect that our disclosure controls and procedures or our internal control over financial reporting will prevent all errors and all fraud. A control system, no matter how well conceived and operated, can provide only reasonable, not absolute, assurance that the objectives of the control system are met. Further, the design of a control system must reflect the fact that there are resource constraints, and the benefits of controls must be considered relative to their costs. Because of the inherent limitations in all control systems, no evaluation of controls can provide absolute assurance that all control issues and instances of fraud, if any, have been detected. These inherent limitations include the realities that judgments in decision making can be faulty, and that breakdowns can occur because of a simple error or mistake. Additionally, controls can be circumvented by the individual acts of some persons, by the collusion of two or more people or by management override of controls. The design of any system of controls is also based in part upon certain assumptions about the likelihood of future events, and there can be no assurance that any design will succeed in achieving its stated goals under all potential future conditions; over time, controls may become inadequate because of changes in conditions, or the degree of compliance with policies or procedures may deteriorate. Because of the inherent limitations in a cost-effective control system, misstatements due to error or fraud may occur and not be detected.

**Item 9B. Other Information.**

None. None of our directors or officers adopted, modified or terminated a "Rule 10b5-1 trading arrangement" or a "non-rule 10b5-1 trading arrangement," as each item is defined in Item 408(a) of Regulation S-K, during the fourth quarter ended December 31, 2023.

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

None.



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## PART III

**Item 10. Directors, Executive Officers and Corporate Governance.**

We have adopted a written code of business ethics that applies to our Chief Executive Officer and senior financial officers and a code of business conduct and ethics that applies to directors, executive officers, and employees. A current copy of each code is posted under “Corporate Governance” on our website at https://ir.nkartatx.com/. To the extent required by rules adopted by the Securities and Exchange Commission and The Nasdaq Stock Market LLC, we intend to promptly disclose future amendments to certain provisions of the code, or waivers of such provisions granted to executive officers and directors, on our website at www.nkartatx.com/.

The remaining information required by this Item will be set forth in the Company’s proxy statement to be filed with the Securities and Exchange Commission within 120 days after the Company’s fiscal year end and is incorporated herein by reference.

**Item 11. Executive Compensation.**

The information required by this Item will be set forth in the Company’s proxy statement to be filed with the Securities and Exchange Commission within 120 days after the Company’s fiscal year end and is incorporated herein by reference.

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

The information required by this Item will be set forth in the Company’s proxy statement to be filed with the Securities and Exchange Commission within 120 days after the Company’s fiscal year end and is incorporated herein by reference.

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

The information required by this Item will be set forth in the Company’s proxy statement to be filed with the Securities and Exchange Commission within 120 days after the Company’s fiscal year end and is incorporated herein by reference.

**Item 14. Principal Accountant Fees and Services.**

The information required by this Item will be set forth in the Company's proxy statement to be filed with the Securities and Exchange Commission within 120 days after the Company's fiscal year end and is incorporated herein by reference.



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**PART IV**

**Item 15. Exhibits and Financial Statement Schedules.**

(a) The following documents are filed as part of this Annual Report on Form 10-K:

1. *Financial Statements.* See Index to Financial Statements in Part II Item 8 of this Annual Report on Form 10-K.
2. *Financial Statement Schedules*. None. All financial statement schedules are omitted because they are not applicable, not required under the instructions or the requested information is included in the financial statements or notes thereto.
3. *Exhibits*. The following is a list of exhibits filed with this report or incorporated herein by reference:



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**Exhibit Index**

| Incorporated by Reference | | | | | |
|---|---|---|---|---|---|
| Exhibit Number | Exhibit Description | Form | File No. | Exhibit | Filing Date |

| Exhibit Number | Description | Form | File No. | Exhibit | Filing Date | Filed Herewith |
|---|---|---|---|---|---|---|
| 3.1 | Amended and Restated Certificate of Incorporation of Nkarta, Inc. | 8-K | 001-39370 | 3.1 | 7/14/2020 | |
| 3.1(A) | Restated Certificate of Incorporation of Nkarta, Inc. | 8-K | 001-39370 | 3.1 | 7/14/2020 | |
| 3.1(B) | Amendment to Restated Certificate of Incorporation of Nkarta, Inc. | 8-K | 001-39370 | 3.1 | 6/9/2023 | |
| 3.2 | Amended and Restated Bylaws of Nkarta, Inc. | 8-K | 001-39370 | 3.2 | 7/14/2020 | |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 4.1 | Form of Common Stock Certificate of the Registrant. | S-1/A | 333-239301 | 47.1 | 7/2/2020 | Form of Common Stock Certificate. | S-1/A | 333-239301 | 4.1 | 7/2/2020 |
| 4.2 | Amended and Restated Investors' Rights Agreement, dated as of August 27, 2019, by and among Nkarta, Inc. and certain of its stockholders. | S-1 | 333-239301 | 46.2 | 6/19/2020 | Amended and Restated Investors' Rights Agreement, dated as of August 27, 2019, by and among Nkarta, Inc. and certain of its stockholders. | S-1 | 333-239301 | 4.2 | 6/19/2020 |

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| 4.3 | Description of Capital Stock | 10-K | 001-39370 | 4/3/25/2021 | Description of Capital Stock. | | | | | X |
| 10.1# | Form of Indemnification Agreement between Nkarta, Inc. and each of its directors and executive officers. | S-1/A | 333-239301 | 7/30/2020 | Form of Indemnification Agreement between Nkarta, Inc. and each of its directors and executive officers. | S-1/A | 333-239301 | 10.1 | 7/2/2020 | |
| 10.2(A)# | 2015 Equity Incentive Plan. | S-1 | 333-239301 | 6/30/19/2020 | 2015 Equity Incentive Plan. | S-1 | 333-239301 | 10.2 | 6/19/2020 | |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 10.2(B)# | Form of Stock Option Agreement for 2015 Equity Incentive Plan. | S-1 | 333-239301 | 10.16 | 6/30/20 | Form of Stock Option Agreement for 2015 Equity Incentive Plan. | S-1 | 333-239301 | 10.3 | 6/19/2020 |
| 10.3(A)# | 2020 Performance Incentive Plan. | S-1/A | 333-239301 | 10.17 | 7/2/2020 | 2020 Performance Incentive Plan. | S-1/A | 333-239301 | 10.4 | 7/2/2020 |
| 10.3(B)# | Form of Director Option Agreement between Nkarta, Inc. and certain of its directors. | 10-Q | 001-39370 | 10.18 | 8/20/2020 | Form of Director Option Agreement between Nkarta, Inc. and certain of its directors. | 10-Q | 001-39370 | 10.5 | 8/20/2020 |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| 10.3(C)# | Form of Director Option Agreement between Nkarta, Inc. and certain of its directors. | | X | Form of Director Option Agreement between Nkarta, Inc. and certain of its directors. | 10-K | 001-39370 | 10.3(C) | 3/16/2023 |
| 10.3(D)# | Form of non-qualified Stock Option Agreement between Nkarta, Inc. and certain of its officers and employees. | 10-Q | 10/18/20 | Form of non-qualified Stock Option Agreement between Nkarta, Inc. and certain of its officers and employees. | 10-Q | 001-39370 | 10.6 | 8/20/2020 |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 10.3(E)# | Form of non-qualified Stock Option Agreement between Nkarta, Inc. and certain of its officers and employees. | X | Form of non-qualified Stock Option Agreement between Nkarta, Inc. and certain of its officers and employees. | 10-K | 001-39370 | 10.3(E) | 3/16/2023 |
| 10.3(F)# | Form of Restricted Stock Unit Agreement between Nkarta, Inc. and certain of its officers and employees. | X | Form of Restricted Stock Unit Agreement between Nkarta, Inc. and certain of its officers and employees. | 10-K | 001-39370 | 10.3(F) | 3/16/2023 |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| 10.4# | 2020 Employee Stock Purchase Plan. | S-1/A | 333-239301 | 17/03/20 | 2020 Employee Stock Purchase Plan. | S-1/A | 333-239301 | 10.5 | 7/2/2020 |
| 10.5# | Nkarta, Inc. Non-Employee Director Compensation Policy, as amended on March 16, 2022. | 10-K | 001-39370 | 13/03/22 | Nkarta, Inc. Non-Employee Director Compensation Policy, as amended on March 22, 2023. | 10-Q | 001-39370 | 10.2 | 5/11/2023 |
| 10.6(A)# | Employment Offer Letter between Nkarta, Inc. and Paul Hastings. | S-1 | 333-239301 | 16/03/20 | Employment Offer Letter between Nkarta, Inc. and Paul Hastings. | S-1 | 333-239301 | 10.6 | 6/19/2020 |

| | | | | | |
|---|---|---|---|---|---|
| 10.6(B)# | Employment Offer Letter between Nkarta, Inc. and Dr. Nadir Mahmood | 10-Q | 001-39370 | 10.2 | 5/13/2021 |
| 10.6(C)# | First Amendment to Employment Offer Letter between Nkarta, Inc. and Dr. Nadir Mahmood | 10-Q | 001-39370 | 10.3 | 5/13/2021 |
| 10.6(D)# | Employment Offer Letter between Nkarta, Inc. and Dr. Alicia Hager | 10-Q | 001-39370 | 10.4 | 5/13/2021 |
| 10.8# | Form of Severance Agreement | 8-K | 001-39370 | 10.1 | 01/13/2021 |
| 10.9 | Exclusive License Agreement between Nkarta, Inc., National University of Singapore and St. Jude Research Hospital, Inc. | S-1 | 333-239301 | 10.9 | 6/19/2020 |
| 10.10(A) | Lease Agreement, dated May 29, 2018, by and between Nkarta, Inc. and HCP Life Science REIT, Inc. | S-1 | 333-239301 | 10.10 | 6/19/2020 |
| 10.10(B) | First Amendment to Lease Agreement, dated April 24, 2019, by and between Nkarta, Inc. and HCP Life Science REIT, Inc. | S-1 | 333-239301 | 10.11 | 6/19/2020 |
| 10.10(C) | Second Amendment to Lease Agreement, dated May 5, 2020, by and between Nkarta, Inc. and HCP Life Science REIT, Inc. | S-1 | 333-239301 | 10.12 | 6/19/2020 |

| | | | | | | |
|---|---|---|---|---|---|---|
| 10.10(D) | Third Amendment to Lease Agreement, dated January 14, 2021, by and between Nkarta, Inc. and HCP Life Science REIT, Inc. | 10-K | 001-39370 | 10.10(D) | 3/25/2021 | |
| 10.10(E) | Fourth Amendment to Lease Agreement, dated October 19, 2021, by and between the Registrant and HCP Life Science REIT, Inc. | 8-K | 001-39370 | 10.1 | 10/22/2021 | |
| 10.10(F) | Fifth Amendment to Lease Agreement, dated August 11, 2022, by and between Nkarta, Inc. and HCP Life Science REIT, Inc. | 10-Q | 001-39370 | 10.2 | 8/11/2022 | |
| 10.11(A) | Lease, dated July 9, 2021, by and between Nkarta, Inc. and HCP BTC, LLC | 8-K | 001-39370 | 10.1 | 7/14/2021 | |
| 10.11(B) | First Amendment to Lease, dated November 5, 2021, by and between Nkarta, Inc. and HCP BTC, LLC | 10-Q | 001-39370 | 10.2 | 11/10/2021 | |
| 10.11(C) | Second Amendment to Lease, dated August 11, 2022, by and between Nkarta, Inc. and HCP BTC, LLC | 10-Q | 001-39370 | 10.1 | 08/11/2022 | |
| 10.12(A)** | Research Collaboration Agreement, dated May 5, 2021, by and between Nkarta, Inc. and CRISPR Therapeutics AG | 10-Q | 001-39370 | 10.1 | 8/12/2021 | |
| 10.12(B)** | Amendment No. 1 to the Research Collaboration Agreement, dated May 4, | 10-Q | 001-39370 | 10.1 | 5/12/2022 | |
| 10.6(B)# | Employment Offer Letter between Nkarta, Inc. and Dr. Alicia Hager. | 10-Q | 001-39370 | 10.4 | 5/13/2021 | |
| 10.6(C)# | Employment Offer Letter between Nkarta, Inc. and Alyssa Levin. | 10-Q | 001-39370 | 10.1 | 8/10/2023 | |
| 10.6(D)# | Employment Offer Letter between Nkarta, Inc. and David Shook. | | | | | X |

| | | | | | |
|---|---|---|---|---|---|
| 10.8# | Form of Severance Agreement. | 8-K | 001-39370 | 10.1 | 1/13/2021 |
| 10.9 | Exclusive License Agreement between Nkarta, Inc., National University of Singapore and St. Jude Research Hospital, Inc. | S-1 | 333-239301 | 10.9 | 6/19/2020 |
| 10.10(A) | Lease Agreement, dated May 29, 2018, by and between Nkarta, Inc. and HCP Life Science REIT, Inc. | S-1 | 333-239301 | 10.10 | 6/19/2020 |
| 10.10(B) | First Amendment to Lease Agreement, dated April 24, 2019, by and between Nkarta, Inc. and HCP Life Science REIT, Inc. | S-1 | 333-239301 | 10.11 | 6/19/2020 |
| 10.10(C) | Second Amendment to Lease Agreement, dated May 5, 2020, by and between Nkarta, Inc. and HCP Life Science REIT, Inc. | S-1 | 333-239301 | 10.12 | 6/19/2020 |
| 10.10(D) | Third Amendment to Lease Agreement, dated January 14, 2021, by and between Nkarta, Inc. and HCP Life Science REIT, Inc. | 10-K | 001-39370 | 10.10(D) | 3/25/2021 |
| 10.10(E) | Fourth Amendment to Lease Agreement, dated October 19, 2021, by and between Nkarta, Inc. and HCP Life Science REIT, Inc. | 8-K | 001-39370 | 10.1 | 10/22/2021 |
| 10.10(F) | Fifth Amendment to Lease Agreement, dated August 11, 2022, by and between Nkarta, Inc. and HCP Life Science REIT, Inc. | 10-Q | 001-39370 | 10.2 | 8/11/2022 |
| 10.11(A) | Lease, dated July 9, 2021, by and between Nkarta, Inc. and HCP BTC, LLC. | 8-K | 001-39370 | 10.1 | 7/14/2021 |

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|---|---|---|---|---|---|
| 10.11(B) | First Amendment to Lease, dated November 5, 2021, by and between Nkarta, Inc. and HCP BTC, LLC. | 10-Q | 001-39370 | 10.2 | 11/10/2021 |
| 10.11(C) | Second Amendment to Lease, dated August 11, 2022, by and between Nkarta, Inc. and HCP BTC, LLC. | 10-Q | 001-39370 | 10.1 | 8/11/2022 |
| 10.11(D) | Third Amendment to Lease, dated April 25, 2023, by and between Nkarta, Inc. and HCP BTC, LLC. | 10-Q | 001-39370 | 10.3 | 5/11/2023 |



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|---|---|---|---|---|---|
| 10.11(E) | 2022, Fourth Amendment to Lease, dated June 14, 2023, by and between Nkarta, Inc. and CRISPR Therapeutics AG HCP BTC, LLC. | 10-Q | 001-39370 | 10.1(B) | 8/10/2023 |
| 10.12(A)** | Research Collaboration Agreement, dated May 5, 2021, by and between Nkarta, Inc. and CRISPR Therapeutics AG. | 10-Q | 001-39370 | 10.1 | 8/12/2021 |

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|---|---|---|---|---|---|---|
| 10.12(B)** | Amendment No. 1 to the Research Collaboration Agreement, dated May 4, 2022, by and between Nkarta, Inc. and CRISPR Therapeutics AG. | 10-Q | 001-39370 | 10.1 | 5/12/2022 | |
| 10.12(C)** | Amendment No. 2 to the Research Collaboration Agreement, dated March 8, 2023, by and between Nkarta, Inc. and CRISPR Therapeutics AG. | 10-Q | 001-39370 | 10.1 | 5/11/2023 | |
| 23.1 | Consent of Independent Registered Public Accounting Firm Firm. | | | | | X |
| 31.1 | Certification of Principal Executive Officer Pursuant to Rules 13a-14(a) and 15d-14(a) under the Securities Exchange Act of 1934, as Adopted Pursuant to Section 302 of the Sarbanes-Oxley Act of 2002. | | | | | X |
| 31.2 | Certification of Principal Financial Officer Pursuant to Rules 13a-14(a) and 15d-14(a) under the Securities Exchange Act of 1934, as Adopted Pursuant to Section 302 of the Sarbanes-Oxley Act of 2002. | | | | | X |
| 32+ | Certification of Principal Executive Officer and Principal Financial Officer Pursuant to 18 U.S.C. Section 1350, as Adopted Pursuant to Section 906 of the Sarbanes-Oxley Act of 2002. | | | | | X |
| 97 | Policy Regarding the Recoupment of Certain Compensation Payments. | | | | | X |
| 101.INS | Inline XBRL Instance Document – the instance document does not appear in the Interactive Data File as its XBRL tags are embedded within the Inline XBRL document | | | | | X |

| | | |
|---|---|---|
| 101.SCH | Inline XBRL Taxonomy Extension Schema Document | X |
| 101.CAL | Inline XBRL Taxonomy Extension Calculation With Embedded Linkbase Document | X |
| 101.DEF | Inline XBRL Taxonomy Extension Definition Linkbase Document | X |
| 101.LAB | Inline XBRL Taxonomy Extension Label Linkbase Document | X |
| 101.PRE | Inline XBRL Taxonomy Extension Presentation Linkbase Document Documents | X |
| 104 | Cover Page Interactive Data File (formatted as Inline XBRL and contained in Exhibit 101) | X |

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# Indicates management contract or compensatory plan



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+ This certification is being furnished solely to accompany this Annual Report on Form 10-K pursuant to 18 U.S.C. Section 1350, and is not being filed for purposes of Section 18 of the Securities Exchange Act of 1934, as amended, or otherwise subject to the liability of that section, nor shall it be deemed incorporated by reference into any filing of the registrant under the Securities Act of 1933, as amended, or the Securities Exchange Act of 1934, as amended, whether made before or after the date hereof, regardless of any general incorporation language in such filing.

** Portions of this exhibit have been omitted in accordance with Item 601(b)(10)(iv) of Regulation S-K. The Company undertakes to provide to the Securities and Exchange Commission or its staff, if requested and on a supplemental basis, an unredacted copy of this exhibit.

**Item 16. Form 10-K Summary**

None.



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**SIGNATURES**

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

**Nkarta, Inc.**

Date: March 16, 2023 March 21, 2024

By: /s/ Paul J. Hastings
Paul J. Hastings
Chief Executive Officer

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

| Signature | Title | Date |
|---|---|---|
| /s/ Paul J. Hastings<br>Paul J. Hastings | Chief Executive Officer and Director<br>(Principal Executive Officer) | March 16, 2023 21, 2024 |
| /s/ Nadir Mahmood Alyssa Levin<br>Nadir Mahmood, Ph.D. Alyssa Levin | Chief Financial and Business Officer<br>(Principal Financial and Accounting Officer) | March 16, 2023 21, 2024 |
| /s/ Fouad Azzam<br>Fouad Azzam, Ph.D., MBA | Director | March 16, 2023 21, 2024 |
| /s/ Ali Behbahani<br>Ali Behbahani, M.D., MBA | Director | March 16, 2023 21, 2024 |

| | | |
|---|---|---|
| /s/ Michael Dybbs<br>Michael Dybbs, Ph.D. | Director | March 16, 2023 21, 2024 |
| /s/ Simeon George<br>Simeon George, M.D., MBA | Director | March 16, 2023 21, 2024 |
| /s/ Leone Patterson<br>Leone Patterson, MBA | Director | March 16, 2023 21, 2024 |
| /s/ Zachary Scheiner<br>Zachary Scheiner, Ph.D. | Director | March 16, 2023 21, 2024 |
| /s/ Laura Shawver<br>Laura Shawver, Ph.D. | Director | March 16, 2023 |
| /s/ Angela Thedinga<br>Angela Thedinga | Director | March 16, 2023 21, 2024 |



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**EXHIBIT 10.3(C) 4.3**

**DESCRIPTION OF CAPITAL STOCK**

The following description of the capital stock of Nkarta, Inc. (“us,” “our,” “we” or the “Company”) is a summary of the rights of our common stock and certain provisions of our amended and restated certificate of incorporation (the “Certificate of Incorporation”) and our amended and restated bylaws (the “Bylaws”) currently in effect. This summary does not purport to be complete and is qualified in its entirety by the provisions of our Certificate of Incorporation, as amended, and Bylaws, each previously filed with the Securities and Exchange Commission and incorporated by reference as an exhibit to the

Annual Report on Form 10-K of which this Exhibit 4.3 is a part, as well as to the applicable provisions of the Delaware General Corporation Law (the "DGCL"). We encourage you to read our certificate of incorporation, bylaws and the applicable portions of the DGCL carefully.

**Authorized Capital Stock**

Our authorized capital stock consists of 100,000,000 shares of common stock, par value $0.0001 per share, and 54,350,179 shares of preferred stock, par value $0.0001 per share, all of which shares of preferred stock are undesignated.

**Common Stock**

**NKARTA, INC. Dividends.**
**2020 PERFORMANCE INCENTIVE PLAN**
**NOTICE OF GRANT OF STOCK OPTION**

Nkarta, Inc., a Delaware corporation, (the "***Corporation***"), pursuant Subject to its 2020 Performance Incentive Plan, preferences that may be applicable to any then outstanding preferred stock, holders of our common stock are entitled to receive ratably those dividends, if any, as may be amended declared by the board of directors out of legally available funds.

**Voting Rights.** Except as otherwise expressly provided in our Certificate of Incorporation or as required by applicable law, the holders of our common stock are entitled to one vote per share on all matters submitted to a vote of stockholders, including for the election of directors. We have not provided for cumulative voting rights for our common stock in our Certificate of Incorporation.

**Liquidation Rights and Distributions.** In the event of our liquidation, dissolution or winding up, the holders of our common stock will be entitled to share ratably in the assets legally available for distribution to stockholders after the payment of or provision for all of our debts and other liabilities, subject to the prior rights of any preferred stock then outstanding.

**Other Matters.** Our Certificate of Incorporation does not entitle holders of our common stock to preemptive or conversion rights or other subscription rights. There are no redemption or sinking fund provisions applicable to our common stock. The common stock may not be subdivided or combined in any manner unless the conversion price of any other class that is convertible to common stock is increased or decreased, as applicable, in the same proportion. All outstanding shares of our common stock are fully paid and non-assessable.

**Authorized but Unissued Preferred Stock**

The authorized shares of preferred stock are available for issuance without further action by our stockholders unless required by law or by the rules and regulations of any stock exchange on which our common stock may be listed. Our Certificate of Incorporation authorizes our board of directors to establish, from time to time, (the "***Plan***"), granted on the Date number of Grant set forth shares to be included in each series of preferred stock, and to fix the designation, powers,

privileges, preferences, and relative participating, optional or other rights, if any, of the shares of each series of preferred stock, and any of its qualifications, limitations or restrictions. Our board of directors is authorized to increase or decrease the number of authorized shares of any series of preferred stock, but not below (the "***Award Date***") to the award recipient listed below (the "***Grantee***"), a nonqualified stock option (the "***Option***") to purchase the number of shares of that series of preferred stock then outstanding, without any further vote or action by stockholders.

The issuance of preferred stock could adversely affect the Corporation's voting power of holders of common stock and the likelihood that such holders will receive dividend payments and payments upon liquidation and. In addition, the existence of unissued and unreserved common stock or preferred stock could render more difficult or discourage an attempt to obtain control of us by means of a merger, tender offer, proxy contest or otherwise, and could thereby

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protect the continuity of our management and possibly deprive stockholders of opportunities to sell their shares of common stock at prices higher than prevailing market prices.

Choice of Forum

Our Certificate of Incorporation provides that, unless we consent in writing, the sole and exclusive forum for any stockholder (including any beneficial owner) to bring (i) any derivative action or proceeding brought on our behalf, (ii) any action asserting a claim of breach of a fiduciary duty owed by any of our directors, officers, or employees to us or to our stockholders, (iii) any action asserting a claim arising pursuant to any provision of the DGCL or our Certificate of Incorporation or Bylaws, or (iv) any action asserting a claim governed by the internal affairs doctrine, will be a state court located within the State of Delaware (or, if no state court located within the State of Delaware has jurisdiction, the federal district court for the District of Delaware); in all cases subject to the court's having personal jurisdiction over the indispensable parties named as defendants. This exclusive forum provision is intended to apply to claims arising under Delaware state law and is not intended to apply to claims brought pursuant to the Exchange Act or the Securities Act, or any other claim for which the federal courts have exclusive jurisdiction. Our Certificate of Incorporation further provides that the federal district courts of the United States of America will be the exclusive forum for resolving any complaint asserting a cause of action arising under the Securities Act. 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 provisions.

Anti-Takeover Effects of Our Certificate of Incorporation and Bylaws and Delaware Law

Certain provisions of Delaware law, our Certificate of Incorporation and our Bylaws could make the acquisition of us more difficult and could delay, defer or prevent a tender offer or other takeover attempt that a stockholder might consider to be in its best interest, including takeover attempts that might result in the payment of a premium to stockholders over the market price for their shares. These provisions include:

- our board of directors is authorized to issue preferred stock without stockholder approval;
- stockholders may not cumulate votes in the election of directors;
- special meetings of our stockholders may be called only by our board of directors, the chairperson of our board of directors, our chief executive officer or president, or by one or more of our stockholders holding shares in the aggregate entitled to cast not less than 10% of the votes at that meeting;
- stockholders may not act by written consent;
    - stockholders must satisfy advance notice procedures to submit proposals or nominate directors for consideration at a stockholders' meeting;
    - we indemnify our directors and officers against losses that they may incur as a result of investigations and legal proceedings resulting from their services to us, which may include services in connection with takeover defense measures;

Our board of directors is divided into three classes as provided by our Certificate of Incorporation. The directors in each class will serve for a three-year term with one class being elected each year by our stockholders.

In addition, we are subject to Section 203 of the DGCL, which provides that, subject to certain stated exceptions, a corporation may not engage in a business combination with any "interested stockholder" (as defined below) for a period of three years following the time that such stockholder became an interested stockholder, unless:

- prior to such time the board of directors of the corporation approved either the business combination or transaction which resulted in the stockholder becoming an interested stockholder;

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- upon consummation of the transaction which resulted in the stockholder becoming an interested stockholder, the interested stockholder owned at least 85% of the voting stock of the corporation outstanding at the time the transaction commenced, excluding shares owned by persons who are directors and also officers and employee stock plans in which

participants do not have the right to determine confidentially whether shares held subject to the plan will be tendered in a tender or exchange offer;

- at or subsequent to such time, the business combination is approved by the board of directors and authorized at an annual or special meeting of stockholders, and not by written consent; or
- by the affirmative vote of 66 2⁄3% of the outstanding voting stock which is not owned by the interested stockholder.

An “interested stockholder” is any person (other than the corporation and any direct or indirect majority-owned subsidiary) who owns 15% or more of the outstanding voting stock of the corporation or is an affiliate or associate of the corporation and was the owner of 15% or more of the outstanding voting stock of the corporation at any time within the three-year period immediately prior to the date of determination, and the affiliates and associates of such person.

Nasdaq Global Select Market Listing

Our common stock is listed on the Nasdaq Global Select Market under the trading symbol “NKTX.”

Transfer Agent and Registrar

The transfer agent and registrar for our common stock is Equiniti Trust Company, LLC.

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EXHIBIT 10.6(D)

Nkarta, Inc.
6000 Shoreline Court, Suite 102
South San Francisco, CA 94080 USA
January 15, 2020
David Shook
*Via Electronic Delivery*
Dear David,
I am pleased to offer you a position with Nkarta, Inc. (the "Company"), as Medical Director, Clinical Development and initially reporting to the Chief Medical Officer. Your employment with the Company will commence on June 1, 2020 (the "Start Date"). Effective as of the Start Date, you will receive an annual base salary of $290,000 (the "Base Salary"), which will be paid in accordance with the Company's then existing payroll procedures. You also

will receive a sign on bonus of $45,000, less required and designated payroll deductions and withholdings, to be paid in the first 30 days of your employment. If you decide to leave the Company for any reason within 12 months of your start date, the sign on bonus will be subject to repayment to the Company by you within 30 days of your separation from the Company.

Each year during the term of your employment, you will be eligible for a bonus of up to twenty percent (20%) of your then existing Base Salary based on achievement of performance objectives to be determined by the Board of Directors (the "Board"). Any bonuses will be subject to your continued employment with the Company through the date the bonus is paid, in no event later than March 15 of the calendar year following the calendar year as to which the bonus relates. As an employee, you will also be eligible for standard Company benefits in accordance with Company policy, subject in each case to the generally applicable terms and conditions of the applicable benefit plan and to the determinations of any person or committee administering such plan. You will be entitled to paid time off in accordance with the Company's time-off policy, the timing and duration of such time off to be mutually and reasonably agreed to between you and the Company. The Company will also reimburse any of your expenses associated with Company business, subject to and in accordance with the Company's expense policies. You should note that the Company may modify salaries, benefits and its policies from time to time as it deems necessary or appropriate.

If you decide to join the Company, the Company will recommend that the Board grant you an option (the "Option") to purchase 49,000 shares(subject to customary adjustments for stock splits, reverse splits, stock dividends and similar events after the date hereof) of the Company's common stock ("Common Stock set forth below") at a price per share equal to the Exercise Price fair market value per Share set forth below (the "***Exercise Price***"). The Option is subject to all share of the terms and conditions set forth in this Notice of Grant of Stock Option (the "Grant Notice Common "), as well as in the Plan and the Terms and Conditions of Director Stock Option attached hereto as **Exhibit A** (the "***Terms***"), each of which is incorporated herein by this reference. Unless otherwise defined in this Grant Notice or in the Terms, capitalized terms used in this Grant Notice or in the Terms are used as defined in the Plan.

| | |
|---|---|
| **Grantee:** | [_____] |
| **Award Number:** | [_____] |
| **Date of Grant:** | [_____] |
| **Vesting Commencement Date:** | [_____] |
| **Exercise Price per Share:** | [_____] |
| **Total Exercise Price[1]:** | [_____] |
| **Total Number of Shares Subject to the Option[1]:** | [_____] |
| **Expiration Date[1],:** | [_____] |

| | |
|---|---|
| **Vesting Schedule[1,2]:** | [100% of the shares will vest on the first to occur of (i) the first anniversary of the date of grant of the award, or (ii) on the day immediately preceding the first annual meeting of the Company's stockholders to occur after the date of grant of the award] |

By accepting the Option (by clicking "sign", "accept" or similar acknowledgement of acceptance through the Company's stock plan recordkeeping system which may be administered by the Company or through a third party on behalf of the Company), the Grantee (1) signs this Grant Notice electronically, which acceptance shall be valid and effective to bind the Grantee to this Grant Notice and shall be treated, for purposes of validity, enforceability and admissibility, the same as Grantee's hand-written signature to this Grant Notice, (2) agrees to be bound by the terms and conditions of the Plan, the Terms, and this Grant Notice and accepts the Option on and subject to such terms and conditions, (3) acknowledges having received and having reviewed in their entirety the Plan, the Terms, this Grant Notice, and the Prospectus for the Plan, (4) acknowledges having had an opportunity to obtain the advice of counsel (to the extent Grantee believed it was appropriate to consult with counsel) prior to executing this Grant Notice, (5) represents that he or she fully understands all provisions of the Plan, the Terms, and this Grant Notice, and (6) agrees to accept as binding, conclusive and final all decisions or interpretations of the Administrator upon any questions arising under the Plan, the Terms, and this Grant Notice.

**NKARTA, INC.:**

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Name:

Title:

Address:

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NKARTA, INC.

2020 PERFORMANCE INCENTIVE PLAN

TERMS AND CONDITIONS OF DIRECTOR STOCK OPTION

## 1.General.

These Terms and Conditions of Director Stock Option (these "**Terms**") apply to a particular stock option (the "**Option**") if incorporated by reference in the Notice of Grant of Stock Option (the "**Grant Notice**") corresponding to that particular grant. The recipient of the Option identified in the Grant Notice is referred to as the "**Director**." The per share exercise price of the Option as set forth in the Grant Notice is referred to as the "**Exercise Price**." The effective date of grant of the Option, as set forth in the Grant Notice is referred to as the "**Award Date**." The exercise price and the number of shares covered determined by the Option are subject to adjustment under Section 7.1 of the Plan.

The Option was granted under and subject to the Nkarta, Inc. 2020 Performance Incentive Plan (the "**Plan**" Board. Twenty-five percent (25%). Capitalized terms are defined in the Plan if not defined herein. The

Option has been granted to the Director in addition to, and not in lieu of, any other form of compensation otherwise payable or to be paid to the Director. The Grant Notice and these Terms are collectively referred to as the "Option Agreement" applicable to the Option.

## 2. Vesting; Limits on Exercise; Incentive Stock Option Status.

**2.1 Vesting in General.** Subject to Sections 2.2 and 5 below, the Option shall vest and become exercisable in percentage installments of the aggregate number of shares subject to the Option as set forth on the cover page of this Option Agreement. The Option may be exercised only to the extent the Option is vested and exercisable.

**2.2 Change in Control Event.** Notwithstanding any other provision to the contrary contained herein or in the Plan, upon the occurrence of a Change in Control Event, the Option, to the extent then outstanding and unvested, shall accelerate and become fully vested and exercisable as of (or, as may be necessary to effectuate the purposes of this acceleration, immediately prior to) the date of the Change in Control Event. For purposes of the Option a "**Change in Control Event**" shall will vest and be deemed to have occurred as exercisable on the first anniversary of the first day, after Start Date, subject to your continuing employment with the Award Date, Company through that any one or more of the following conditions shall have been satisfied:

(a) The acquisition by any individual, entity or group (within the meaning of Section 13(d)(3) or 14(d)(2) of the Securities Exchange Act of 1934, as amended (the "Exchange Act")) (a "**Person**") of beneficial ownership (within the meaning of Rule 13d-3 promulgated under the Exchange Act) of 30% or more of either (1) the then-outstanding shares of Common Stock of the Corporation (the "**Outstanding Corporation Common Stock**") or (2) the combined voting power of the then-outstanding voting securities of the Corporation entitled to vote generally in the election of directors (the "**Outstanding Corporation Voting Securities**"); provided, however, that, for purposes of this definition, the following acquisitions shall not constitute a Change in Control Event; (A) any acquisition directly from the Corporation, (B) any acquisition by the Corporation, (C) any acquisition by any employee benefit plan (or related trust) sponsored or maintained by the Corporation or any affiliate of the Corporation or a successor, or (D) any acquisition by any entity pursuant to a transaction that complies with Sections (c)(1), (2) date, and (3) below;

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(b) Individuals who, as of the Award Date, constitute the Board (the "**Incumbent Board**") cease for any reason to constitute at least a majority of the Board; provided, however, that any individual becoming a director subsequent to the Award Date whose election, or nomination for election by the Corporation's stockholders, was approved by a vote of at least two-thirds of the directors then comprising the Incumbent Board (including for these purposes, the new members whose election or nomination was so approved, without counting the member and his predecessor twice) shall

be considered as though such individual were a member of the Incumbent Board, but excluding, for this purpose, any such individual whose initial assumption of office occurs as a result of an actual or threatened election contest with respect to the election or removal of directors or other actual or threatened solicitation of proxies or consents by or on behalf of a Person other than the Board;

(c) Consummation of a reorganization, merger, statutory share exchange or consolidation or similar corporate transaction involving the Corporation or any of its Subsidiaries, a sale or other disposition of all or substantially all of the assets of the Corporation, or the acquisition of assets or stock of another entity by the Corporation or any of its Subsidiaries (each, a "**Business Combination**"), in each case unless, following such Business Combination, (1) all or substantially all of the individuals and entities that were the beneficial owners of the Outstanding Corporation Common Stock and the Outstanding Corporation Voting Securities immediately prior to such Business Combination beneficially own, directly or indirectly, more than 50% of the then-outstanding shares of common stock and the combined voting power of the then-outstanding voting securities entitled to vote generally in the election of directors, as the case may be, of the entity resulting from such Business Combination (including, without limitation, a Parent, as defined above) in substantially the same proportions as their ownership immediately prior to such Business Combination of the Outstanding Corporation Common Stock and the Outstanding Corporation Voting Securities, as the case may be, (2) no Person (excluding any entity resulting from such Business Combination or a Parent or any employee benefit plan (or related trust) of the Corporation or such entity resulting from such Business Combination or Parent) beneficially owns, directly or indirectly, 30% or more of, respectively, the then-outstanding shares of common stock of the entity resulting from such Business Combination or the combined voting power of the then-outstanding voting securities of such entity, except to the extent that the ownership in excess of 30% existed prior to the Business Combination, and (3) at least a majority of the members of the board of directors or trustees of the entity resulting from such Business Combination or a Parent were members of the Incumbent Board at the time of the execution of the initial agreement or of the action of the Board providing for such Business Combination; or

(d) Approval by the stockholders of the Corporation of a complete liquidation or dissolution of the Corporation other than in the context of a transaction that does not constitute a Change in Control Event under clause (c) above.

**2.3 Limits on Exercise; Incentive Stock Option Status.** The following limits shall apply with respect to the Option:

• Cumulative Exercisability. To the extent that the Option is vested and exercisable, the Director has the right to exercise the Option (to the extent not previously exercised), and such right shall continue, until the expiration or earlier termination of the Option.

- No Fractional Shares. Fractional share interests shall be disregarded, but may be cumulated.

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- Minimum Exercise. No fewer than 100 shares of Common Stock (subject to adjustment under Section 7.1 of the Plan) may be purchased at any one time, unless the number purchased is the total number at the time exercisable under the Option.

- Nonqualified Stock Option. The Option is a nonqualified stock option and is not, and shall not be, an incentive stock option within the meaning of Section 422 of the Code.

## 3. Continuance of Board Service Required; No Service Commitment.

The vesting schedule requires the Director's continued service on the Board through each applicable vesting date as a condition to the vesting of the applicable installment none of the Option and will vest before such date. The remaining Option will vest monthly over the rights and benefits under this Option Agreement. Service for only a portion of the vesting period, even if a substantial portion, will not entitle the Director to any proportionate vesting or avoid or mitigate a termination of rights and benefits upon or following a termination of services as provided next thirty-six (36) months in Section 5 below or under the Plan. Nothing contained in this Option Agreement or the Plan constitutes a continued service commitment by the Corporation or interferes with the right of the Corporation to increase or decrease the compensation of the Director from the rate in existence at any time.

## 4. Method of Exercise of Option.

The Option shall be exercisable by the delivery to the Secretary of the Corporation (or such other person as the Administrator may require pursuant to such administrative exercise procedures as the Administrator may implement from time to time) of:

- a written notice stating the number of shares of Common Stock to be purchased pursuant to the Option or by the completion of such other administrative exercise procedures as the Administrator may require from time to time;

- payment in full for the Exercise Price of the shares to be purchased in cash, check or by electronic funds transfer to the Corporation;

- any written statements or agreements required pursuant to Section 8.1 of the Plan; and

- satisfaction of the tax withholding provisions of Section 8.5 of the Plan.

The Administrator also may, but is not required to, authorize a non-cash payment alternative by one or more of the following methods (subject equal installments, subject in each case to compliance your continuing employment with all the Company through the applicable laws, rules, regulations vesting date. The Option will be

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granted under the Company's equity incentive plan and listing requirements and further will be subject to such rules further terms and conditions as the Administrator may adopt as to any such payment method):

- notice and third party payment in such manner as may be authorized by the Administrator;

- in shares of Common Stock already owned by the Director, valued at their fair market value (as determined under the Plan) on the exercise date;

- a reduction in the number of shares of Common Stock otherwise deliverable to the Director (valued at their fair market value on the exercise date, as determined under the Plan) pursuant to the exercise of the Option; or

- a "cashless exercise" with a third party who provides simultaneous financing for the purposes of (or who otherwise facilitates) the exercise of the Option.

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## 5. Early Termination of Option; Acceleration on Death/Disability.

**5.1 Expiration Date**. Subject to earlier termination as provided below in this Section 5, the Option will terminate on the "Expiration Date" set forth in such plan and in a written stock option agreement to be entered into by the Grant Notice (the "Company and you to evidence the Option.**Expiration Date**").

**5.2 Possible Termination**

**If you terminate, or if the Company terminates, your employment for any reason(with or without cause), then you will be entitled to receive only: (i) any earned but unpaid Base Salary as of Option upon Certain Corporate Events.** The Option is subject to termination the date of

termination; (ii) reimbursement for all reasonable and necessary expenses incurred by you in connection with certain corporate events as provided in Section 7.2 your performance of services on behalf of the Plan.

**5.3 Termination Company while you are employed with the Company (subject to providing reasonable documentation of Option upon a Termination of Director's Services.** Subject to earlier termination on the Expiration Date of the Option or pursuant to Section 5.2 above, if the Director ceases to be a member of the Board, the following rules shall apply (the last day that the Director is serving as a member of the Board is referred to as the Director's "**Severance Date**"):

- other than as expressly provided below in this Section 5.3, (a) the Director will have until the date that is 3 months after his or her Severance Date to exercise the Option (or portion thereof) such expenses and to the extent that it was such expenses are reimbursable under the Company's expense policies), payable in accordance with applicable Company policies and procedures; and (iii) your vested on and unpaid benefits (if any) pursuant to any Company benefit plan, payable in accordance with the Severance Date, (b) the Option, to the extent not vested on the Severance Date, shall terminate on the Severance Date, and (c) the Option, to the extent exercisable for the 3-month period following the Severance Date and not exercised during such period, shall terminate at the close of business on the last day terms of the 3-month period; applicable plan.

The Company is excited about your joining and

looks forward to a beneficial and productive relationship. Nevertheless, • you ifshould be aware that your employment with the Director ceases Company is for no specified period and constitutes at will employment. As a result, you are free to be a member resign at any time, for any reason or for no reason. Similarly, the Company is free to conclude its employment relationship with you at any time, with or without cause, and with or without notice. We request that, in the event of resignation, you give the Board due to the Director's death or Total Disability (as defined below), (a) the Option, to the extent then outstanding and unvested, shall accelerate and be fully vested on the Director's Severance Date, (b) the Director (or his or her beneficiary or personal representative, as the case may be) will have until the date that is 12 months after the Director's Severance Date to exercise the Option, and (c) the Option, to the extent not exercised during the 12-month period following the Severance Date, shall terminate Company at the close of business on the last day of the 12-month period.

least two (2) weeks' advance notice.

For purposes of federal immigration law, you will be required to provide to the Option, "**Total Disability**" means a "permanent Company documentary evidence of your identity and total disability" (within eligibility for employment in the meaning of Section 22(e)(3) of United States. Please bring such documentation with you on your Start Date or our employment relationship with you may be terminated.
We also ask that, if you have not already done so, you disclose to the Code or as otherwise determined Company any and all agreements relating to your prior employment that may affect your eligibility to

be employed by the Administrator).

In all events Company or limit the Option is subject to earlier termination on the Expiration Date of the Option or as contemplated by Section 5.2.

## 6. Non-Transferability.

The Option and any other rights of the Director under this Option Agreement or the Plan are nontransferable and exercisable only by the Director, except as set forth manner in Section 5.7 of the Plan.

## 7. Notices.

Any notice to be given under the terms of this Option Agreement shall be in writing and addressed to the Corporation at its principal office to the attention of the Secretary, and to the Director at the address last reflected on the Corporation's payroll records, or at such other address as either party may hereafter designate in writing to the other. Any such notice shall be delivered in person or shall be enclosed in a properly sealed envelope addressed as aforesaid, registered or certified, and deposited (postage and registry or certification fee prepaid) in a post office or branch post office regularly maintained by the United States Government. Any such notice shall be given only when received, but if the Director is no longer employed

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by the Corporation or a Subsidiary, shall be deemed to have been duly given five business days after the date mailed in accordance with the foregoing provisions of this Section 7.

## 8. Plan.

The Option and all rights of the Director under this Option Agreement are subject to the terms and conditions of the Plan, incorporated herein by this reference. The Director agrees to be bound by the terms of the Plan and this Option Agreement. The Director acknowledges having read and understanding the Plan, the Prospectus for the Plan, and this Option Agreement. Unless otherwise expressly provided in other sections of this Option Agreement, provisions of the Plan that confer discretionary authority on the Board or the Administrator do not and shall not be deemed to create any rights in the Director unless such rights are expressly set forth herein or are otherwise in the sole discretion of the Board or the Administrator so conferred by appropriate action of the Board or the Administrator under the Plan after the date hereof.

## 9. Entire Agreement.

This Option Agreement and the Plan together constitute the entire agreement and supersede all prior understandings and agreements, written or oral, of the parties hereto with respect to the subject matter hereof. The Plan and this Option Agreement which you may be amended pursuant to Section 8.6 of employed. It is the Plan. Such amendment must be in writing and signed by the Corporation. The Corporation may, however, unilaterally waive any provision hereof in writing to the extent such waiver does not adversely affect the interests

of the Director hereunder, but no such waiver shall operate as or be construed to be a subsequent waiver of the same provision or a waiver of any other provision hereof.

**10. Governing Law.**

This Option Agreement shall be governed by and construed and enforced in accordance with the laws of the State of Delaware without regard to conflict of law principles thereunder.

**11. Effect of this Agreement.**

Subject to the Corporation's right to terminate the Option pursuant to Section 7.2 of the Plan, this Option Agreement shall be assumed by, be binding upon and inure to the benefit of any successor or successors to the Corporation.

**12. Electronic Signatures and Counterparts.**

The Grant Notice may be signed and/or transmitted in one or more counterparts by facsimile, e-mail of a .PDF, .TIF, .GIF, .JPG or similar attachment or using electronic signature technology (e.g., via DocuSign or similar electronic signature technology), all of which will be considered one and the same agreement and will become effective when one or more counterparts have been signed by each of the parties hereto and delivered to the other parties, it being understood that all parties need not sign the same counterpart, and Company's understanding that any such signed electronic record shall be valid agreements will not prevent you from performing, and as effective will not interfere with your performance of, the duties of your position and you represent that such is the case. Moreover, you agree that, while you are employed with the Company, you will not engage in any other employment, occupation, consulting or other business activity directly related to bind the party so signing as a paper copy bearing business in which the Company is now involved or becomes involved during the period of your employment, nor will you engage in any other activities that conflict with your obligations to the Company. Similarly, you agree not to bring any third-party confidential information to the Company, including that of your former employer, and that in performing your duties for the Company you will not in any way utilize any such party's hand-written signature. To the extent a party signs the Grant Notice using electronic signature technology, by clicking "sign" (or similar acknowledgement of acceptance), such party is signing the Grant Notice electronically. Electronic signatures appearing on the Grant Notice shall be treated, for purposes of validity, enforceability and admissibility, the same as hand-written signatures. information.

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13.**Section Headings.**

The section headings As a condition of this Option Agreement are for convenience of reference only your employment and shall not be deemed to alter or affect any provision hereof.

## 14. Clawback Policy.

The Option is subject prior to the terms Start Date, you are also required to sign the Company's At Will Employment, Confidential Information, Invention Assignment and Arbitration Agreement ("Confidentiality Agreement") which requires, among other provisions, the assignment of patent rights to any invention made during your employment at the Corporation's recoupment, clawback Company, non-disclosure of Company proprietary information, and that in the event of any dispute or similar policy claim relating to or arising out of our employment relationship, you and the Company agree that any and all disputes between you and the Company will be fully and finally resolved by binding arbitration. Please note that we must receive your signed Confidentiality Agreement before your first day of employment. Your continued employment with the Company is subject to your ongoing compliance with your obligations under the Confidentiality Agreement and your compliance with all other Company policies, as it may be they are in effect from time to time, as well as any similar provisions of applicable law, any of which could in certain circumstances require forfeiture of the Option and repayment or forfeiture of any shares of Common Stock or other cash or property received with respect to the Option (including any value received from a disposition of the shares acquired upon exercise of the Option).

## 15. No Advice Regarding Grant.

The Director is hereby advised to consult with his or her own tax, legal and/or investment advisors with respect to any advice the Director may determine is needed or appropriate with respect to the Option (including, without limitation, to determine the foreign, state, local, estate and/or gift tax consequences with respect to the Option and any shares that may be acquired upon exercise of the Option). Neither the Corporation nor any of its officers, directors, affiliates or advisors makes any representation (except for the terms and conditions expressly set forth in this Option Agreement) or recommendation with respect to the Option. Except for the withholding rights contemplated by Section 4 above and Section 8.5 of the Plan, the Director is solely responsible for any and all tax liability that may arise with respect to the Option and any shares that may be acquired upon exercise of the Option.

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**EXHIBIT 10.3(E)**

**NKARTA, INC.**

**2020 PERFORMANCE INCENTIVE PLAN**

**NOTICE OF GRANT OF STOCK OPTION TIME.**

Nkarta, Inc., This letter and all of your rights and obligations hereunder are personal to you and may not be transferred or assigned by you at any time. The Company may assign its rights under this letter to a Delaware corporation, (the " parent or

affiliated company or to an entity that assumes the Company's obligations hereunder Corporation in "), pursuant to its 2020 Performance Incentive Plan, as may be amended from time to time (the " connection with a sale or transfer of all or a substantial Plan portion "), granted on the Date of Grant set forth below (the "***Award Date***") to the award recipient listed below (the "***Grantee***"), a nonqualified stock option (the "***Option***") to purchase the number of shares of the Corporation's Common Stock Company's business or assets.

To accept the Company's offer, please sign and date this letter agreement in the space provided below and return it to the sender before the deadline indicated below. This letter, along with the Confidentiality Agreement set forth below at a price per share equal to the Exercise Price per Share set forth below (the "***Exercise Price***"). The Option is subject to all of the terms and conditions set forth in this Notice of Grant of Stock Option (the "***Grant Notice***"), as well as in the Plan and the Terms and Conditions of Nonqualified Stock Option attached hereto as **Exhibit A** (the "***Terms***"), each of which is incorporated herein by this reference. Unless otherwise defined in this Grant Notice or in the Terms, capitalized terms used in this Grant Notice or in the Terms are used as defined in the Plan.

| | |
|---|---|
| **Grantee:** | [_____] |
| **Award Number:** | [_____] |
| **Date of Grant:** | [_____] |
| **Vesting Commencement Date:** | [_____] |
| **Exercise Price per Share:** | [_____] |
| **Total Exercise Price[1]:** | [_____] |
| **Total Number of Shares Subject to the Option[1]:** | [_____] |
| **Expiration Date[1],:** | [_____] |
| **Vesting Schedule[1,2]:** | [25% of the shares will vest on the one-year anniversary of the Vesting Commencement Date above and then 1/48th monthly thereafter for the remaining 36 months] |

By accepting the Option (by clicking "sign", "accept" or similar acknowledgement of acceptance through the Company's stock plan recordkeeping system which may be administered by the Company or through a third party on behalf of the Company), the Grantee (1) signs this Grant Notice electronically, which acceptance shall be valid and effective to bind the Grantee to this Grant Notice and shall be treated, for purposes of validity, enforceability and admissibility, the same

as Grantee's hand-written signature to this Grant Notice, (2) agrees to be bound by the terms and conditions of the Plan, the Terms, and this Grant Notice and accepts the Option on and subject to such terms and conditions, (3) acknowledges having received and having reviewed in their entirety the Plan, the Terms, this Grant Notice, and the Prospectus for the Plan, (4) acknowledges having had an opportunity to obtain the advice of counsel (to the extent Grantee believed it was appropriate to consult with counsel) prior to executing this Grant Notice, (5) represents that he or she fully understands all provisions of the Plan, the Terms, and this Grant Notice, and (6) agrees to accept as binding, conclusive and final all decisions or interpretations of the Administrator upon any questions arising under the Plan, the Terms, and this Grant Notice.

**NKARTA, INC.:**

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Name:

Title:

Address:

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NKARTA, INC.

2020 PERFORMANCE INCENTIVE PLAN

STOCK OPTION AGREEMENT

TERMS AND CONDITIONS OF NONQUALIFIED STOCK OPTION

**1.General.**

These Terms and Conditions of Nonqualified Stock Option (these "Terms") apply to a particular stock option (the "Option") if incorporated by reference in the Notice of Grant of Stock Option (the "Grant Notice") corresponding to that particular grant. The recipient of the Option identified in the Grant Notice is referred to as the "Grantee." The per share exercise price of the Option as set forth in the Grant Notice is referred to as the "Exercise Price." The effective date of grant of the Option as set forth in the Grant Notice is referred to as the "Award Date." The exercise price and the number of shares covered by the Option are subject to adjustment under Section 7.1 of the Plan.

The Option was granted under and subject to the Nkarta, Inc. 2020 Performance Incentive Plan (the "Plan"). Capitalized terms are defined in the Plan if not defined herein. The Option has been granted to the Grantee in addition to, and not in lieu of, any other form of compensation otherwise payable or to be paid to the Grantee. The Grant Notice and these Terms are collectively referred to as the "Option Agreement" applicable to the Option.

**2. Vesting; Limits on Exercise; Incentive Stock Option Status.**

The Option shall vest and become exercisable in percentage installments of the aggregate number of shares subject to the Option as set forth on the Grant Notice. The Option may be exercised only to the extent the Option is vested and exercisable.

• Cumulative Exercisability. To the extent that the Option is vested and exercisable, the Grantee has the right to exercise the Option (to the extent not previously exercised), and such right shall continue, until the expiration or earlier termination of the Option.

• No Fractional Shares. Fractional share interests shall be disregarded, but may be cumulated.

• Minimum Exercise. No fewer than 100 shares of Common Stock (subject to adjustment under Section 7.1 of the Plan) may be purchased at any one time, unless the number purchased is the total number at the time exercisable under the Option.

• Nonqualified Stock Option. The Option is a nonqualified stock option and is not, and shall not be, an incentive stock option within the meaning of Section 422 of the Code.

**3. Continuance of Employment/Service Required; No Employment/Service Commitment.**

The vesting schedule applicable to the Option requires continued employment or service through each applicable vesting date as a condition to the vesting of the applicable installment of the Option and the rights and benefits under this Option Agreement. Employment or service for only a portion of the vesting period, even if a substantial portion, will not entitle the Grantee to any proportionate vesting or avoid or mitigate a termination of rights and benefits upon or following a termination of employment or services as provided in Section 5 below or under the Plan.

Nothing contained in this Option Agreement or the Plan constitutes a continued employment or service commitment by the Corporation or any of its Subsidiaries, affects the Grantee's status, if he or she is an employee, as an employee at will who is subject to termination without cause, confers upon the Grantee any right to remain employed by or in service to the Corporation or any Subsidiary, interferes in any way with the right of the Corporation or any Subsidiary at any time to terminate such employment or service, or affects the

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right of the Corporation or any Subsidiary to increase or decrease the Grantee's other compensation. Nothing in this paragraph, however, is intended to adversely affect any independent contractual right of the Grantee without his/her consent thereto.

**4.Method of Exercise of Option.**

The Option shall be exercisable by the delivery to the Secretary of the Corporation (or such other person as the Administrator may require pursuant to such administrative exercise procedures as the Administrator may implement from time to time) of:

• a written notice stating the number of shares of Common Stock to be purchased pursuant to the Option or by the completion of such other administrative exercise procedures as the Administrator may require from time to time;

• payment in full for the Exercise Price of the shares to be purchased in cash, check or by electronic funds transfer to the Corporation;

• any written statements or agreements required pursuant to Section 8.1 of the Plan; and

• satisfaction of the tax withholding provisions of Section 8.5 of the Plan.

The Administrator also may, but is not required to, authorize a non-cash payment alternative by one or more of the following methods (subject in each case to compliance with all applicable laws, rules, regulations and listing requirements and further subject to such rules as the Administrator may adopt as to any such payment method):

• notice and third party payment in such manner as may be authorized by the Administrator;

• in shares of Common Stock already owned by the Grantee, valued at their fair market value (as determined under the Plan) on the exercise date;

• a reduction in the number of shares of Common Stock otherwise deliverable to the Grantee (valued at their fair market value on the exercise date, as determined under the Plan) pursuant to the exercise of the Option; or

• a “cashless exercise” with a third party who provides simultaneous financing for the purposes of (or who otherwise facilitates) the exercise of the Option.

**5.Early Termination of Option.**

5.1 Expiration Date. Subject to earlier termination as provided below in this Section 5, the Option will terminate on the “Expiration Date” set forth in the Grant Notice (the “Expiration Date”).

5.2 Possible Termination of Option upon Certain Corporate Events. The Option is subject to termination in connection with certain corporate events as provided in Section 7.2 of the Plan. 5.3 Termination of Option upon a Termination of Grantee’s Employment or Services. Subject to earlier termination on the Expiration Date of the Option or pursuant to Section 5.2 above, if the Grantee ceases to be employed by or ceases to provide services to the Corporation or a Subsidiary, the following rules shall apply (the last day that the Grantee is employed by or provides services to the Corporation or a Subsidiary is referred to as the Grantee’s “Severance Date”):

• other than as expressly provided below in this Section 5.3, (a) the Grantee will have until the date that is 3 months after his or her Severance Date to exercise the Option (or portion thereof) to the extent that it was vested on the Severance Date, (b) the Option, to the extent not vested on the Severance Date, shall terminate on the Severance Date, and (c) the Option, to the extent exercisable for the 3-month period following the Severance Date and not exercised during such period, shall terminate at the close of business on the last day of the 3-month period;

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• if the termination of the Grantee’s employment or services is the result of the Grantee’s death or Total Disability (as defined below), (a) the Grantee (or his beneficiary or personal representative, as the case may be) will have until the date that is 12 months after the Grantee’s Severance Date to exercise the Option (or portion thereof) to the extent that it was vested on the Severance Date, (b) the Option, to the extent not vested on the Severance Date, shall terminate on the Severance Date, and (c) the Option, to the extent exercisable for the 12-month period following the Severance Date and not exercised during such period, shall terminate at the close of business on the last day of the 12-month period;

• if the Grantee's employment or services are terminated by the Corporation or a Subsidiary for Cause (as defined below), the Option (whether vested or not) shall terminate on the Severance Date.

For purposes of the Option, "Total Disability" means a "permanent and total disability" (within the meaning of Section 22(e)(3) of the Code or as otherwise determined by the Administrator).

For purposes of the Option, "Cause" means that the Grantee:

(1) has been negligent in the discharge of his or her duties to the Corporation or any of its Subsidiaries, has refused to perform stated or assigned duties or is incompetent in or (other than by reason of a disability or analogous condition) incapable of performing those duties;

(2) has been dishonest or committed or engaged in an act of theft, embezzlement or fraud, a breach of confidentiality, an unauthorized disclosure or use of inside information, customer lists, trade secrets or other confidential information; has breached a fiduciary duty, or willfully and materially violated any other duty, law, rule, regulation or policy of the Corporation, any of its Subsidiaries or any affiliate of the Corporation or any of its Subsidiaries; or has been convicted of a felony or misdemeanor (other than minor traffic violations or similar offenses);

(3) has materially breached any of the provisions of any agreement with the Corporation, any of its Subsidiaries or any affiliate of the Corporation or any of its Subsidiaries; or

(4) has engaged in unfair competition with, or otherwise acted intentionally in a manner injurious to the reputation, business or assets of, the Corporation, any of its Subsidiaries or any affiliate of the Corporation or any of its Subsidiaries; has improperly induced a vendor or customer to break or terminate any contract with the Corporation, any of its Subsidiaries or any affiliate of the Corporation or any of its Subsidiaries; or has induced a principal for whom the Corporation, any of its Subsidiaries or any affiliate of the Corporation or any of its Subsidiaries acts as agent to terminate such agency relationship.

In all events the Option is subject to earlier termination on the Expiration Date of the Option or as contemplated by Section 5.2. The Administrator shall be the sole judge of whether the Grantee continues to render employment or services for purposes of this Option Agreement.

**6.Non-Transferability.**

The Option and any other rights of the Grantee under this Option Agreement or the Plan are nontransferable and exercisable only by the Grantee, except as set forth in Section 5.7 of the Plan.

**7.Notices.**

Any notice to be given under the terms of this Option Agreement shall your employment with the Company and supersede any prior representations or agreements including, but not limited to, any representations made during your recruitment, interviews or pre-employment negotiations, whether written or oral. This letter, including, but not limited to, its at-will employment provision, may not be in writing and addressed to the Corporation at

its principal office to the attention modified or amended except by a written agreement signed by authorized officer of the Secretary, Company and to the Grantee at the address last reflected on the Corporation's payroll records, or at such other address as either party may hereafter designate in writing to the other. Any such notice shall be delivered in person or shall be enclosed in a properly sealed envelope addressed as aforesaid, registered or certified, and deposited (postage and registry or certification fee prepaid) in a post office or branch post office regularly maintained by the United States Government. Any such notice shall be given only when received, but if the Grantee is no longer employed by the Corporation or a Subsidiary, shall be deemed to have been duly given five business days after the date mailed in accordance with the foregoing provisions of this Section 7.

**8.Plan.**

The Option and all rights of the Grantee under this Option Agreement are subject to the terms and conditions of the Plan, incorporated herein by this reference. The Grantee agrees to be bound by the terms of the Plan and this Option Agreement. The Grantee acknowledges having read and understanding the Plan, the Prospectus for the Plan, and this Option Agreement. Unless otherwise expressly provided in other sections of this Option Agreement, provisions of the Plan that confer discretionary authority on the Board or the Administrator do not and shall not be deemed to create any rights in the Grantee unless such rights are expressly set forth herein or are otherwise in the sole discretion of the Board or the Administrator so conferred by appropriate action of the Board or the Administrator under the Plan after the date hereof.

**9.Entire Agreement.**

This Option Agreement and the Plan together constitute the entire agreement and supersede all prior understandings and agreements, written or oral, of the parties hereto with respect to the subject matter hereof. The Plan and this Option Agreement may be amended pursuant to Section 8.6 of the Plan. Such amendment must be in writing and signed by the Corporation. The Corporation may, however, unilaterally waive any provision hereof in writing to the extent such waiver does not adversely affect the interests of the Grantee hereunder, but no such waiver shall operate as or be construed to be a subsequent waiver of the same provision or a waiver of any other provision hereof.

**10.Governing Law.**

This Option Agreement shall be governed by and construed and enforced in accordance with the laws of the State of Delaware without regard to conflict of law principles thereunder.

**11.Effect of this Agreement.**

Subject to the Corporation's right to terminate the Option pursuant to Section 7.2 of the Plan, this Option Agreement shall be assumed by, be binding upon and inure to the benefit of any successor or successors to the Corporation.

**12.Counterparts.**

This Option Agreement may be executed simultaneously in any number of counterparts, each of which shall be deemed an original but all of which together shall constitute one and the same instrument.

**13.Section Headings.**

The section headings of this Option Agreement are for convenience of reference only and shall not be deemed to alter or affect any provision hereof.

**14.Clawback Policy.**

The Option is subject to the terms of the Corporation's recoupment, clawback or similar policy as it may be in effect from time to time, as well as any similar provisions of applicable law, any of which could in certain circumstances require forfeiture of the Option and repayment or forfeiture of any shares of Common Stock or other cash or property received with respect to the Option (including any value received from a disposition of the shares acquired upon exercise of the Option).

**15.No Advice Regarding Grant.**

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The Grantee is hereby advised to consult with his or her own tax, legal and/or investment advisors with respect to any advice the Grantee may determine is needed or appropriate with respect to the Option (including, without limitation, to determine the foreign, state, local, estate and/or gift tax consequences with respect to the Option and any shares that may be acquired upon exercise of the Option). Neither the Corporation nor any of its officers, directors, affiliates or advisors makes any representation (except for the terms and conditions expressly set forth in this Option Agreement) or recommendation with respect to the Option. Except for the withholding rights contemplated by Section 4 above and Section 8.5 of the Plan, the Grantee is solely responsible for any and all tax liability that may arise with respect to the Option and any shares that may be acquired upon exercise of the Option.

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**EXHIBIT 10.3(F)**

**NKARTA, INC.**

**2020 PERFORMANCE INCENTIVE PLAN**

**NOTICE OF GRANT OF RESTRICTED STOCK UNITS you.**

This offer of employment will expire if we don't receive your signed acceptance by January 20, 2020.
I look forward to your favorable reply and to welcoming you to Nkarta, Inc., a Delaware corporation, (the "
Sincerely,
/s/ Kanya Rajangam
Kanya Rajangam, MD, PhD
Chief Medical Officer
Date: January Corporation 15, "), pursuant 2020

Agreed to its 2020 Performance Incentive Plan, as may be amended from time to time (the "***Plan***"), granted on the Date of Grant set forth below (the "***Award Date***") to the award recipient listed below (the "***Grantee***"), an award of restricted stock units (each, an "***RSU,***" and collectively, the "accepted:

/s/ David Shook

David Shook

Award"). The Award is subject to all of the terms and conditions set forth in this Notice of Grant of Restricted Stock Units (the "***Grant Notice***"), as well as in the Plan and the Terms and Conditions of Restricted Stock Units attached hereto as **Exhibit A Date:** (the "***Terms***"), each of which is incorporated herein by this reference. Unless otherwise defined in this Grant Notice or in the Terms, capitalized terms used in this Grant Notice or in the Terms are used as defined in the Plan. 1/20/2020

| | |
|---|---|
| **Grantee:** | [_____] |
| **Award Number:** | [_____] |
| **Date of Grant:** | [_____] |
| **Vesting Commencement Date:** | [_____] |
| **Total Number of RSUs Subject to the Award:** | [_____] |
| **Vesting Schedule1:** | [One quarter (1/4) of the Award will vest on each of the one (1) year, two (2) year, three (3) year, and four (4) year anniversaries of the Vesting Commencement Date, such that all of the Award shall be vested on the four (4) year anniversary of the Vesting Commencement Date, subject in each case to the Grantee continuing to be an Eligible Person through each such date] |

By accepting the Award (by clicking "sign", "accept" or similar acknowledgement of acceptance through the Company's stock plan recordkeeping system which may be administered by the Company or through a third party on behalf of the Company), the Grantee (1) signs this Grant Notice electronically, which acceptance shall be valid

Enclosures

At-Will Employment, Confidential Information, Invention Assignment and effective to bind the Grantee to this Grant Notice and shall be treated, for purposes of validity, enforceability and admissibility, the same as Grantee's hand-written signature to this Grant Notice, (2) agrees to be bound by the terms and conditions of the Plan, the Terms (including, without limitation, the tax withholding provisions of Section 8 of the Terms), and this Grant Notice and accepts the Award on and subject to such terms and conditions, (3) acknowledges having received and having reviewed in their entirety the Plan, the Terms, this Grant Notice, and the Prospectus for the Plan, (4) acknowledges having had an opportunity to obtain the advice of counsel (to the extent Grantee believed it was appropriate to consult with counsel) prior to executing this Grant Notice, (5) represents that he or she fully understands all provisions of the Plan, the Terms, and this Grant Notice, and (6) agrees to accept as

binding, conclusive and final all decisions or interpretations of the Administrator upon any questions arising under the Plan, the Terms, and this Grant Notice. Arbitration Agreement

**NKARTA, INC.:**

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Name:

Title:

Address:

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NKARTA, INC.

2020 PERFORMANCE INCENTIVE PLAN

TERMS AND CONDITIONS OF RESTRICTED STOCK UNITS

**1. General.**

These Terms and Conditions of Restricted Stock Units (these "Terms") apply to a particular award of restricted stock units (each, an "RSU," and collectively, the "Award") if incorporated by reference in the Notice of Grant of Restricted Stock Units (the "Grant Notice") corresponding to that particular grant. The recipient of the Award identified in the Grant Notice is referred to as the "Grantee." The effective date of the Award as set forth in the Grant Notice is referred to as the "Award Date." The RSUs covered by the Award are subject to adjustment under Section 7.1 of the Plan.

The Award was granted under and subject to the Nkarta, Inc. 2020 Performance Incentive Plan (the "Plan"). Capitalized terms are defined in the Plan if not defined herein. The Award has been granted to the Grantee in addition to, and not in lieu of, any other form of compensation otherwise payable or to be paid to the Grantee. The Grant Notice and these Terms are collectively referred to as the "RSU Agreement" applicable to the Award.

**2. Vesting.**

The Award shall vest and become nonforfeitable in percentage installments of the aggregate number of RSUs subject to the Award as set forth on the Grant Notice.

**3. Dividend and Voting Rights.**

3.1 Limitations on Rights Associated with RSUs. The Grantee shall have no rights as a stockholder of the Corporation, no dividend rights (except as expressly provided in Section 3.2 with respect to Dividend Equivalent Rights) and no voting rights, with respect to the RSUs and any shares of Common Stock underlying or issuable in respect of such RSUs until such shares of Common Stock are actually issued to and held of record by the Grantee. No adjustments will be made for dividends or other rights of a holder for which the record date is prior to the date of issuance of such shares.

3.2 Dividend Equivalent Rights Distributions. As of any date that the Corporation pays an ordinary cash dividend on its Common Stock, the Corporation shall credit the Grantee with an additional number of RSUs equal to (i) the per share cash dividend paid by the Corporation on its Common Stock on such date, multiplied by (ii) the total number of RSUs (including any dividend equivalents previously credited hereunder) (with such total number adjusted pursuant to Section 7.1 of the Plan) subject to the Award as of the related dividend payment record date, divided by (iii) the fair market value of a share of Common Stock on the date of payment of such dividend. Any RSUs credited pursuant to the foregoing provisions of this Section 3.2 shall be subject to the same vesting, payment and other terms, conditions and restrictions as the original RSUs to which they relate. No crediting of RSUs shall be made pursuant to this Section 3.2 with respect to (i) any RSUs which, as of such record date, have either been paid pursuant to Section 5 or terminated pursuant to Section 6 or (ii) any cash dividend or distribution as to which an adjustment is made pursuant to Section 7.2 of the Plan.

**4. Continuance of Employment/Service Required; No Employment/Service Commitment.**

The vesting schedule applicable to the Award requires continued employment or service through each applicable vesting date as a condition to the vesting of the applicable installment of the Award and the rights and benefits under this RSU Agreement. Employment or service for only a portion of the vesting period, even if a substantial portion, will not entitle the Grantee to any proportionate vesting or avoid or mitigate a termination of rights and benefits upon or following a termination of employment or services as provided in Section 6 below or under the Plan.

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Nothing contained in this RSU Agreement or the Plan constitutes a continued employment or service commitment by the Corporation or any of its Subsidiaries, affects the Grantee's status, if he or she is an employee, as an employee at will who is subject to termination without cause, confers upon the Grantee any right to remain employed by or in service to the Corporation or any Subsidiary, interferes in any way with the right of the Corporation or any Subsidiary at any time to terminate such employment or service, or affects the right of the Corporation or any Subsidiary to increase or decrease the Grantee's other compensation. Nothing in this paragraph, however, is intended to adversely affect any independent contractual right of the Grantee without his/her consent thereto.

**5. Timing and Manner of Payment of RSUs.**

On or as soon as administratively practical following each vesting of the applicable portion of the total Award pursuant to Section 2 hereof or Section 7 of the Plan (and in all events not later than two and one-half months after the applicable vesting date) and subject to Sections 6 and 8, the Corporation shall deliver to the Grantee a number of shares of Common Stock (either by delivering one or more certificates for such shares or by entering such shares in

book entry form, as determined by the Corporation in its discretion)equal to the number of RSUs subject to this Award that vested on that vesting date. The Corporation's obligation to deliver shares of Common Stock or otherwise make payment with respect to vested RSUs is subject to the condition precedent that the Grantee or other person entitled under the Plan to receive any shares with respect to the vested RSUs deliver to the Corporation any representations or other documents or assurances required pursuant to Section 8.1 of the Plan. The Grantee shall have no further rights with respect to any RSUs that are paid or that terminate pursuant to Section 6.

**6. Termination of Award.**

6.1 Possible Termination of Award upon Certain Corporate Events. The Award is subject to termination in connection with certain corporate events as provided in Section 7.2 of the Plan.

6.2 Termination of Award upon a Termination of Grantee's Employment or Services. On the date the Grantee ceases to be employed by or ceases to provide services to the Corporation or a Subsidiary (the last day that the Grantee is employed by or provides services to the Corporation or a Subsidiary is referred to as the Grantee's "Severance Date"), the RSUs subject to the Award will terminate to the extent such RSUs have not become vested by such Severance Date. If any unvested RSUs are terminated hereunder, such RSUs shall automatically terminate and be cancelled as of the Severance Date without payment of any consideration by the Corporation and without any other action by the Grantee, or the Grantees's beneficiary or personal representative, as the case may be. The Administrator shall be the sole judge of whether the Grantee continues to render employment or services for purposes of this RSU Agreement.

**7. Non-Transferability.**

The Award and any other rights of the Grantee under this RSU Agreement or the Plan are nontransferable, except as set forth in Section 5.6 of the Plan.

**8. Tax Withholding.**

The Grantee agrees that, in connection with any distribution of shares of Common Stock in respect of the RSUs, the withholding obligations of the Corporation or its Subsidiaries with respect to such distribution of shares shall be satisfied as follows:

- The Corporation will determine the amount of any federal, state, local or other income, employment, or other taxes which the Corporation or any of its Subsidiaries may be obligated to withhold with respect to such distribution of shares of Common Stock in respect of the RSUs (such withholding obligations, the "Withholdin Obligation").
- The Grantee hereby irrevocably instructs the Corporation (and any third-party broker designated by the Corporation) to sell in one or more transactions on the open market, for and on the

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Grantee's behalf, from the shares of Common Stock otherwise deliverable to the Grantee in payment of such RSUs, a number of such shares of Common Stock (valued at the applicable sale prices applying the applicable broker's customary methodology) to satisfy the Withholding Obligation and any brokerage fees and commissions arising in connection with such sale (rounded up to the nearest whole share). Such sale shall occur in connection with the delivery of the shares of Common Stock in payment of the RSUs as to which such

Withholding Obligation relates. The proceeds of such sale, in an amount equal to the Withholding Obligation, shall be promptly remitted to the Corporation to satisfy the Withholding Obligation. Any brokerage fees and commissions arising in connection with such sale shall also be satisfied from the proceeds of such sale.

- Any such sale of shares of Common Stock for and on the Grantee's behalf will be conducted through a broke designated by the Corporation. The Grantee agrees to execute any and all such other documents as may be requested by the Corporation or such broker, as applicable, in order to implement and consummate the transactions contemplated by this Section 8. The Grantee agrees to comply with any administrative rules and procedures established by the Corporation with respect to such transactions.
- For clarity, should any tax withholding event arise in connection with the RSUs other than in connection with the delivery of shares of Common Stock in payment of the RSUs, the Corporation (or a Subsidiary) shall be entitled to require a cash payment by or on behalf of the Grantee and/or to deduct from other compensation payable to the Grantee any sums required by federal, state or local tax law to be withheld with respect to suc distribution or payment. In such circumstances, the Corporation shall not be obligated to deliver any shares t the Grantee unless and until the amount of all federal, state and local taxes applicable to the taxable income the Grantee resulting from the grant or vesting of the RSUs, or other applicable withholding event, has been satisfied in full by or on behalf of the Grantee.

The Corporation reserves the right, by action of the Administrator and subject to Section 8.5 of the Plan, to provide that the Withholding Obligation arising in connection with any distribution of shares of Common Stock in respect of the RSUs will be satisfied by the Corporation reducing the number of shares to be delivered by (or otherwise reacquiring) the appropriate number of whole shares, valued at their then fair market value, to satisfy such Withholding Obligation with respect to such distribution of shares.

**9. Notices.**

Any notice to be given under the terms of this RSU Agreement shall be in writing and addressed to the Corporation at its principal office to the attention of the Secretary, and to the Grantee at the address last reflected on the Corporation's payroll records, or at such other address as either party may hereafter designate in writing to the other. Any such notice shall be delivered in person or shall be enclosed in a properly sealed envelope addressed as aforesaid, registered or certified, and deposited (postage and registry or certification fee prepaid) in a post office or branch post office regularly maintained by the United States Government. Any such notice shall be given only when received, but if the Grantee is no longer employed by the Corporation or a Subsidiary, shall be deemed to have been duly given five business days after the date mailed in accordance with the foregoing provisions of this Section 9.

**10. Plan.**

The Award and all rights of the Grantee under this RSU Agreement are subject to the terms and conditions of the Plan, incorporated herein by this reference. The Grantee agrees to be bound by the terms of the Plan and this RSU Agreement. The Grantee acknowledges having read and understanding the Plan, the Prospectus for the Plan, and this RSU Agreement. Unless otherwise expressly provided in other sections of this RSU Agreement, provisions of the Plan that confer discretionary authority on the Board or the Administrator do not and shall not be deemed to create any rights in the Grantee unless such rights are expressly set forth herein or are otherwise in

the sole discretion of the Board or the Administrator so conferred by appropriate action of the Board or the Administrator under the Plan after the date hereof.

**11. Entire Agreement.**

This RSU Agreement and the Plan together constitute the entire agreement and supersede all prior understandings and agreements, written or oral, of the parties hereto with respect to the subject matter hereof. The Plan and this RSU Agreement may be amended pursuant to Section 8.6 of the Plan. Such amendment must be in writing and signed by the Corporation. The Corporation may, however, unilaterally waive any provision hereof in writing to the extent such waiver does not adversely affect the interests of the Grantee hereunder, but no such waiver shall operate as or be construed to be a subsequent waiver of the same provision or a waiver of any other provision hereof.

**12. Governing Law.**

This RSU Agreement shall be governed by and construed and enforced in accordance with the laws of the State of Delaware without regard to conflict of law principles thereunder.

**13. Effect of this Agreement.**

Subject to the Corporation's right to terminate the Award pursuant to Section 7.2 of the Plan, this RSU Agreement shall be assumed by, be binding upon and inure to the benefit of any successor or successors to the Corporation.

**14. Electronic Signatures and Counterparts.**

The Grant Notice may be signed and/or transmitted in one or more counterparts by facsimile, e-mail of a .PDF, .TIF, .GIF, .JPG or similar attachment or using electronic signature technology (e.g., via DocuSign or similar electronic signature technology), all of which will be considered one and the same agreement and will become effective when one or more counterparts have been signed by each of the parties hereto and delivered to the other parties, it being understood that all parties need not sign the same counterpart, and that any such signed electronic record shall be valid and as effective to bind the party so signing as a paper copy bearing such party's hand-written signature. To the extent a party signs the Grant Notice using electronic signature technology, by clicking "sign" (or similar acknowledgement of acceptance), such party is signing the Grant Notice electronically. Electronic signatures appearing on the Grant Notice shall be treated, for purposes of validity, enforceability and admissibility, the same as hand-written signatures.

**15. Section Headings.**

The section headings of this RSU Agreement are for convenience of reference only and shall not be deemed to alter or affect any provision hereof.

**16. Clawback Policy.**

The Award is subject to the terms of the Corporation's recoupment, clawback or similar policy as it may be in effect from time to time, as well as any similar provisions of applicable law, any of which could in certain circumstances require forfeiture of the Award and repayment or forfeiture of any shares of Common Stock or other cash or property

received with respect to the Award (including any value received from a disposition of the shares acquired pursuant to the Award).

**17. No Advice Regarding Grant.**

The Grantee is hereby advised to consult with his or her own tax, legal and/or investment advisors with respect to any advice the Grantee may determine is needed or appropriate with respect to the Award (including, without limitation, to determine the foreign, state, local, estate and/or gift tax consequences with respect to the Award and any shares that may be acquired pursuant to the Award). Neither the Corporation nor any of its officers, directors, affiliates or advisors makes any representation (except for the terms and conditions expressly

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set forth in this RSU Agreement) or recommendation with respect to the Award. Except for the withholding rights contemplated by Section 8 above and Section 8.5 of the Plan, the Grantee is solely responsible for any and all tax liability that may arise with respect to the Award and any shares that may be acquired pursuant to the Award.

**18. Construction.**

It is intended that the terms of the Award will not result in the imposition of any tax liability pursuant to Section 409A of the Code. This Agreement shall be construed and interpreted consistent with that intent.

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**Exhibit 23.1**

**Consent of Independent Registered Public Accounting Firm**

We consent to the incorporation by reference in the following Registration Statements:

(1) Registration Statement (Form S-8 No. 333-252134) pertaining to the Nkarta, Inc. 2020 Performance Incentive Plan a the Nkarta, Inc. Employee Stock Purchase Plan of Nkarta, Inc.;

(2) Registration Statement (Form S-8 No. 333-240309) pertaining to the Nkarta, Inc. 2020 Performance Incentive Plan, t Nkarta, Inc. Employee Stock Purchase Plan, and the Nkarta, Inc. 2015 Equity Incentive Plan of Nkarta, Inc.; ,

(2) Registration Statement (Form S-8 No. 333-252134) pertaining to the Nkarta, Inc. 2020 Performance Incentive Plan a the Nkarta, Inc. Employee Stock Purchase Plan of Nkarta, Inc.,

(3) Registration Statement (Form S-3 No. 333-258766) of Nkarta, Inc. pertaining to the offer, issuance, and sale of maximum aggregate offering of up to $500,000,000 of common stock, preferred stock, debt securities, warrants, righ and unit and at-the-market offering of common stock. ,

(4) Registration Statement (Form S-8 No. 333-263650) pertaining to the Nkarta, Inc. 2020 Performance Incentive Plan a the Nkarta, Inc. Employee Stock Purchase Plan,

(5) Registration Statement (Form S-8 No. 333-269164) pertaining to the Nkarta, Inc. 2020 Performance Incentive Plan a the Nkarta, Inc. Employee Stock Purchase Plan,

(6) Registration Statement (Form S-3 No. 333-270680 and Amendment No. 1 thereto) of Nkarta, Inc., and

(7) Registration Statement (Form S-8 No. 333-276361) pertaining to the Nkarta, Inc. 2020 Performance Incentive Plan a the Nkarta, Inc. Employee Stock Purchase Plan;

of our report dated March 16, 2023 March 21, 2024, with respect to the financial statements of Nkarta, Inc. included in this Annual Report (Form 10-K) of Nkarta, Inc. for the year ended December 31, 2022 December 31, 2023.

/s/ Ernst & Young LLP

San Mateo, California
March 16, 2023 21, 2024

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**Exhibit 31.1**

**NKARTA, INC.**
**CERTIFICATIONS PURSUANT TO**
**SECTION 302 OF**
**THE SARBANES-OXLEY ACT OF 2002**

I, Paul J. Hastings, certify that:

1. I have reviewed this Annual Report on Form 10-K (the "report") of Nkarta, Inc. (the "registrant");

2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;

3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this report;

4. The registrant's other certifying officer and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the registrant and have:

   (a) Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be

designed under our supervision, to ensure that material information relating to the registrant, including its consolid subsidiaries, is made known to us by others within those entities, particularly during the period in which this report being prepared;

(b) Designed such internal control over financial reporting, or caused such internal control over financial reporting to b designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;

(c) Evaluated the effectiveness of the registrant's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered this report based on such evaluation; and

(d) Disclosed in this report any change in the registrant's internal control over financial reporting that occurred during t registrant's most recent fiscal quarter (the registrant's fourth fiscal quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the registrant's internal control over financial reportin and

5. The registrant's other certifying officer and I have disclosed, based on our most recent evaluation of internal control ove financial reporting, to the registrant's auditors and the audit committee of the registrant's board of directors (or persons performing the equivalent functions):

(a) All significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the registrant's ability to record, process, summarize and report financial information; and

(b) Any fraud, whether or not material, that involves management or other employees who have a significant role in th registrant's internal control over financial reporting.

Date: March 16, 2023 March 21, 2024

By: /s/ Paul J. Hastings

**Paul J. Hastings**

**Chief Executive Officer**

**Exhibit 31.2**

**NKARTA, INC.**
**CERTIFICATIONS PURSUANT TO**
**SECTION 302 OF**
**THE SARBANES-OXLEY ACT OF 2002**

I, Nadir Mahmood, Alyssa Levin, certify that:

1. I have reviewed this Annual Report on Form 10-K (the “report”) of Nkarta, Inc. (the “registrant”);

2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;

3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this report;

4. The registrant's other certifying officer and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the registrant and have:

   (a) Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolid subsidiaries, is made known to us by others within those entities, particularly during the period in which this report being prepared;

   (b) Designed such internal control over financial reporting, or caused such internal control over financial reporting to b designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;

   (c) Evaluated the effectiveness of the registrant's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered this report based on such evaluation; and

   (d) Disclosed in this report any change in the registrant's internal control over financial reporting that occurred during t registrant's most recent fiscal quarter (the registrant's fourth fiscal quarter in the case of an annual report) that has

materially affected, or is reasonably likely to materially affect, the registrant's internal control over financial reportin and

5. The registrant's other certifying officer and I have disclosed, based on our most recent evaluation of internal control ove financial reporting, to the registrant's auditors and the audit committee of the registrant's board of directors (or persons performing the equivalent functions):

   (a) All significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the registrant's ability to record, process, summarize and report financial information; and

   (b) Any fraud, whether or not material, that involves management or other employees who have a significant role in th registrant's internal control over financial reporting.

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Date: March 16, 2023 March 21, 2024

By: /s/ Nadir Mahmood Alyssa Levin

**Nadir Mahmood Alyssa Levin**

**Chief Financial and Business Officer**

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**Exhibit 32**

**NKARTA, INC.**

**CERTIFICATION PURSUANT TO**

**18 U.S.C. SECTION 1350,**
**AS ADOPTED PURSUANT TO**
**SECTION 906 OF THE SARBANES-OXLEY ACT OF 2002**

In connection with the Annual Report on Form 10-K for the year ended December 31, 2022 December 31, 2023 of Nkarta, Inc. (the “Company”) as filed with the Securities and Exchange Commission on the date hereof (the "Report"), we, Paul J. Hastings, Chief Executive Officer of the Company, and Nadir Mahmood, Alyssa Levin, Chief Financial and Business Officer of the Company, certify, pursuant to 18 U.S.C. 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002, that:

(1) The Report fully complies with the requirements of section 13(a) of the Securities Exchange Act of 1934; and

(2) The information contained in the Report fairly presents, in all material respects, the financial condition and results operations of the Company.

Date: March 16, 2023 March 21, 2024 By: /s/ Paul J. Hastings

**Paul J. Hastings**

**Chief Executive Officer**

Date: March 16, 2023 March 21, 2024 By: /s/ Nadir Mahmood Alyssa Levin

**Nadir Mahmood Alyssa Levin**

**Chief Financial and Business Officer**

*This is being furnished solely to accompany the Report pursuant to 18 U.S.C. § 1350. This certification shall not be deemed “filed” for purposes of Section 18 of the Securities Exchange Act of 1934, as amended, or otherwise subject to the liability of that section, nor shall it be incorporated by reference into any filing of the Company under the Securities Act of 1933, as amended, or the Securities Exchange Act of 1934, as amended, except to the extent that the Company specifically incorporates it by reference.*

**EXHIBIT 97**

## Policy Regarding the Recoupment of Certain Compensation Payments

Adopted by the Board of Directorson September 20, 2023

In the event Nkarta, Inc. (the "Company") is required to prepare an accounting restatement due to the material noncompliance of the Company with any financial reporting requirement under the securities laws (including any required accounting restatement to correct an error in previously issued financial statements that is material to the previously issued financial statements or that would result in a material misstatement if the error were corrected in the current period or left uncorrected in the current period), the Company shall recover reasonably promptly the amount of any erroneously awarded Incentive-Based Compensation from each Covered Individual unless an exception (set forth below) applies.

Incentive-Based Compensation shall be considered "erroneously awarded" under this policy to the extent such Incentive-Based Compensation (1) is received by the Covered Individual on or after the effective date of Rule 5608 of The Nasdaq Stock Market LLC ("Nasdaq") Rules and while the Company has a class of securities listed on a national securities exchange or a national securities association, (2) is received by the Covered Individual during the three completed fiscal years immediately preceding the date that the Company is required to prepare the accounting restatement (and any transition period applicable to a change in the Company's fiscal year as required by Nasdaq listing rules), and (3) the amount of such received Incentive-Based Compensation exceeds the amount of the Incentive-Based Compensation that would have been received by the Covered Individual had it been determined based on the restated financial results (with such Incentive-Based Compensation computed in each case without regard to any taxes paid). For purposes of this policy, the date that the Company is required to prepare the accounting restatement is the earlier to occur of (A) the date the Company's Board of Directors (the "Board"), or a committee of the Board, or the officer or officers of the Company authorized to take such action if Board action is not required, concludes, or reasonably should have concluded, that the Company is required to prepare such accounting restatement, or (B) the date a court, regulator, or other legally authorized body directs the Company to prepare such accounting restatement.

For purposes of this policy, Incentive-Based Compensation is considered "received" by a Covered Individual in the Company's fiscal period during which the Financial Reporting Measure applicable to the Incentive-Based Compensation is attained, even if the payment or grant of the Incentive-Based Compensation occurs after the end of that fiscal period. For Incentive-Based Compensation based on stock price or total shareholder return, where the amount of erroneously awarded compensation is not subject to mathematical recalculation directly from the information in an accounting restatement, the amount of erroneously awarded compensation will be determined by the Compensation Committee of the Board (the "Committee") based on a reasonable estimate of the effect of the accounting restatement on the stock price or total shareholder

return upon which the Incentive-Based Compensation was received. The Company must maintain documentation of the determination of that reasonable estimate and provide such documentation to Nasdaq as required by Nasdaq listing rules. If the erroneously awarded Incentive-Based Compensation consists of shares (including share-denominated equity awards) or options that are still held by the Covered Individual at the time of recovery, the recoverable amount is the number of shares or options received in excess of the number of shares or options that would have been received based on the accounting restatement (or the value of that excess number). If the options have been exercised but the underlying shares have not been sold, the recoverable amount is the number of shares underlying the excess options based on the restatement (or the value thereof). If the shares have been sold, the recoverable amount is the proceeds that were received in connection with the sale of the excess number of shares. Amounts credited under plans (other than tax-qualified plans for which the exception set forth below applies) based on erroneously awarded Incentive-Based Compensation and any accrued earnings thereon are also recoverable under this policy.

The Company shall not be required under this policy to recover erroneously awarded Incentive-Based Compensation if the Committee has made a determination that recovery would be impracticable and either of the following conditions are met: (1) after making a reasonable attempt to recover such erroneously awarded Incentive-Based Compensation, the Committee determines that the direct expense paid to a third party to assist in enforcing this policy would exceed the amount to be recovered (documentation evidencing the reasonable attempt to recover the erroneously awarded Incentive-Based Compensation must be maintained and provided to Nasdaq as required by listing rules), or (2) the recovery would likely cause an otherwise tax-qualified retirement plan, under which benefits are broadly available to employees of the Company, to fail to meet the requirements of Internal Revenue Code Section 401(a)(13) or Internal Revenue Code Section 411(a) and the regulations thereunder.

For purposes of this policy, the following definitions will apply:

- "Covered Individual" means any current or former officer of the Company who is or was subject to Section 16 of the Securities Exchange Act of 1934, as amended, at any time during the applicable performance period for the relevant Incentive-Based Compensation, regardless of whether such individual continues to hold such position or continues to be employed by the Company or any of its subsidiaries.
- "Incentive-Based Compensation" means any compensation that is granted, earned, or

vested based wholly or in part upon the attainment of a Financial Reporting Measure.

- "Financial Reporting Measures" means measures that are determined and presented in accordance with the accounting principles used in preparing the Company's financial statements, and any measures that are derived wholly or in part from such measures (including, for purposes of this policy, stock price



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and total shareholder return). A Financial Reporting Measure need not be presented within the Company's financial statements or included in a filing with the Securities and Exchange Commission.

This policy is intended to comply with the requirements of Rule 10D-1 promulgated by the Securities and Exchange Commission and the related listing rules of Nasdaq, and the terms hereof shall be construed consistent with that intent. This policy does not limit any other remedies the Company may have available to it in the circumstances, which may include, without limitation, dismissing an employee or initiating other disciplinary procedures. The provisions of this policy are in addition to (and not in lieu of) any rights to repayment the Company may have under Section 304 of the Sarbanes-Oxley Act of 2002 (applicable to the Chief Executive Officer and Chief Financial Officer only) and other applicable laws. The Company shall not indemnify any Covered Individual against the loss of erroneously-awarded Incentive-Based Compensation that is recovered by the Company pursuant to this policy.

The Committee shall have the sole authority to construe and interpret this policy and to make all determinations required to be made pursuant to this policy. Any such construction, interpretation or determination by the Committee shall be final and binding.

The Committee may revise this policy from time to time.



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## DISCLAIMER

THE INFORMATION CONTAINED IN THE REFINITIV CORPORATE DISCLOSURES DELTA REPORT™ IS A COMPARISON OF TWO FINANCIALS PERIODIC REPORTS. THERE MAY BE MATERIAL ERRORS, OMISSIONS, OR INACCURACIES IN THE REPORT INCLUDING THE TEXT AND THE COMPARISON DATA AND TABLES. IN NO WAY DOES REFINITIV OR THE APPLICABLE COMPANY ASSUME ANY RESPONSIBILITY FOR ANY INVESTMENT OR OTHER DECISIONS MADE BASED UPON THE INFORMATION PROVIDED IN THIS REPORT. USERS ARE ADVISED TO REVIEW THE APPLICABLE COMPANY'S ACTUAL SEC FILINGS BEFORE MAKING ANY INVESTMENT OR OTHER DECISIONS.







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